

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

CERTARA, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

7372
(Primary Standard Industrial
Classification Code Number)

82-2180925
(I.R.S. Employer
Identification Number)

**100 Overlook Center, Suite 101
Princeton, New Jersey 08540
(609) 716-7900**
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Richard M. Traynor
Senior Vice President and General Counsel
100 Overlook Center, Suite 101
Princeton, New Jersey 08540
(609) 716-7900**
(Name, address, including zip code, and telephone number, including area code, of agent for service)

With copies to:

**William B. Brentani
Simpson Thacher & Bartlett LLP
2475 Hanover Street
Palo Alto, California 94304
Tel: (650) 251-5000
Fax: (650) 251-5002**

**Jason M. Licht
Wesley C. Holmes
Latham & Watkins LLP
555 Eleventh Street, NW — Suite 1000
Washington, D.C. 20004
Tel: (202) 637-2200
Fax: (202) 637-2201**

**Approximate date of commencement of proposed sale to the public:
As soon as practicable after the effective date of this registration statement.**

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer <input type="checkbox"/>	Accelerated filer <input type="checkbox"/>
Non-accelerated filer <input checked="" type="checkbox"/>	Smaller reporting company <input type="checkbox"/>
	Emerging growth company <input checked="" type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	PROPOSED MAXIMUM OFFERING PRICE PER SHARE ⁽¹⁾⁽²⁾	AMOUNT OF REGISTRATION FEE
Common stock, \$0.01 par value per share	\$ 100,000,000	\$ 10,910

⁽¹⁾ Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

⁽²⁾ Includes the aggregate offering price of shares of common stock that the underwriters have the option to purchase from the registrant to cover over-allotments.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

PROSPECTUS

Shares



COMMON STOCK

This is Certara, Inc.'s initial public offering. We are selling _____ shares of our common stock and the selling stockholders are selling _____ shares of common stock. We will not receive any proceeds from the sale of shares by the selling stockholders.

We expect the initial public offering price of our common stock to be between \$ _____ and \$ _____ per share. Prior to this offering, no public market existed for our common stock. After pricing of this offering, we expect that shares of our common stock will trade on The Nasdaq Global Select Market (the "Nasdaq") under the symbol "CERT."

We are an "emerging growth company" as defined under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements. See "Prospectus Summary— Implications of Being an Emerging Growth Company." After the completion of this offering, an investment fund advised by an affiliate of EQT AB will continue to own a majority of the shares eligible to vote in the election of our directors. As a result, we will be a "controlled company" within the meaning of the corporate governance standards of the Nasdaq. See "Management— Controlled Company Exception" and "Principal and Selling Stockholders."

Investing in the common stock involves risks. See the "Risk Factors" section beginning on page 16 of this prospectus.

	PER SHARE	TOTAL
Public offering price	\$ _____	\$ _____
Underwriting discount ⁽¹⁾	\$ _____	\$ _____
Proceeds, before expenses, to us	\$ _____	\$ _____
Proceeds, before expenses, to the selling stockholders	\$ _____	\$ _____

⁽¹⁾ See "Underwriting" for a description of the compensation payable to the underwriters.

The underwriters may also exercise their option to purchase up to an additional _____ shares from the selling stockholders, at the public offering price, less the underwriting discount, for 30 days after the date of this prospectus to cover over-allotments. We will not receive any proceeds from the sale of shares by the selling stockholders pursuant to any exercise of the underwriters' option to purchase additional shares.

At our request, the underwriters have reserved up to _____ shares of common stock, or _____ % of the shares offered by this prospectus, for sale at the initial public offering price in a directed share program, to our directors, officers, employees and related persons. See "Underwriting."

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The shares will be ready for delivery on or about _____, 2020.

**Jefferies
Credit Suisse**

**Morgan Stanley
Barclays**

**BofA Securities
William Blair**

The date of this prospectus is _____, 2020.

The information in this prospectus is not complete and may be changed. Neither we nor the selling stockholders may sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and neither we nor the selling stockholders are soliciting offers to buy the securities in any jurisdiction where the offer or sale is not permitted.



TABLE OF CONTENTS

	<u>PAGE</u>
Prospectus Summary	1
Risk Factors	16
Special Note Regarding Forward-Looking Statements	45
Use of Proceeds	48
Dividend Policy	49
Capitalization	50
Dilution	52
Selected Consolidated Financial Data	54
Management's Discussion and Analysis of Financial Condition and Results of Operations	56
Business	81
Management	96
Executive Compensation	102
Certain Relationships and Related Party Transactions	116
Principal and Selling Stockholders	118
Description of Capital Stock	120
Shares Eligible for Future Sale	128
Certain United States Federal Income and Estate Tax Consequences to Non-U.S. Holders	130
Underwriting	133
Legal Matters	141
Experts	141
Where You Can Find Additional Information	141
Index to Consolidated Financial Statements	F-1

Through and including _____, 2021 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

You should rely only on the information contained in this prospectus, any amendment or supplement to this prospectus or any free writing prospectus we may authorize to be delivered or made available to you. We, the selling stockholders and the underwriters have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus, any amendment or supplement to this prospectus or any free writing prospectuses prepared by us or on our behalf. We, the selling stockholders and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus, any amendment or supplement to this prospectus or any applicable free writing prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus, any amendment or supplement to this prospectus or any applicable free writing prospectus is current only as of its date, regardless of the time of delivery of this prospectus, any amendment or supplement to this prospectus or any applicable free writing prospectus or any sale of the shares. Our business, financial condition, results of operations and prospects may have changed since such date.

For investors outside the United States: We, the selling stockholders and the underwriters have not done anything that would permit a public offering of the shares of our common stock or possession or distribution of this prospectus, any amendment or supplement to this prospectus or any applicable free writing prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus, any amendment or supplement to this prospectus or any applicable free writing prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus, any amendment or supplement to this prospectus or any applicable free writing prospectus outside of the United States.

Unless otherwise indicated or the context otherwise requires, references in this prospectus to the term:

- “2017 Incentive Plan” means the Class B Profits Interest Unit Incentive Plan of the EQT Investor;
- “2020 Incentive Plan” means the Certara, Inc. 2020 Incentive Plan, an equity incentive plan that we intend to adopt prior to the completion of this offering;
- “ACV” means annual customer value in revenue;
- “Arsenal” means those certain investment funds of Arsenal Capital Partners and its affiliates;
- “Bribery Act” means the U.K. Bribery Act 2010;
- “CAGR” means compound annual growth rate;
- “Credit Agreement” means the credit agreement, dated as of July 15, 2017, among certain of our wholly-owned subsidiaries, as borrowers (collectively, the “Borrowers”), and the lenders thereunder, as amended;
- “Credit Facilities” means the Credit Agreement together with the Loan Agreement;
- “DGCL” means the Delaware General Corporation Law, as amended;
- “EEA” means the European Economic Area;
- “EMA” means the European Medicines Agency;
- “EQT” means those certain investment funds of EQT AB and its affiliates;
- “EQT Investor” means EQT Avatar Parent L.P., an affiliate of EQT and the entity that, until the completion of this offering, will hold all of our outstanding equity;
- “Exchange Act” means the U.S. Securities Exchange Act of 1934, as amended;
- “FCPA” means the U.S. Foreign Corrupt Practices Act;
- “FDA” means the U.S. Food and Drug Administration;
- “GAAP” means U.S. generally accepted accounting principles;
- “GAO” means the U.S. Government Accountability Office;
- “GDPR” means the European Union’s General Data Protection Directive;
- “HIPAA” means the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act (“HITECH”);
- “*in silico*” means trials, studies, or experiments conducted via computer or computer simulation;
- “*in vivo*” means trials, studies, or experiments conducted on living organisms, including humans and animals;
- “JOBS Act” means the U.S. Jumpstart Our Business Startups Act of 2012, as amended;
- “Loan Agreement” means the loan agreement, dated as of July 6, 2017, between the Company, as borrower, and the lender thereunder;
- “NMPA” means the National Medical Products Administration of China;
- “NOLs” means net operating losses;
- “our Compensation Committee” means (i) prior to the completion of this offering, the Compensation Committee of EQT Avatar Parent GP LLC, the general partner of the EQT Investor, and (ii) after the completion of this offering, the Compensation Committee of Certara, Inc.;
- “PD” means pharmacodynamic;
- “PK” means pharmacokinetic;
- “PMDA” means the Pharmaceuticals and Medical Devices Agency of Japan;
- “QSP” means quantitative systems pharmacology;
- “QSTS” means quantitative systems toxicology and safety;
- “R&D” means research and development;

- “Securities Act” means the Securities Act of 1933, as amended;
- “SaaS” means software as a service;
- “SEC” means the U.S. Securities and Exchange Commission;
- “SOX” means the U.S. Sarbanes-Oxley Act of 2002, as amended;
- “TAM” means our total addressable market; and
- “underwriters” means the firms listed on the cover page of this prospectus.

For ease of reference, we have repeated definitions for certain of these terms in other portions of the body of this prospectus. All such definitions conform to the definitions set forth above.

Trademarks and Service Marks

The Certara design logo, “Certara,” and our other registered or common law trademarks, service marks or trade names appearing in this prospectus are our property. Solely for convenience, our trademarks, tradenames, and service marks referred to in this prospectus appear without the ®, TM, and SM symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights to these trademarks, tradenames, and service marks. This prospectus contains additional trademarks, tradenames, and service marks of other companies that are the property of their respective owners. We do not intend our use or display of other companies’ trademarks, trade names or service marks to imply relationships with, or endorsement or sponsorship of us by, these other companies.

Market, Industry and Other Data

This prospectus contains statistical data that we obtained from industry publications and reports. These publications generally indicate that they have obtained their information from sources believed to be reliable.

PROSPECTUS SUMMARY

This summary highlights information contained in greater detail elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our financial statements and the related notes included elsewhere in this prospectus, and the information set forth under “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Unless otherwise indicated in this prospectus, references to the “Company,” “Certara,” “we,” “us” and “our” refer to Certara, Inc. and its consolidated subsidiaries.

Our Company

We accelerate medicines to patients using biosimulation software and technology to transform traditional drug discovery and development.

Biosimulation is a powerful technology used to conduct virtual trials using virtual patients to predict how drugs behave in different individuals. Biopharmaceutical companies use our proprietary biosimulation software throughout drug discovery and development to inform critical decisions that not only save significant time and money but also advance drug safety and efficacy, improving millions of lives each year.

As a global leader in biosimulation based on 2019 revenue, we provide an integrated, end-to-end platform used by more than 1,600 biopharmaceutical companies and academic institutions across 60 countries, including all of the top 35 biopharmaceutical companies by R&D spend in 2019. Since 2014, customers who use our biosimulation software and technology-enabled services have received over 90% of all new drug approvals by the FDA. Moreover, 17 global regulatory authorities license our biosimulation software to independently analyze, verify, and review regulatory submissions, including the FDA, Europe’s EMA, Health Canada, Japan’s PMDA, and China’s NMPA. Demand for our offerings continues to expand rapidly.

While traditional drug development has led to meaningful therapies, many patients still wait for life-saving medicines, which can take more than 10 years and \$2 billion to bring to market. In 2019, according to EvaluatePharma, worldwide biopharmaceutical R&D expenditures reached \$186 billion, but the return on investment at the world’s 12 leading biopharmaceutical companies was below 2%, down from 10% in 2010, according to a report by the Deloitte Center for Health Solutions. Change is necessary to continue delivering remarkable gains in human health at an accelerated pace. We, and many others in the biopharmaceutical industry, believe that biosimulation enables this change.

We build our biosimulation technology on first principles of biology, chemistry, and pharmacology with proprietary mathematical algorithms to predict how medicines and diseases behave in the body. For over two decades, we have honed and validated our biosimulation technology with an abundance of data from scientific literature, lab research, and preclinical and clinical studies. In turn, our customers use biosimulation to conduct virtual trials to answer critical questions, such as: What will be the human response to a drug based on preclinical data? How will other drugs interfere or interact with this new drug? What is a safe and efficacious dose for children, the elderly, or patients with pre-existing conditions? Virtual trials may be used to optimize dosing on populations that are otherwise difficult to study for ethical or logistical reasons, such as infants, pregnant women, the elderly, and cancer patients.

The benefits of biosimulation are significant. One of our customers, a top 10 global biopharmaceutical company by R&D spend, estimated that they saved more than half a billion dollars over three years using biosimulation to inform key decisions. Biosimulation can reduce the size and cost of human trials, the most expensive and time-consuming part of drug development, and in some cases, eliminate certain human trials completely. An analysis published on Applied Clinical Trials Online, to which we contributed, estimated that \$1 billion was saved in clinical trial costs using biosimulation for a specified cancer drug due to consistently shorter completion times in the later phase clinical trials. According to such analysis, the Phase III trial for this cancer drug, which generated more than \$10 billion in revenue in 2019, was more than a year shorter than the length of trials for two comparable cancer drugs that did not use biosimulation as extensively. Another global biopharmaceutical customer avoided a Phase III trial after submitting our biosimulation analysis to the

FDA for their central nervous system (“CNS”) therapy, which we believe saved them \$60 million and 24 months. This is a conservative estimate of savings given that the average duration of a Phase III trial is 32 months and the out-of-pocket cost of the clinical phase is \$351 million for a CNS drug, according to the Office of Health Economics.

Biosimulation results need to be incorporated into regulatory documents for compelling submissions. Accordingly, we provide regulatory science solutions and integrate them with biosimulation so that our customers can navigate the complex and evolving regulatory landscape and maximize their chances of approval. Our differentiated regulatory services are powered by submissions management software and natural language processing for scalability and speed, allowing us to deliver more than 200 regulatory submissions over the past four years. Our team of more than 200 regulatory professionals has extensive experience applying industry guidelines and global regulatory requirements.

The final hurdle to delivering medicines to patients is market access, defined as strategies, processes, and activities to ensure that therapies are available to patients at the right price. We believe that biosimulation and market access will continue to be increasingly intertwined as healthcare systems move toward outcomes-based pricing. We have recently expanded into technology-enabled market access solutions, which help our customers understand the real-world impact of therapies and dosing regimens earlier in the process and effectively communicate this to payors and health authorities. Our solutions are underpinned by technologies such as Bayesian statistical software and SaaS-based value communication tools.

We have a proven track record of steady growth, driven by higher adoption of biosimulation, expansion of our technology portfolio, strategic acquisitions, and cross-selling of biosimulation, regulatory science, and market access solutions across our end-to-end platform:

- From 2018 to 2019, our revenue increased by 27% from \$163.7 million to \$208.5 million.
- From 2018 to 2019, our net loss decreased by 73% from \$33.3 million to \$8.9 million.
- The number of customers with ACV of \$100,000 or more in revenue increased from 197 in 2018 to 228 in 2019, and revenue from these customers grew by 20% from 2018 to 2019.
- The number of customers with ACV of \$1,000,000 or more in revenue increased from 37 in 2018 to 44 in 2019.
- Of our top 300 customers, 67% purchased two or more of our four major solution areas (Simcyp, Phoenix and other software, biosimulation services, regulatory science & market access services) in 2019, up from 55% in 2018. We believe there is significant ongoing opportunity to continue cross-selling our integrated suite of solutions to our existing customers.

With continued innovation in and adoption of our biosimulation software and technology-enabled services, we believe more biopharmaceutical companies worldwide will leverage more of our end-to-end platform to reduce cost, accelerate speed to market, and ensure safety and efficacy of medicines for all patients.

Our Markets

We believe our addressable market is large and rapidly expanding. The current total addressable market for our solutions represents an estimated \$10 billion today and is expected to grow at a CAGR of approximately 12 to 15% annually over the next five to seven years. Our total addressable market estimate includes the biosimulation market estimated at \$2 billion, which is estimated to grow at 15% CAGR over such period according to Grand View Research; the regulatory science market estimated at \$7 billion, which is estimated to grow at 12% CAGR over such period according to Grand View Research; and the market access market estimated at \$1 billion, which is estimated to grow at 13% CAGR over such period according to SpendEdge. With increasing adoption of technology across all stages of drug discovery and development, we believe our end-to-end platform and growth strategies position us to further penetrate the rapidly growing technology-enabled biopharmaceutical R&D market in the future.

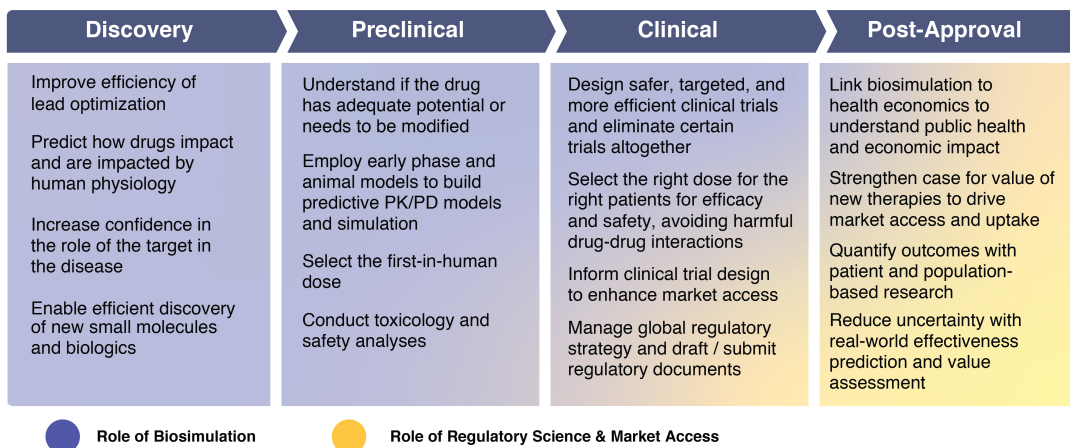
Traditional drug discovery and development is costly and prone to failure. The biopharmaceutical industry was estimated to have spent a total of approximately \$186 billion in 2019 on R&D. It can take more than 10 years to bring a drug to market, and the cost has grown significantly in the past decade from \$1.2 billion

in 2010 to \$2.0 billion in 2019. At the same time, scientific advances are driving increased complexity as the R&D pipeline shifts from small molecules to biologics and cell and gene therapies. The increasing cost, time and complexity of developing drugs have driven down the rate of return on R&D to less than 2% in 2019 for the 12 leading biopharmaceutical companies analyzed in a report by the Deloitte Center for Health Solutions.

Continued development and innovation in software and technology such as biosimulation, virtual trials, and real-world evidence tools are helping biopharmaceutical companies increase efficiency and decrease costs. In addition, the COVID-19 pandemic has highlighted some of the limitations of human trials and is expected to drive increased utilization of technology during and after the pandemic. We believe we are still in the early stages of a long-term trend that will continue to advance traditional drug discovery and development into a technology-enabled era of advanced modeling and analytics.

We have purpose-built our innovative end-to-end platform to capitalize on industry trends by delivering biosimulation software and technology-enabled services that span all stages of the drug discovery and development continuum.

Role of Our Platform across the Stages of Drug Discovery and Development



Our core markets today include:

- **Biosimulation:** Biosimulation is the computer-aided mathematical modeling of biological processes and systems to simulate how a drug affects the body, how the body affects the drug, how potential doses will affect different patient groups, and how patients will respond under various clinical scenarios. Biosimulation informs every stage of the drug discovery and development process and brings value through identifying winners and losers earlier, streamlining preclinical and clinical studies, optimizing dosing for different populations for safety and efficacy, and increasing probability of success and return on R&D.
- **Regulatory Science:** Regulatory science is the development and application of scientific methods, tools, and approaches to support regulatory and other policy objectives. Expert management of these processes is critical to drugs receiving regulatory approval and ultimately reaching patients and generating sales.
- **Market Access:** To achieve commercial access, sponsors must assess, optimize, and persuasively communicate the therapeutic and economic value of a new therapy in a manner that stakeholders such as payors and health care providers will accept and act on. Market access services include real-world evidence and health economics outcomes research.

We believe that our end-to-end platform is well-positioned to continue benefiting from market trends. In addition to the continued growth in our core markets, we expect to capture a broader share of the overall biopharmaceutical R&D spend as we continue to innovate and add new solutions to our end-to-end platform.

Our Competitive Strengths

We compete by offering a broad and deep combination of industry-standard biosimulation software and technology-enabled services across all stages of the continuum, from discovery and development to regulatory approval and market access. We have cultivated the following competitive strengths for more than two decades:

- **Our Proprietary, Scalable Biosimulation Software:** Our proprietary, scalable biosimulation software, built on first principles and including more than 9.3 million lines of code, integrates biosimulation models, scientific knowledge, and data, which we believe would require years of effort, immense resources, and scarce expertise to duplicate. Our versatile biosimulation software is deployed to public and private cloud networks, on-premises, and data centers. We protect our proprietary technology through intellectual property rights, including copyrights, patents, trade secrets, know-how, and trademarks.
- **Our Integrated End-to-End Platform:** We have developed a differentiated, integrated end-to-end platform of software and technology-enabled services, powered by proprietary technology and unique talent, spanning discovery through market access. Our integrated set of solutions, anchored in our biosimulation technology combined with our world-leading experts, uniquely positions us to be our customers' first-choice partner to accelerate their R&D programs and achieve regulatory and commercial success. Ninety percent of our top 50 customers by revenue use both our biosimulation solutions and regulatory and market access offerings.
- **Our Innovation Framework:** We are at the forefront of innovation in biosimulation, advancing both incremental and breakthrough innovations in biosimulation to transform traditional drug discovery and development. Our innovation framework is built on four pillars: customer-centricity, alignment with regulators, scalable data collection and curation, and scientific research.
- **Our Trusted, Long-Term Customer and Regulatory Partnerships:** We work continuously and closely with our customers to provide software and technology-enabled services from drug discovery and development to regulatory science and market access, applying biosimulation throughout the continuum to maximize R&D productivity and increase the probability of success. We have substantial repeat business and long-term partnerships — our top 30 customers by revenue in 2019 have been with us for more than nine years on average. Our consortium model with biopharmaceutical companies provides for detailed customer input into software enhancements. Our customer relationships are bolstered by our regulatory partnerships — 17 regulatory agencies use our biosimulation software. We have received four grants and a Cooperative Research and Development Agreement from the FDA, as well as grants from six European organizations.
- **The Deep Expertise of Our People and Our Culture of Innovation:** We are led by a diverse, global, and talented team of scientists, software engineers, and subject matter experts who not only advance our technology but also seek to understand and tackle our customers' greatest challenges. Sharing core values of dedication, quality, and respect, the executive management team is focused on fostering our passion for science and growing our culture of innovation, excellence, collaboration, and customer-centricity, as well as delivering exceptional performance.

Our Growth Strategy

Our growth strategy is to build upon our scalable end-to-end platform. We continue to innovate in biosimulation, engage with regulatory agencies, and land and expand our customer partnerships. We remain focused on reducing the cost, time, and probability of failure of clinical trials for our customers, so that they can materially accelerate the availability of future therapies that are needed by patients worldwide. As exciting, new research areas arise, such as cell and gene therapy, we attract and hire specialized talent and acquire businesses to expand our offerings accordingly.

- **Advance Our Technology:** The science, technology, and data behind biosimulation continue to advance rapidly, and our top investment priority is to develop additional functionality and uses for biosimulation to improve patient outcomes. We release new software, additional features, and upgrades

on a frequent and regular basis, and have introduced more than 10 new software applications and upgrades in the past two years.

We are investing in three major areas to elevate our technology:

- *Spearheading the frontier of quantitative systems pharmacology (“QSP”) and toxicology*, an emerging approach with enormous potential for industry-wide transformation to optimize decisions in both drug discovery and development;
 - *Continuing to develop cloud-based solutions*, such as Certara Integral Data Repository, CODEx Clinical Outcomes Databases, and BaseCase Value Communication Software, which enhance computing scalability, significantly reduce maintenance time and cost, and promote access, collaboration, and mobility; and
 - *Architecting an ecosystem of interconnected software applications* to facilitate seamless workflows and sharing of data across the drug discovery and development continuum for efficiency and speed.
- **Grow Within Existing Customers:** As we continue to expand our portfolio of offerings, we integrate our solutions and sell more across our end-to-end platform. Our customer relationships grow steadily over time, driven by higher adoption of biosimulation with additional user licenses and more modules. We also cross-sell our software and technology-enabled services — of our top 300 customers in 2019 by revenue, 67% purchased two or more of our major solution areas.
 - **Expand Our Customer Base Globally:** We are growing our footprint globally to match that of the biopharmaceutical industry. There are more than 4,800 biopharmaceutical companies worldwide with active R&D pipelines, up from nearly 2,400 in 2011, according to Informa’s Pharma R&D Annual Review 2020. Informa also estimates that the R&D pipeline encompasses approximately 18,000 drug programs in 2020. As drug discovery and development in Asia Pacific grows, we are investing heavily to expand our presence in the region to work with these customers where they are, just as we already have in North America, Europe, and Japan.
 - **Scale Through Acquisitions:** We have a proven record of successfully acquiring and integrating software and services companies. To date, we have acquired 12 companies of which nine included software or technology such as Simcyp, the core of our mechanistic biosimulation platform, and Xenologiq, which jumpstarted our biosimulation initiative using QSP. As we build out the depth and breadth of our biosimulation platform, we continually seek and assess a range of highly focused opportunities, whether through acquisitions, licenses, or partnerships.
 - **Inspire Our People:** Our people, 900 strong, are the key to our success. The diversity and depth of expertise, experience, and backgrounds in our vibrant community bring richness of ideas, problem-solving capabilities, and mutual respect. We are dedicated to attracting, retaining, and growing leading scientists and experts who are passionate about developing medicines that matter. We strive to encourage intellectual curiosity and offer a myriad of professional development opportunities. We continue to invest in our people to help them thrive and solidify our position as an employer of choice in our industry.

The Certara End-to-End Platform

We provide both software and technology-enabled services to enable customers to realize the full benefits of biosimulation in drug discovery, preclinical and clinical research, regulatory submission, and market access. Our software is primarily subscription-based with licenses ranging from one to three years. We estimate that 65% of our revenue in 2019 came from the application of our solutions in the clinical stage, the most expensive and time-consuming part of the drug discovery and development process, according to Nature Reviews Drug Discovery. We estimate that in 2019, 10% of our total revenues were attributed to the use of our solutions in the discovery stage, 15% in the preclinical stage and 10% in the post-approval stage.



- **Market Access Communication Platform (BaseCase):** We license a cloud-based SaaS platform for drag-and-drop visualization of biosimulation results and other complex data. Customers use our software to communicate the value of a new therapy to payors and providers to gain formulary acceptance and reimbursement.

Technology-Enabled Services

Our technology-enabled biosimulation services help customers who do not have staff capability or availability to gain the benefits of biosimulation. We also provide related technology-enabled services to guide our customers' new drugs through the regulatory submission process and into the market. Our technology-enabled services include mechanistic biosimulation, empirical biosimulation, drug development and regulatory strategy, clinical pharmacology, model-based meta-analysis, regulatory writing and medical communications, regulatory operations, and market access.

- **Mechanistic Biosimulation:** We utilize our Simcyp Platform for predicting PK to determine first-in-human dose selection, design more efficient and effective clinical studies, evaluate new drug formulations, and predict drug-drug interactions. We use our QSP and QSTS software to advise customers on target selection and ranking, and strategies for avoiding toxicities.
- **Empirical Biosimulation:** We use our Phoenix Platform and other tools to provide a wide range of quantitative biosimulation approaches, such as non-compartmental analysis, PK/PD modeling, and population PK/PD analyses.
- **Drug Development and Regulatory Strategy:** We develop and deliver drug development and regulatory plans and provide high-level regulatory input to customer projects, incorporating biosimulation and supporting decision making through critical development and investment stage gates.
- **Clinical Pharmacology:** We provide early-phase development plans and study designs across the development life-cycle, often incorporating biosimulation. We use clinical pharmacology gap analysis and modeling to anticipate and manage development risks.
- **Model-Based Meta-Analysis:** We utilize curated clinical trial data from our CODEx clinical outcomes database platform together with model-based meta-analysis to assess a new drug's safety and efficacy in relation to competitive products.
- **Regulatory Writing and Medical Communications:** We support submissions from early-stage investigational new drugs to late-stage new drug applications, biologics license applications, and market authorization applications, by writing regulatory documents such as clinical study protocols/reports, safety submissions, and other summary documents for submission to the FDA and global regulatory authorities. We manage technical editing including transparency and disclosure services to ensure that our customers' regulatory documents are "filing-ready." Our team also offers advanced publication planning and writing support for scientific and medical publications. We deploy natural language processing software and other technology to enable efficient and scalable document creation.
- **Regulatory Operations:** We manage the submission of regulatory documents using our GlobalSubmit platform. Our submission management services include submission leadership, program management and planning, due diligence and readiness preparation, submission compilation, and electronic common technical document publishing. We support applications to all major health agencies, including the FDA, Europe's EMA, Health Canada, Japan's PMDA, and China's NMPA.
- **Market Access:** We assist customers in demonstrating the value of new drugs and health technologies to payors and other stakeholders to support their efforts in securing reimbursement and access in global markets. These services include conducting real-world evidence and health economics outcomes research, delivering value and access consultancy solutions, creating cost and comparative effectiveness models to support pricing and payor reimbursement, and collecting and analyzing real-world data for use in market and payor communications. We use our proprietary technology called the Health Outcomes Performance Estimator (HOPE), based on a Bayesian engine, that translates clinical trial findings and population health knowledge into expected real-world impact.

Risks Related to Our Business

Investing in our common stock involves a high degree of risk. You should carefully consider these risks before investing in our common stock, including the risks related to our business and industry described under

“Risk Factors” elsewhere in this prospectus. In particular, the following considerations, among others, may offset our competitive strengths or have a negative effect on our business strategy, which could cause a decline in the price of our common stock and result in a loss of all or a portion of your investment:

- our ability to compete within our market;
- any deceleration in, or resistance to, the acceptance of model-informed biopharmaceutical discovery;
- changes or delays in government regulation relating to the biopharmaceutical industry;
- increasing competition, regulation and other cost pressures within the pharmaceutical and biotechnology industries;
- trends in R&D spending, the use of third parties by biopharmaceutical companies and a shift toward more R&D occurring at smaller biotechnology companies;
- consolidation within the biopharmaceutical industry;
- reduction in the use of our products by academic institutions;
- pricing pressures due to increased customer utilization of our products;
- our ability to successfully enter new markets, increase our customer base and expand our relationships with existing customers;
- the occurrence of natural disasters and epidemic diseases, such as the recent COVID-19 pandemic;
- any delays or defects in our release of new or enhanced software or other biosimulation tools;
- failure of our existing customers to renew their software licenses or any delays or terminations of contracts or reductions in scope of work by our existing customers;
- our ability to accurately estimate costs associated with our fixed-fee contracts;
- our ability to retain key personnel or recruit additional qualified personnel;
- risks related to our contracts with government customers, including the ability of third parties to challenge our receipt of such contracts;
- our ability to sustain recent growth rates;
- any future acquisitions and our ability to successfully integrate such acquisitions;
- the accuracy of our addressable market estimates;
- the length and unpredictability of our software and service sales cycles;
- our ability to successfully operate a global business;
- our ability to comply with applicable anti-corruption, trade compliance and economic sanctions laws and regulations;
- risks related to litigation against us;
- the adequacy of our insurance coverage and our ability to obtain adequate insurance coverage in the future;
- our ability to perform our services in accordance with contractual requirements, regulatory standards and ethical considerations;
- the loss of more than one of our major customers;
- our future capital needs;
- the ability or inability of our bookings to accurately predict our future revenue and our ability to realize the anticipated revenue reflected in our backlog;
- any disruption in the operations of the third-party providers who host our software solutions or any limitations on their capacity or interference with our use;
- our ability to reliably meet our data storage and management requirements, or the experience of any failures or interruptions in the delivery of our services over the internet;
- our ability to comply with the terms of any licenses governing our use of third-party open source software utilized in our software solutions;
- any breach of our security measures or unauthorized access to customer data;

- our ability to comply with applicable privacy and data security laws;
- our ability to adequately enforce or defend our ownership and use of our intellectual property and other proprietary rights;
- any allegations that we are infringing, misappropriating or otherwise violating a third party's intellectual property rights;
- our ability to meet the obligations under our current or future indebtedness as they become due and have sufficient capital to operate our business and react to changes in the economy or industry;
- any limitations on our ability to pursue our business strategies due to restrictions under our current or future indebtedness or inability to comply with any restrictions under such indebtedness;
- any impairment of goodwill or other intangible assets;
- our ability to use our NOLs and R&D tax credit carryforwards to offset future taxable income;
- the accuracy of our estimates and judgments relating to our critical accounting policies and any changes in financial reporting standards or interpretations;
- actions by our controlling stockholders;
- any inability to design, implement and maintain effective internal controls when required by law;
- the costs and management time associated with operating as a publicly traded company; and
- the other factors discussed under "Risk Factors."

Our Sponsor

EQT is a differentiated global investment organization with more than €62 billion in raised capital and around €40 billion in assets under management across 19 active funds. EQT funds have portfolio companies in Europe, Asia-Pacific and North America with total sales of more than €27 billion and approximately 159,000 employees. EQT works with portfolio companies to achieve sustainable growth, operational excellence and market leadership. Over the last 20 years, EQT has completed more than 27 acquisitions in the healthcare sector, including current investments in Aldevron, Waystar, Galderma and WS Audiology and former investments in Press Ganey, CaridianBCT, BSN Medical and Clinical Innovations.

In August 2017, investment funds affiliated with EQT, together with certain other institutional and other investors, acquired a majority of the indirect equity interests in our Company from certain affiliates of Arsenal Capital Partners and other existing equityholders. After completion of this offering, such EQT investment funds and their affiliates will own, directly or indirectly, approximately % of our outstanding common stock, or approximately % if the underwriters exercise in full their option to purchase additional shares. We intend to enter into a stockholders agreement with EQT, Arsenal and certain other stockholders in connection with this offering that will provide (i) affiliates of EQT with the right to nominate to our board of directors a number of nominees equal to (x) the total number of directors comprising our board of directors at such time, multiplied by (y) the percentage of our outstanding common stock held from time to time by such affiliates of EQT and (ii) affiliates of Arsenal with the right to nominate to our board of directors one nominee for so long as such affiliates collectively own at least 5% of our outstanding common stock. See "Certain Relationships and Related Party Transactions — Stockholders Agreement."

Corporate Information

Certara, Inc. was incorporated in Delaware on June 27, 2017. Our principal executive offices are located at 100 Overlook Center, Suite 101, Princeton, New Jersey 08540. Our telephone number is (609) 716-7900. Our website address is www.certara.com. Information contained in, or that can be accessed through, our website does not constitute part of this prospectus, and inclusions of our website address in this prospectus are inactive textual references only.

Implications of Being an Emerging Growth Company

We qualify as an "emerging growth company" as defined in the JOBS Act. For so long as we remain an emerging growth company, we are permitted and currently intend to rely on the following provisions of the

JOBS Act that contain exceptions from disclosure and other requirements that otherwise are applicable to companies that conduct initial public offerings and file periodic reports with the SEC. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements in this prospectus and only two years of related “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our periodic reports and registration statements, including this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the SOX;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements, including in this prospectus; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We will remain an emerging growth company until:

- the first to occur of the last day of the fiscal year (i) that follows the fifth anniversary of the completion of this offering, (ii) in which we have total annual gross revenue of at least \$1.07 billion or (iii) in which we are deemed to be a “large accelerated filer,” as defined in the Exchange Act; or
- if it occurs before any of the foregoing dates, the date on which we have issued more than \$1 billion in non-convertible debt over a three-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in this prospectus and may elect to take advantage of other reduced reporting requirements in our future filings with the SEC. As a result, the information that we provide to our stockholders may be different than what you might receive from other public reporting companies in which you hold equity interests.

We have elected to avail ourselves of the provision of the JOBS Act that permits emerging growth companies to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. As a result, we will not be subject to new or revised accounting standards at the same time as other public companies that are not emerging growth companies.

For additional information, see the section titled “Risk Factors—Risks Related to this Offering and Ownership of Our Common Stock—We are an “emerging growth company” and the reduced disclosure requirements applicable to emerging growth companies may make our common stock less attractive to investors.”

THE OFFERING

Common stock offered by us	shares.
Common stock offered by the selling stockholders	shares.
Common stock to be outstanding immediately after this offering	shares.
Option to purchase additional shares	The underwriters have been granted an option to purchase up to additional shares of common stock from the selling stockholders at any time within 30 days from the date of this prospectus to cover over-allotments.
Use of proceeds	<p>We estimate that the net proceeds to us from this offering, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, will be approximately \$ million, based on the assumed initial public offering price of \$ per share, which is the midpoint of the price range set forth on the front cover of this prospectus. We will not receive any proceeds from the sale of shares of our common stock by the selling stockholders.</p> <p>We intend to use the net proceeds received by us from this offering to repay outstanding indebtedness under the Loan Agreement, a portion of our term loan under our Credit Agreement and the remainder for general corporate purposes. See "Use of Proceeds."</p> <p>A \$1.00 increase (decrease) in the assumed initial public offering price of \$ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase (decrease) the net proceeds to us from this offering by \$ million, assuming the number of shares offered by us, as set forth on the front cover of this prospectus, remains the same and after deducting the assumed underwriting discounts and commissions and estimated offering expenses payable by us. An increase (decrease) of 100,000 shares from the expected number of shares to be sold by us in this offering, assuming no change in the assumed initial public offering price per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase (decrease) our net proceeds from this offering by \$ million.</p>
Risk factors	See "Risk Factors" and the other information included in this prospectus for a discussion of the factors you should consider carefully before deciding to invest in our common stock.
Dividend policy	We currently do not intend to declare any dividends on our common stock in the foreseeable future. Our ability to pay dividends on our common stock is limited by the covenants of the credit agreement governing our Credit Facilities. See "Dividend Policy."

Directed share program

At our request, the underwriters have reserved up to _____ shares of common stock, or up to _____ % of the shares offered by this prospectus, for sale at the initial public offering price through a directed share program to our directors, officers, employees and related persons. The sales will be made at our direction by _____ and its affiliates through a directed share program. The number of shares of our common stock available for sale to the general public in this offering will be reduced to the extent that such persons purchase such reserved shares. Any reserved shares not so purchased will be offered by the underwriters to the general public on the same terms as the other shares of common stock offered by this prospectus. Participants in the directed share program will not be subject to lock-up or market standoff restrictions with the underwriters or with us with respect to any shares purchased through the directed share program, except in the case of shares purchased by any director or executive officer. For additional information, see "Underwriting."

Nasdaq symbol

"CERT"

Except as otherwise indicated, all information in this prospectus:

- assumes no exercise by the underwriters of their option to purchase up to _____ additional shares of common stock from the selling stockholders;
- assumes the effectiveness, at the time of this filing, of our amended and restated certificate of incorporation and our amended and restated bylaws, the forms of which are filed as exhibits to the registration statement of which this prospectus is a part;
- assumes an initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover of this prospectus;
- assumes a _____ for 1 forward stock split to be effected upon the filing of our amended and restated certificate of incorporation;
- assumes the issuance of _____ shares of common stock to be issued to certain holders of units (the "Former Unit Holders") of the EQT Investor in connection with the closing of this offering (which amount of shares is based upon an assumed initial public offering price of \$ _____ per share, which is the midpoint of the range set forth on the cover page of this prospectus), which issuance we refer to as the "EQT Equity Conversion"; and
- does not reflect _____ shares of common stock available for future issuance under our 2020 Incentive Plan or _____ shares of common stock available for future issuance under our 2020 Employee Stock Purchase Plan.

A \$1.00 increase in the assumed initial public offering price referred to above shall modify the forward stock-split ratio and the number of shares to be received by the Former Unit Holders resulting in an increase to the number of shares of common stock to be outstanding immediately after this offering by _____ shares and an increase of _____ shares to be received by the Former Unit Holders.

A \$1.00 decrease in the assumed initial public offering price referred to above shall modify the forward stock-split ratio and the number of shares to be received by the Former Unit Holders resulting in a decrease to the number of shares of common stock to be outstanding immediately after this offering by _____ shares and a decrease of _____ shares to be received by the Former Unit Holders.

Until the completion of the EQT Equity Conversion, all of our outstanding common stock will be held by the EQT Investor.

SUMMARY CONSOLIDATED FINANCIAL DATA

The following table summarizes our consolidated financial and other data for the periods and dates indicated. The balance sheet data as of September 30, 2020 and the statements of operations and comprehensive income (loss) and cash flow data for the nine months ended September 30, 2020 and 2019 have been derived from our unaudited condensed consolidated financial statements included elsewhere in this prospectus. The statements of operations and comprehensive income (loss) and cash flow data for the years ended December 31, 2019 and 2018 have been derived from our audited consolidated financial statements included elsewhere in this prospectus. Our unaudited condensed consolidated interim financial statements were prepared in accordance with GAAP, on the same basis as our audited consolidated financial statements and include, in the opinion of management, all adjustments, consisting of normal recurring adjustments, that are necessary for the fair statement of the financial information set forth in those financial statements. Our historical results are not necessarily indicative of the results that may be expected in the future, and results for the nine months ended September 30, 2020 are not necessarily indicative of results that may be expected for the full fiscal year or any other period. The summary consolidated financial data set forth below should be read in conjunction with "Risk Factors," "Capitalization," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our unaudited condensed consolidated financial statements and audited consolidated financial statements included elsewhere in this prospectus.

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
	2020	2019	2019	2018
	(in thousands)			
Statement of operations and comprehensive income (loss) data:				
Revenues	\$ 178,889	\$ 154,654	\$ 208,511	\$ 163,719
Cost of revenues	65,860	57,817	79,770	71,043
Operating expenses:				
Sales and marketing	8,773	7,946	10,732	9,416
Research and development	9,139	8,651	11,633	10,478
General and administrative	36,125	35,630	47,926	43,393
Intangible asset amortization	28,056	26,908	36,241	31,625
Depreciation and amortization expense	1,836	2,140	2,596	2,416
Total operating expenses	<u>83,929</u>	<u>81,275</u>	<u>109,128</u>	<u>97,328</u>
Income (loss) from operations	29,100	15,562	19,613	(4,652)
Other expenses:				
Interest expense	(19,810)	(21,011)	(28,004)	(27,802)
Miscellaneous, net	456	(163)	(760)	(107)
Total other expenses	<u>(19,354)</u>	<u>(21,174)</u>	<u>(28,764)</u>	<u>(27,909)</u>
Income (loss) before income taxes	9,746	(5,612)	(9,151)	(32,561)
Provision for (benefit from) income taxes	4,696	(2,701)	(225)	697
Net income (loss)	5,050	(2,911)	(8,926)	(33,258)
Other comprehensive (loss):				
Foreign currency translation adjustment	513	(3,383)	433	(16,721)
Change in fair value of interest rate swap, net of tax	(1,530)	(4,441)	(4,283)	1,079
Total other comprehensive loss	<u>(1,017)</u>	<u>(7,824)</u>	<u>(3,850)</u>	<u>(15,642)</u>
Comprehensive income (loss)	<u>\$ 4,033</u>	<u>\$ (10,735)</u>	<u>\$ (12,776)</u>	<u>\$ (48,900)</u>

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
Per share data:				
Net income (loss) per share attributable to common stockholders:				
Basic	\$ 50,500	\$ (29,110)	\$ (89,260)	\$ (332,580)
Diluted	50,500	(29,110)	(89,260)	(332,580)
Weighted average common shares outstanding:				
Basic	100	100	100	100
Diluted	100	100	100	100

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
	2020	2019	2019	2018
(in thousands)				
Cash flow data:				
Net cash provided by (used in):				
Operating activities	\$ 32,129	\$ 15,783	\$38,025	\$ 11,592
Investing activities	(7,209)	(6,866)	(9,517)	(73,905)
Financing activities	(24,103)	(7,640)	(8,489)	57,296
Cash paid for interest	21,077	21,407	26,428	25,713
Cash paid for taxes	6,675	3,149	4,109	3,165
Non-GAAP Metrics:				
Adjusted EBITDA ⁽¹⁾	\$ 65,713	\$ 52,156	\$68,411	\$ 44,964

	AS OF SEPTEMBER 30, 2020	
	ACTUAL	AS ADJUSTED ⁽²⁾
(in thousands)		
Balance sheet data:		
Cash and cash equivalents	\$ 29,937	\$
Total assets	1,020,380	
Total liabilities	522,842	
Total stockholders' equity	497,538	

⁽¹⁾ We define Adjusted EBITDA as net income (loss) excluding interest expense, provision (benefit) for income taxes, depreciation and amortization expense, intangible asset amortization, equity-based compensation expense, acquisition and integration expense and other items not indicative of our ongoing operating performance. We use Adjusted EBITDA to supplement GAAP measures of performance to evaluate the effectiveness of our business strategies, to make budgeting decisions, make certain compensation decisions, and to compare our performance against that of other peer companies using similar measures. In addition, it provides a useful measure for period-to-period comparisons of our business, as it removes the effect of certain non-cash expenses and other items not indicative of our ongoing operating performance. Management believes it is useful to investors and analysts to evaluate this non-GAAP measure on the same basis as management uses to evaluate our operating results.

Adjusted EBITDA is not calculated or presented in accordance with GAAP and other companies in our industry may calculate adjusted EBITDA differently than we do. As a result, this financial measure has limitations as an analytical and comparative tool and you should not consider this item in isolation, or as a substitute for analysis of our results as reported under GAAP. Adjusted EBITDA should not be considered a measure of discretionary cash available to us to invest in the growth of our business. In addition, in evaluating Adjusted EBITDA, you should be aware that in the future we may incur expenses similar to those eliminated in this presentation. Our presentation of Adjusted EBITDA should not be construed as an inference that our future results will be unaffected by unusual items.

The following table reconciles net income (loss) to adjusted EBITDA.

	NINE MONTHS ENDED		YEAR ENDED	
	SEPTEMBER 30, 2020	2019	2019	2018
	(in thousands)			
Adjusted EBITDA:				
Net income (loss)	\$ 5,050	\$ (2,911)	\$ (8,926)	\$(33,258)
Interest expense ^(a)	19,810	21,011	28,004	27,802
Provision (benefit) for income taxes ^(a)	4,696	(2,701)	(225)	697
Intangible asset amortization ^(a)	29,804	28,505	38,964	34,595
Depreciation and amortization expense ^(a)	1,836	2,140	2,596	2,416
Equity-based compensation expense ^(b)	2,286	1,141	1,691	1,711
Acquisition-related expense ^(c)	1,165	1,994	2,471	6,718
Integration expense ^(d)	57	501	546	2,822
Severance expense ^(e)	361	1,932	2,057	1,356
Reorganization expense ^(f)	190	172	222	—
Currency gain (loss) ^(a)	(190)	78	431	23
Gain (loss) on disposal of fixed assets ^(g)	9	10	113	91
Interest income ^(a)	(36)	(6)	(9)	(9)
Executive recruiting expense ^(h)	188	290	476	—
Transaction related expenses ⁽ⁱ⁾	487	—	—	—
Adjusted EBITDA	\$ 65,713	\$ 52,156	\$68,411	\$ 44,964

(a) Represents amounts as determined under GAAP.

(b) Represents expense related to equity-based compensation. Equity-based compensation has been, and will continue to be for the foreseeable future, a recurring expense in our business and an important part of our compensation strategy.

(c) Represents costs associated with mergers and acquisitions and any retention bonuses pursuant to the acquisitions.

(d) Represents integration costs related to post-acquisition integration activities.

(e) Represents charges for severance provided to former executives and non-executives.

(f) Represents expense related to reorganization, including legal entity reorganization.

(g) Represents the gain/loss related to disposal of fixed assets.

(h) Represents recruiting expenses related to hiring a CEO and other senior executives.

(i) Represents costs associated with our initial public offering that are not capitalized.

(2) The as adjusted balance sheet data as of September 30, 2020 gives effect to (i) the sale by us of _____ shares of our common stock in this offering at an assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us and (ii) the application of the net proceeds received by us from this offering to repay outstanding indebtedness under the Loan Agreement and a portion of our term loan under our Credit Agreement, as described in "Use of Proceeds."

A \$1.00 increase or decrease in the assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase or decrease, as applicable, on an as adjusted basis, cash and cash equivalents, total assets and total stockholders' equity by \$ _____ million, assuming the number of shares offered by us, as set forth on the front cover of this prospectus, remains the same and after deducting the assumed underwriting discount and estimated offering expenses payable by us and the application of the net proceeds thereof as described in "Use of Proceeds." An increase or decrease of 100,000 shares in the number of shares sold in this offering by us would increase or decrease, as applicable, on an as adjusted basis, cash and cash equivalents, total assets and total stockholders' equity by \$ _____ million, assuming an initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us and the application of the net proceeds thereof as described in "Use of Proceeds."

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the following risk factors together with other information in this prospectus, including our consolidated financial statements and related notes included elsewhere in this prospectus, before deciding whether to invest in shares of our common stock. The occurrence of any of the events described below could harm our business, financial condition, results of operations and growth prospects. In such an event, the trading price of our common stock may decline and you may lose all or part of your investment.

Risks Related to Our Industry

We compete in a competitive and highly fragmented market.

The market for our biosimulation products and related services for the biopharmaceutical industry is competitive and highly fragmented. In biosimulation software, we compete with other scientific software providers, technology companies, in-house development by biopharmaceutical companies, and certain open source solutions. In the technology-enabled services market, we compete with specialized companies, in-house teams at biopharmaceutical companies, academic and government institutions. In some standard biosimulation services, and in regulatory, and market access, we also compete with contract research organizations. Some of our competitors and potential competitors have longer operating histories in certain segments of our industry than we do and could have greater financial, technical, marketing, research and development and other resources. Some of our competitors offer products and services directed at more specific markets than those we target, enabling these competitors to focus a greater proportion of their efforts and resources on those specific markets. Some competing products are developed and made available at lower cost by government organizations and academic institutions, and these entities may be able to devote substantial resources to product development. Some clinical research organizations or technology companies may decide to enter into or expand their offerings in the biosimulation area, whether through acquisition or internal development. We also face competition from open source software initiatives, in which developers provide software and intellectual property free of charge, such as R and PK-Sim software. In addition, some of our customers spend significant internal resources in order to develop their own solutions. There can be no assurance that our current or potential competitors will not develop products, services or technologies that are comparable, or superior to, or will render obsolete, the products, services and technologies we offer. There can be no assurance that our competitors will not adapt more quickly than we do to technological advances and customer demands, thereby increasing such competitors' market share relative to ours. Any material decrease in demand for our technologies or services may have a material adverse effect on our business, financial condition and results of operations.

Deceleration in, or resistance to, the acceptance of model-informed biopharmaceutical discovery and development by regulatory authorities could damage our reputation or reduce the demand for our products and services.

The use of computer-aided modeling and simulation in the field of biopharmaceutical discovery and development has been evolving for many years. Support for the use of biosimulation in discovery and development from regulatory bodies, such as the FDA and EMA, has been critical to its rapid adoption by the biopharmaceutical industry. There has been a steady increase in the recognition by regulatory and academic institutions of the role that modeling and simulation can play in the biopharmaceutical development and approval process, as demonstrated by new regulations and guidance documents describing and encouraging the use of modeling and simulation in the biopharmaceutical discovery, development, testing and approval process, which has directly led to an increase in the demand for our services. Changes in government or regulatory policy, or a reversal in the trend toward increasing the acceptance of and reliance upon *in silico* data in the drug approval process, could decrease the demand for our products and services or lead regulatory authorities to cease use of, or to recommend against the use of, our products and services. This, in turn, could have a material adverse impact on our revenue and future growth.

Our software products are licensed by the FDA, the EMA and 15 other regulatory authorities, who use them in assessing new drug applications. These licenses, which accounted for 0.2% of our annual revenue in 2018, and 0.2% in 2019, are typically renewed on an annual basis, and there is no obligation for these regulatory authorities to renew these licenses at the same or any level. Although we do not believe that reduction or elimination of the use of any of our software products that are currently licensed by regulatory authorities would

have a direct impact on the use of those products by our industry customers, it could diminish our reputation and negatively impact our ability to effectively market and sell our software products, particularly if such move were part of a wider reversal of government or regulatory acceptance of *in silico* data.

Changes or delays in government regulation relating to the biopharmaceutical industry could decrease the need for some of the services we provide.

Governmental agencies throughout the world, but particularly in the United States where the majority of our customers are based, strictly regulate the biopharmaceutical development process. Our business involves helping biopharmaceutical companies strategically and tactically navigate the regulatory approval process. New or amended regulations are expected to result in higher regulatory standards and often additional revenues for companies that service these industries. However, some changes in regulations, such as a relaxation in regulatory requirements or the introduction of streamlined or expedited approval procedures, or an increase in regulatory requirements that we have difficulty satisfying or that make our regulatory strategy services less competitive, could eliminate or substantially reduce the demand for our regulatory services. Regulatory developments that could potentially increase demand for our services could also be postponed or not fully implemented. For example, the EMA issued proposed rules that would require our customers to publish suitably redacted clinical reports submitted as part of a regulatory application. We provide a technology-enabled service for automated redaction of these large, complex documents. The EMA has since delayed implementation of this requirement, reducing demand for our document redaction technology and services. Any material decrease or delay in demand for our technologies or services may have a material adverse effect on our business, financial condition and results of operations.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, or changes to governmental regulation that may be required as a result of judicial decisions, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, our business may be harmed.

Increasing competition, regulation and other cost pressures within the pharmaceutical and biotechnology industries, as well as delays in the drug discovery and development process, may reduce demand for our products and services and negatively impact our results of operations and financial condition.

Our pharmaceutical and biotechnology customers' demand for our products and services is driven by continued demand for their products, and dependent upon our customers' research and development needs and available funding. Demand for our customers' products could decline, and prices charged by our customers for their products may decline, as a result of increasing competition. In addition, our customers' expenses could continue to increase as a result of the higher costs of developing more complex drugs and biologics and complying with more onerous government regulations. A decrease in demand for our customers' products, pricing pressures associated with the sales of these products, and additional costs associated with product development could cause our customers to reduce or delay research and development expenditures.

Furthermore, our customers' profitability could decline as a result of efforts by government and third-party payors to reduce the cost of healthcare. Governments worldwide have increased efforts to expand healthcare coverage while at the same time curtailing and better controlling the increasing costs of healthcare. If cost-containment efforts or other measures substantially changing existing insurance models limit our customers' profitability, they may decrease research and development spending, which could decrease the demand for our services and materially adversely affect our growth prospects.

In the United States, over the past few years, there has been heightened governmental scrutiny over the manner in which biopharmaceutical companies set prices for their marketed products, which has resulted in several Congressional inquiries, and proposed and enacted legislation and regulations, guidance documents, and executive actions designed, among other things, to bring more transparency to product pricing, reform government program reimbursement methodologies for drug products, and provide procedures for the importation of certain prescription drugs authorized for sale in a foreign country. Individual states in the United States have also become increasingly active in implementing laws and regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access such as prior authorization requirements or right-to-try laws, and marketing cost disclosure and transparency measures, and, in some cases, mechanisms to encourage importation from other countries

and bulk purchasing. Furthermore, there has been increased interest by third-party payors and governmental authorities in reference-pricing systems and publication of discounts and list prices. Most recently, President Trump signed four Executive Orders on drug pricing directing the Secretary of the U.S. Department of Health and Human Services to take several steps to lower the costs of prescription drugs, including an executive order intended to ensure that the Medicare program pays no more for the most costly Medicare Part B drugs than any economically comparable country that is a member of the Organization for Economic Co-operation and Development. Any of these legislative, regulatory, or executive efforts could harm our customers' businesses, which could cause them to reduce their spending on research and development, which, in turn, could negatively impact our business. Furthermore, delays in the biopharmaceutical development cycle, particularly related to clinical trials being delayed or canceled, such as those caused by the recent COVID-19 pandemic, could also impact the demand for our products and services.

Because our products and services depend on our customers' research and development expenditures, our revenues may be materially negatively affected by any economic, competitive, regulatory, demand, or other market impact that decreases our customers' profitability or causes them to decrease or delay research and development spend. In such an event, our revenues may be reduced through increased downward pricing pressure, reduction in the scope of projects, delays or cancellations of ongoing projects, or our customers' shifting away from using third parties for their modeling and simulation work. Any material decrease in demand for our technologies or services may have a material adverse effect on our business, financial condition and results of operations.

Trends in research and development spending, the use of third parties by biopharmaceutical companies and a shift toward more research and development occurring at smaller biotechnology companies could adversely affect our growth potential, business, results of operations, financial condition and/or cash flows.

We provide biosimulation software platforms and services to the biopharmaceutical industry, both private and public companies as well as government and academic institutions, and our direct revenues, growth prospects and bookings are highly dependent on their research and development spending levels and use of third parties. Our customers determine the amounts that they will spend on research and development on the basis of, among other things, available resources and their need to develop new products, which, in turn, is dependent upon a number of factors, including their competitors' research, development, and production initiatives. Our customers finance their research and development spending from both private and public sources, including the capital markets. As a result, our revenues and financial performance may be adversely impacted if our customers are unable to obtain sufficient capital on acceptable terms to finance their research and development spending. Government and university-based funding of scientific research can vary for a number of reasons, including general economic conditions, political priorities, changes in the number of students and other demographic changes. Smaller biotechnology companies increasingly represent a larger proportion of industry research and development expenditures, and these small companies may not be as familiar with our company or products. If we are not successful in marketing to and establishing relationships with these smaller companies, our continued revenue growth could be impacted.

Industry trends, economic factors, regulatory developments, patent protection and political and other events and circumstances that affect the biopharmaceutical industry, such as volatility or declines in securities markets limiting capital and liquidity or decreased government funding of scientific research, or other circumstances that decrease our customers' research and development spending also affect us. Furthermore, our financial success depends upon the creditworthiness and ultimate collection of amounts due from our customers. If we are not able to collect amounts due from our customers in a timely fashion due to funding or liquidity challenges or for any other reason, we may be required to write-off significant accounts receivable and recognize bad debt expenses, which could materially and adversely affect our operating results. All of these events could have a material adverse effect on our business, results of operations or financial condition.

Consolidation within the biopharmaceutical industry may reduce the pool of potential customers for our products and services or reduce the number of licenses for our software products.

A significant portion of our customer base consists of biopharmaceutical companies, and our revenue is dependent upon expenditures by these customers. Consolidation through mergers or business failures within the biopharmaceutical industry may reduce the number of potential customers, particularly larger customers, for our products and services. Consolidation of major biopharmaceutical companies could result in consolidation of software licenses used by those companies, reduction of the number of individual user

licenses, or increased pressure to negotiate price discounts or other terms for service that are less favorable to us, which may have a material adverse effect on our revenue and financial condition. Personnel redundancies and layoffs by merged companies to achieve deal synergies would result in a commensurate reduction in total users of our software, reducing the license fees we charge based on number of users.

Reduction in the use of our products by academic institutions could have a negative impact on our current and future business, as well as our reputation.

We work closely with the global academic community on research, publications, and training of the next generation of biopharmaceutical scientists. Our software products are used in many academic institutions, often free of charge, where students, including PhD candidates, are first exposed to the types of tools and models that we offer. Upon graduating, these students often become employed by biopharmaceutical companies, where they continue to use our products and advocate for their continued use. If academic institutions decide to use competitive products, or develop their own biosimulation products, familiarity with our products by the future generations of pharmacometricians and clinical pharmacologists will be diminished, which could ultimately result in a reduction in demand for our products.

As customers increase their utilization of our products and services, we may be subject to additional pricing pressures.

One of our strategic goals is to increase the breadth and utilization of products and services we provide to our existing customers, such as increasing the number of user licenses for our software products, selling licenses for new software products and expanding the number and scope of services we provide to individual customers. As the total annual expenditure from a particular customer increases, we may experience pricing pressure, often from the customer's procurement department, in the form of requests for discounts or rebates, price freezes and less favorable payment terms. This could have an adverse impact on our profitability.

Risks Related to Our Business

Our continued revenue growth depends on our ability to successfully enter new markets, increase our customer base and expand our relationship and the products and services we provide to our existing customers.

Our products and services are used primarily by modeling and simulation specialists in pharmaceutical, biotechnology, and government research or regulatory organizations. We have relationships with many large companies in the biopharmaceutical sector, and part of our growth strategy entails deriving more revenues from these existing customers by expanding their use of our existing and new products and services. Our ability to increase revenues with existing customers may be limited without significant investment in marketing our existing products and services or developing new products, which could be time-consuming and costly and may not be successful. We are also focused on increasing the number of emerging or smaller biotechnology customers that we serve. These small companies are increasingly responsible for much of the discovery and development of new molecules and treatments, and their share of the total industry research and development discovery and development dollars is rapidly growing. Attracting these smaller customers may require us to expend additional resources on targeted marketing, as they may not be as familiar with our company or products. And although these small biotechnology companies tend to use third parties such as Certara for many of their development activities, these smaller companies also tend to be less financially secure. If their products are not successful or they have difficulty raising sufficient investment capital, they may not be able to timely or fully pay for our services, or they may terminate or decrease the scope of projects for which they use our products and services, which could adversely impact our revenues.

Our strategy also includes expanding into new markets, new geographies, and new areas within our existing markets, either organically or by acquiring other companies in these markets. For example, we recently acquired several QSP models in the field of neurodegenerative diseases and are currently creating a consortium of customers to further develop these models. If our strategies are not executed successfully, or we cannot integrate acquired models into our platform, our products and services may not achieve market acceptance or penetration in targeted new departments within our existing customers or new customers. We cannot guarantee that we will be able to identify new biosimulation or regulatory and market access technologies of interest to our customers, or develop or acquire them in a timely fashion. Even if we are able to identify and develop new technologies and biosimulation tools of interest, we may not be able to negotiate license agreements on acceptable terms, or at all. Some of our products, such as our QSP models, require significant time and investment to develop to a point where they can achieve market acceptance, and we may not be

able to develop them at a rate that matches market demand. We may also face more significant pricing pressure as we expand geographically and our customer profile evolves. For example, smaller biotechnology companies, or companies based in countries that have less developed economies, may not be able to afford our products and services at our customary rates. If we are unable to develop or acquire new services and products and/or create demand for those newly developed services and products, accelerate the development of products where there is a market demand, or maintain or increase our historic pricing levels, our future business, results of operations, financial condition and cash flows could be adversely affected.

Our business may be subject to risks arising from natural disasters and epidemic diseases, such as the recent COVID-19 pandemic.

We may be subject to risks related to natural disasters and public health crises, such as the global pandemic associated with COVID-19. Since its initial outbreak in late 2019, SARS-CoV-2, and the resulting disease COVID-19, has rapidly spread throughout the world. During the pandemic, our employees, contractors, suppliers and other partners have been and may continue to be hindered or prevented from conducting customary business activities. Most countries and public health organizations have recommended or mandated restrictions on non-essential travel or entry into certain jurisdictions, which has, among other things, impacted our ability to meet face-to-face with our customers.

The COVID-19 pandemic has also had a significant and sustained negative impact on the global economy and a negative impact on many of our customers. Many of our customers have experienced or may in the future be adversely impacted by supply chain interruptions, disruptions to pipeline development and clinical trials, decreased product demand (including due to reduced elective healthcare consumption and as a result of increased unemployment), costs associated with the COVID-19 pandemic and interruptions or delays in regulatory approvals due to the impact of the COVID-19 pandemic on the operations of certain regulatory authorities. We may also see a reduction in total users of our software due to layoffs resulting from the COVID-19 pandemic in the biopharmaceutical industry. These and other adverse impacts on our customers and economic conditions related to the COVID-19 pandemic may cause our customers to significantly scale back their operations or research and development spending and limit the use of third parties, which could have a material adverse effect on our business.

We have undertaken several actions to mitigate and/or limit the spread of COVID-19 amongst our employees, including restricting employee travel, closing our offices in compliance with local guidelines and, when reopening offices, implementing a number of safety measures, such as increasing sanitation, mandating social distancing or use of personal protective equipment, and limiting the number of employees at each location. Furthermore, even if we follow what we believe to be best practices, there can be no assurance that our measures will prevent the transmission of SARS-CoV-2 between employees. Any incidents of actual or perceived transmission may expose us to liability claims, adversely impact employee productivity and morale, and result in negative publicity and reputational harm.

Travel restrictions and the cancellation of industry conferences have significantly limited face-to-face interactions with existing and potential customers, which have traditionally been an effective avenue for developing new business. If our scientists and consultants are not able to effectively communicate and interact with our existing and potential customers remotely, a prolonged period of limited direct contact with customers could translate into reduced bookings and negatively impact our revenue generation.

The continued spread of COVID-19 could also adversely impact our business, financial condition or results of operations as a result of increased costs, negative impacts to our healthy workforce, or a sustained economic downturn. The extent to which the COVID-19 pandemic may impact our business in the future is highly uncertain and cannot be predicted. In addition, a recession or a prolonged period of depressed economic activity related to COVID-19 and measures taken to mitigate its spread could have a material adverse effect on our business, financial condition and results of operations.

In addition to the current COVID-19 pandemic, our business could be negatively impacted by other natural disasters, such as new disease epidemics, significant weather events, the outbreak of war, the escalation of hostilities and acts of terrorism or other "acts of God." The COVID-19 pandemic and such other events may also exacerbate a number of the other risks discussed in this section, any of which could have a material effect on us. We are a global company with offices in many countries. Disruptions in the infrastructure, either on a local or global scale, caused by these types of events could adversely affect our ability to serve our customers.

Although we have disaster recovery plans, carry business interruption insurance policies and typically have provisions in our contracts that protect us in certain *force majeure* type events, our coverage might not be adequate to compensate us for all losses that may occur.

Delays or defects in the release of new or enhanced software or other biosimulation tools may result in increased cost to us, delayed market acceptance of our products, diminished demand for our products, delayed or lost revenue, and liability.

Market acceptance of our products depends upon the continuous, effective and reliable operation of our software and other biosimulation tools and models. New or enhanced products or services can require long development and testing periods, which may result in delays in scheduled introduction. Our software solutions and biosimulation tools and models are inherently complex and may contain defects or errors. The risk of errors is particularly significant when a new product is first introduced or when new versions or enhancements of existing software solutions are released. Although we extensively test and conduct quality control on each new or enhanced biosimulation product before it is released to the market, there can be no assurance that significant errors will not be found in existing or future releases. As a result, in the months following the introduction of certain releases, we may need to devote significant resources to correct these errors. There can be no assurance, however, that all of these errors can be corrected. Many of our customers also require that new versions of our software be internally validated before implementing it, which can result in implementation delays or the decision to skip smaller updates altogether. Any errors, defects, disruptions or other performance problems with our products could hurt our reputation and may damage our customers' businesses. Any delays in the release schedule for new or enhanced products or services may delay market acceptance of these products or services and may result in delays in new customer orders for these new or enhanced products or services or the loss of customer orders, which may have a material adverse effect on our business, financial condition and results of operations.

To the extent that defects or errors cause our software or other biosimulation tools to malfunction and our customers' use of our products is interrupted, or the data derived from the use of our products is incorrect or incomplete, our customers may delay or withhold payment to us, cancel their agreements with us or elect not to renew, make service credit claims, warranty claims or other claims against us, and we could lose future sales. The occurrence of any of these events could result in diminishing demand for our software, a reduction of our revenues, an increase in collection cycles for accounts receivable, require us to increase our warranty provisions or incur the expense of litigation or substantial liability.

If our existing customers do not renew their software licenses, do not buy additional solutions from us or renew at lower prices, our business and operating results will suffer.

We expect to continue to derive a significant portion of our software revenues from the renewal of existing license agreements. As a result, maintaining the renewal rate of our existing customers and selling additional software solutions to them is critical to our future operating results. Factors that may affect the renewal rate for our customers and our ability to sell additional solutions to them include:

- the price, performance and functionality of our software solutions;
- the availability, price, performance and functionality of competing products;
- the effectiveness of our professional services;
- our ability to develop complementary software solutions, applications and services;
- the stability, performance and security of our technological infrastructure; and
- the business environment of our customers.

We deliver our software through either (i) a product license that permits our customers to install the software solution directly onto their own in-house hardware and use it for a specified term, or (ii) a subscription that allows our customers to access the cloud-based software solution for a specified term. Our customers have no obligation to renew their product licenses or subscriptions for our software solutions after the license term expires, which are typically between one and three years, and some of our contracts may be terminated or reduced in scope either immediately or upon notice. In addition, our customers may negotiate terms less advantageous to us upon renewal, which may reduce our revenues from these customers.

Our customers depend on our support organization to resolve technical issues relating to our solutions, as our software requires expert usage to fully exploit its capabilities. Any failure to offer high-quality technical support, or a market perception that we do not offer high-quality support, could adversely affect our renewal rates and our ability to sell our additional solutions to existing or to sell to prospective customers. Factors that are not within our control may also contribute to a reduction in our software revenues. For instance, our customers may reduce the number of their employees who are engaged in research and who would have use of our software, which would result in a corresponding reduction in the number of user licenses needed for some of our solutions and thus a lower aggregate renewal fee. The loss, reduction in scope or delay of a large contract, or the loss or delay of multiple contracts, could materially adversely affect our business.

Our future operating results also depend, in part, on our ability to sell new software solutions and licenses to our existing customers. For example, the willingness of existing customers to license our software will depend on our ability to scale and adapt our existing software solutions to meet the performance and other requirements of our customers, which we may not do successfully. If our customers fail to renew their agreements, renew their agreements upon less favorable terms or at lower fee levels or fail to purchase new software solutions and licenses from us, our revenues may decline and our future revenues may be constrained. Furthermore, our sales process is dependent on the reputation of our solutions and business and on positive recommendations from our existing customers. Any dissatisfaction from existing customers may adversely impact our ability to sell our solutions to new customers.

Our customers may delay or terminate contracts, or reduce the scope of work, for reasons beyond our control, or we may underprice or overrun cost estimates with our fixed-fee contracts, potentially resulting in financial losses.

Many of our technology-enabled service contracts may be terminated by the customer at its discretion immediately or after a short notice period without penalty. Customers terminate, delay or reduce the scope of these types of contracts for a variety of reasons, including but not limited to:

- lack of available funding or financing;
- mergers or acquisitions involving the customer;
- a change in customer priorities;
- delay or termination of a specific product candidate development program; and
- the customer decides to shift business to a competitor or to use internal resources.

As a result, contract terminations, delays and reductions in scope occur regularly in the normal course of our business. However, the delay, loss or reduction in scope of a large contract or multiple smaller contracts could result in under-utilization of our personnel, a decline in revenue and profitability and adjustments to our bookings, any or all of which could have a material adverse effect on our business, results of operations, financial condition and/or cash flows.

Many of our contracts with customers also provide for services on a fixed-price or fee-for-service with a cap basis. Accordingly, we bear the financial risk if we initially underprice our contracts or otherwise overrun our cost estimates. In these situations, we attempt to revise the scope of activity from the contract specifications and negotiate contract modifications shifting the additional cost to the customer, but are not always successful. If we fail to adequately price our contracts or if we experience significant cost overruns (including direct and indirect costs such as pass-through costs), or if we are delayed in, or fail to, execute contract modifications with customers increasing the scope of activity, our results of operations could be materially adversely affected. From time to time, we have had to commit unanticipated resources to complete projects, resulting in lower margins and profitability on those projects. We might experience similar situations in the future, which could have a material adverse impact on our results of operations and cash flows.

We depend on key personnel and may not be able to retain these employees or recruit additional qualified personnel, which could harm our business.

Our success depends to a significant extent on the continued services of our senior management and other key contributors throughout our business. As of November 9, 2020, approximately 300 of our employees held PhDs, PharmDs, or MDs. It is challenging to attract and retain critical and qualified employees because of the specialized scientific nature of our business and significant competition for qualified personnel in the biopharmaceutical industry. Many of our scientists also play a significant role in marketing and selling our

products and services to new and existing customers. If any of our senior scientists or members of senior management team, such as our CEO, CFO or division presidents, do not continue in their present positions, our operations could be disrupted. Compensation for our employees makes up our most significant fixed cost. Unexpected revenue shortfalls in the future may make it difficult for us to retain all of our employees. The loss of any key employee, or our inability to continue to recruit, retain and motivate key personnel, replace departed personnel in a timely fashion, or train our scientists to develop new business, may adversely impact our ability to compete effectively and grow our business and negatively affect our ability to meet our short and long-term financial and operational objectives.

We have government customers and have received government grants, which subject us to risks including early termination, audits, investigations, sanctions, or penalties.

We derive limited revenue from contracts with U.S. government, including the FDA and the Center for Disease Control and Prevention within the Department of Health and Human Services. We have also accepted limited grant funds from the U.S. government, whereby we are reimbursed for certain expenses incurred, subject to our compliance with the specific requirements of the applicable grant, including rigorous documentation requirements. We may enter into further contracts with the U.S. or foreign governments in the future, or accept additional grant funds. These subjects us to statutes and regulations applicable to companies doing business with the government. These types of contracts customarily contain provisions that give the government substantial rights and remedies, many of which are not typically found in commercial contracts and which are unfavorable to contractors, including provisions that allow the government to unilaterally terminate or modify our federal government contracts, in whole or in part, at the government's convenience or in the government's best interest, including if funds become unavailable to the applicable government agency. Under general principles of government contracting law, if the government terminates a contract for convenience, the terminated company may generally recover only its incurred or committed costs and settlement expenses and profit on work completed prior to the termination. If the government terminates a contract for default, the defaulting company may be liable for any extra costs incurred by the government in procuring undelivered items from another source.

In addition, government contracts and grants normally contain additional requirements that may increase our costs of doing business, reduce our profits, and expose us to liability for failure to comply with these terms and conditions. These requirements include, for example:

- compliance with complex regulations for procurement, formation, administration, and performance of government contracts under the Federal Acquisition Regulations, agency-specific regulations supplemental to the Federal Acquisition Regulations, and regulations specific to the administration of grants by the U.S. government;
- specialized disclosure and accounting requirements unique to government contracts and grants;
- mandatory financial and compliance audits that may result in potential liability for price or cost adjustments, recoupment of government funds after such funds have been spent, civil and criminal penalties, or administrative sanctions such as suspension or debarment from doing business with the U.S. government;
- public disclosures of certain contract, grant, and company information; and
- mandatory socioeconomic compliance requirements, including labor requirements, non-discrimination and affirmative action programs and environmental compliance requirements.

Government contracts and grants are also generally subject to greater scrutiny by the government, which can unilaterally initiate reviews, audits and investigations regarding our compliance with government contract and grant requirements. In addition, if we fail to comply with government contract laws, regulations and contract or grant requirements, our contracts and grants may be subject to termination or suspension, and we may be subject to financial and/or other liability under our contracts or under the Federal Civil False Claims Act. The False Claims Act's "whistleblower" provisions allow private individuals, including present and former employees, to sue on behalf of the U.S. government. The False Claims Act statute provides for treble damages and other penalties and, if our operations are found to be in violation of the False Claims Act, we could face other adverse action, including suspension or prohibition from doing business with the United States government. Any penalties, damages, fines, suspension, or damages could adversely affect our ability to operate our business and our financial results.

The U.S. government’s determination to award a future contract or contract option may be challenged by an interested party, and, if that challenge is successful, that future contract or option may be terminated.

The laws and regulations governing the procurement of goods and services by the United States government provide procedures by which other bidders and interested parties may challenge the award of a government contract at the U.S. Government Accountability Office (“GAO”) or in federal court. If we are awarded a government contract, such challenges or protests could be filed even if there are not any valid legal grounds on which to base the protest. If any such protests are filed, the government agency may decide to suspend our performance under the contract while such protests are being considered by the GAO or the applicable federal court, thus potentially delaying delivery of payment. In addition, we could be forced to expend significant funds to defend any potential award. If a protest is successful, the government may be ordered to terminate any one or more of our contracts and reselect bids. The government agencies with which we have contracts could even be directed to award a potential contract to one of the other bidders.

Our recent growth rates may not be sustainable or indicative of future growth.

We have experienced significant growth in recent years. Revenue increased from \$163.7 million for 2018 to \$208.5 million for 2019 and from \$154.7 million for the nine months ended September 30, 2019 to \$178.9 million for the nine months ended September 30, 2020. Our historical rate of growth may not be sustainable or indicative of our future rate of growth. We believe that our continued growth in revenue, as well as our ability to improve or maintain margins and profitability, will depend upon, among other factors, our ability to address the challenges, risks and difficulties described elsewhere in this “Risk Factors” section and the extent to which our various product offerings grow and contribute to our results of operations. We cannot provide assurance that we will be able to successfully manage any such challenges or risks to our future growth. In addition, our customer base may not continue to grow or may decline due to a variety of possible risks, including increased competition, changes in the regulatory landscape and the maturation of our business. Any of these factors could cause our revenue growth to decline and may adversely affect our margins and profitability. Failure to continue our revenue growth or improve margins would have a material adverse effect on our business, financial condition and results of operations. You should not rely on our historical rate of revenue growth as an indication of our future performance.

We may acquire other companies or technologies, which could divert our management’s attention, result in additional dilution to our stockholders, and otherwise disrupt our operations and adversely affect our operating results.

We may in the future seek to acquire or invest in businesses, solutions or technologies that we believe could complement or expand our solutions, enhance our technical capabilities or otherwise offer growth opportunities. The pursuit of potential acquisitions may divert the attention of management and cause us to incur various expenses in identifying, investigating and pursuing suitable acquisitions, whether or not they are consummated.

If we acquire additional businesses, we may not be able to integrate the acquired personnel, operations and technologies successfully, effectively manage the combined business following the acquisition or preserve the operational synergies between our business units that we underwrite at the time of the acquisition. We cannot assure that following any acquisition we would achieve the expected synergies to justify the transaction, due to a number of factors, including:

- inability to integrate or benefit from acquired technologies or services in a profitable manner;
- unanticipated costs or liabilities associated with the acquisition;
- incurrence of acquisition-related costs;
- difficulty integrating the accounting systems, operations and personnel of the acquired business;
- difficulties and additional expenses associated with supporting legacy products and hosting infrastructure of the acquired business;
- difficulty converting the customers of the acquired business onto our solutions and contract terms, including disparities in the revenues, licensing, support or professional services model of the acquired company;
- diversion of management’s attention from other business concerns;
- adverse effects to our existing business relationships with business partners and customers as a result of the acquisition;

- the potential loss of key employees;
- use of resources that are needed in other parts of our business; and
- use of substantial portions of our available cash to consummate the acquisition.

In addition, a significant portion of the purchase price of companies we acquire may be allocated to acquired goodwill and other intangible assets, which must be assessed for impairment at least annually. In the future, if our acquisitions do not yield expected returns, we may be required to take charges to our operating results based on this impairment assessment process, which could adversely affect our results of operations.

Acquisitions could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our operating results. In addition, if an acquired business fails to meet our expectations, our operating results, business and financial position may suffer.

Our estimated addressable market is subject to inherent challenges and uncertainties. If we have overestimated the size of our addressable market or the various markets in which we operate, our future growth opportunities may be limited.

Our TAM is based on publicly available third-party market research and internal estimates regarding the size of our markets, and is subject to significant uncertainty and is based on assumptions that may not prove to be accurate. We base the TAM for our business off our current core markets, biosimulation, regulatory science, and market access. These estimates, as well as the estimates and forecasts in this prospectus relating to the size and expected growth of the markets in which we operate, may change or prove to be inaccurate. While we believe the information on which we base our TAM is generally reliable, such information is inherently imprecise. In addition, our expectations, assumptions and estimates of future opportunities are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described herein. If third-party or internally generated data prove to be inaccurate or we make errors in our assumptions based on that data, our future growth opportunities may be affected. If our TAM, or the size of any of the various markets in which we operate, proves to be inaccurate, our future growth opportunities may be limited and there could be a material adverse effect on our prospects, business, financial condition and results of operations.

Our software and service sales cycle can vary and be long and unpredictable.

The timing of sales of our software solutions or technology-enabled services is difficult to forecast because of the length and unpredictability of our sales cycle. We sell our solutions primarily to biopharmaceutical companies, and our sales cycles can be as long as nine to twelve months or longer. Furthermore, the length of time that potential customers devote to their testing and evaluation, contract negotiation, and budgeting processes varies significantly, depending on the size of the organization and the nature of their needs. Accordingly, we might devote substantial time and effort to a particular unsuccessful sales effort, and as a result, we could lose other sales opportunities or incur expenses that are not offset by an increase in revenue, which could have a material adverse effect on our business, financial condition and results of operations.

We are subject to risks associated with the operation of a global business.

We derive a significant portion of our total revenue from our operations in international markets. During the year ended December 31, 2019 and the nine months ended September 30, 2020, 27% and 25%, respectively, of our revenues were transacted in foreign currencies, the majority of which included the British pound sterling, the euro and Japanese yen. Our global business may be affected by local economic conditions, including inflation, recession and currency exchange rate fluctuations. Changes in the value of the U.S. dollar relative to other currencies could result in material foreign currency exchange rate fluctuations and, as a result, our net earnings could be materially adversely affected. In addition, political and economic changes, including international conflicts and terrorist acts, throughout the world may interfere with our or our customers' activities in particular locations and result in a material adverse effect on our business, financial condition and operating results. Potential trade restrictions, exchange controls, adverse tax consequences and legal restrictions may affect our revenue from customers located outside the United States and the repatriation of funds into the United States. Also, we could be subject to unexpected changes in regulatory requirements, the difficulties of compliance with a wide variety of foreign laws and regulations, potentially negative consequences from changes in or interpretations of U.S. and foreign tax laws, import and export licensing requirements and longer accounts receivable cycles in certain foreign countries. Foreign currency exchange

rate hedges, transactions, re-measurements, or translations could also materially impact our financial results. These risks, individually or in the aggregate, could have an adverse effect on our results of operations and financial condition.

We are subject to the FCPA and the Bribery Act and similar anti-corruption laws and regulations in other countries. Violations of these laws and regulations could harm our reputation and business, or materially adversely affect our business, results of operations, financial condition and/or cash flows.

We operate in numerous countries around the world and are subject to the FCPA, the Bribery Act and similar anti-bribery laws in the countries in which we operate. Our business involves sales to government and state-owned agencies and brings us and others acting on our behalf, into contact with government officials around the world. The FCPA and the Bribery Act prohibit us and our officers, directors, employees and third parties acting on our behalf, including agents, from corruptly offering, promising, authorizing or providing anything of value to a “foreign official” for the purposes of influencing official decisions or obtaining or retaining business or otherwise obtaining favorable treatment. The FCPA further requires us to make and keep books, records and accounts that accurately reflect transactions and dispositions of assets and to maintain a system of adequate internal accounting controls. The Bribery Act also prohibits “commercial” bribery and accepting bribes.

Although our officers, directors, employees, distributors, and agents are required to comply with these laws, we cannot be sure that our internal policies and procedures will always protect us from liability for violations of these laws committed by persons associated with us, including our employees or third parties acting on our behalf. Violations of anti-corruption laws, or even allegations of such violations, could disrupt our business and result in a material adverse effect on our reputation, business, results of operations, financial condition and/or cash flows. For example, violations may result in criminal or civil penalties, disgorgement of profits, related stockholder lawsuits, debarment from government contracting and other remedial measures.

Our failure to comply with trade compliance and economic sanctions laws and regulations of the United States and applicable international jurisdictions could materially adversely affect our reputation and results of operations

We must operate our business in compliance with applicable economic and trade sanctions laws and regulations, such as those administered and enforced by the U.S. Department of Treasury’s Office of Foreign Assets Control, the U.S. Department of State, the U.S. Department of Commerce, the United Nations Security Council and other relevant sanctions authorities. Our global operations expose us to the risk of violating, or being accused of violating, economic and trade sanctions laws and regulations. Our failure to comply with these laws and regulations may expose us to reputational harm as well as significant penalties, including criminal fines, imprisonment, civil fines, disgorgement of profits, injunctions and debarment from government contracts, as well as other remedial measures. Investigations of alleged violations can be expensive and disruptive. Despite our compliance efforts and activities we cannot assure compliance by our employees or representatives for which we may be held responsible, and any such violation could materially adversely affect our reputation, business, financial condition and results of operations.

Current and future litigation against us, which may arise in the ordinary course of our business, could be costly and time consuming to defend.

We are subject to claims that arise in the ordinary course of business, such as claims brought by our customers in connection with commercial disputes, employment claims made by our current or former employees, or claims brought by third-parties for failure to adequately protect their personal data. Third parties may in the future assert intellectual property rights to technologies that are important to our business and demand back royalties or demand that we license their technology. Litigation may result in substantial costs and may divert management’s attention and resources, which may seriously harm our business, overall financial condition and operating results. Insurance may not cover such claims, may not be sufficient for one or more of such claims and may not continue to be available on terms acceptable to us. A claim brought against us that is uninsured or underinsured could result in unanticipated costs, negatively affecting our business, financial condition and results of operations.

Our insurance coverage may not be sufficient to avoid material impact on our financial position resulting from claims or liabilities against us, and we may not be able to obtain insurance coverage in the future.

We maintain insurance coverage for protection against many risks of liability, including professional errors and omissions, breach of fiduciary duty, and cybersecurity risks. The extent of our insurance coverage is under

continuous review and is modified as we deem it necessary. Despite this insurance, it is possible that claims or liabilities against us may have not be fully insured, or our insurance carriers may contest coverage, which could have a material adverse impact on our financial position or results of operations. In addition, we may not be able to obtain any insurance coverage, or adequate insurance coverage, when our existing insurance coverage expires.

If we fail to perform our services in accordance with contractual requirements, regulatory standards and ethical considerations, we could be liable for significant costs or penalties and our reputation could be harmed.

The services we provide to biopharmaceutical companies and other customers are complex and subject to contractual requirements, regulatory standards and ethical considerations. For example, some of our services must adhere to regulatory requirements of the FDA governing our activities relating to preclinical studies and clinical trials, including Good Laboratory Practices and Good Clinical Practices. Additionally, we are subject to compliance with FDA's regulations set forth in part 11 of title 21 of the Code of Federal Regulations, which relates to the creation, modification, maintenance, storage, retrieval, or transmittal of electronic records submitted to the FDA. We may be subject to inspection by regulatory authorities in connection with our customers' marketing applications and other regulatory submissions. If we fail to perform our services in accordance with regulatory requirements, regulatory authorities may take action against us or our customers for failure to comply with applicable regulations governing the development and testing of therapeutic products. Regulatory authorities may also or disqualify certain data or analyses from consideration in connection with applications for regulatory approvals, which would result in our customers not being able to rely on our services in connection with their regulatory submissions and may subject our customers to additional or repeat clinical trials and delays in the development and regulatory approval process. Mistakes in providing services to our customers, such as dosing models, could affect medical decisions for patients in clinical trials and create liability for personal injury. Such actions may include sanctions, such as warning or untitled letters, injunctions or failure of such regulatory authorities to grant marketing approval of products, delay, suspension or withdrawal of approvals, license revocation, loss of accreditation, product seizures or recalls, operational restrictions, civil or criminal penalties or prosecutions, damages or fines. Customers may also bring claims against us for breach of our contractual obligations or errors in the outcomes of our products or services, may terminate their contracts with us and/or may choose not to award further work to us. Any such action could have a material adverse effect on our reputation, business, financial condition and results of operations.

We derive a significant percentage of our revenues from a concentrated group of customers and the loss of more than one of our major customers could materially and adversely affect our business, results of operations and/or financial condition.

Our ten largest customers accounted for 28% and 29% of revenues for the year ended December 31, 2019 and the nine months ended September 30, 2020, respectively. The loss of any of our major customers could have a material adverse effect on our results of operations and financial condition. We may not be able to maintain our customer relationships, and our customers may delay payment under, or fail to renew, their agreements with us, which could adversely affect our business, results of operations or financial condition. Any reduction in the amount of revenues that we derive from these customers, without an offsetting increase in new sales to other customers, could have a material adverse effect on our operating results. A significant change in the liquidity or financial position of our customers could also have a material adverse effect on the collectability of our accounts receivable, our liquidity, and our future operating results.

Even if this offering is successful, we may need additional funding. If we are unable to raise additional capital on terms acceptable to us or at all or generate cash flows necessary to maintain or expand our operations, we may not be able to compete successfully, which would harm our business, results of operations, and financial condition.

We expect to devote substantial financial resources to our ongoing and planned activities, including the continued investment in our biosimulation software platform. Furthermore, upon the closing of this offering, we expect to incur additional costs associated with operating as a public company.

As of September 30, 2020 we had cash and cash equivalents of \$29.9 million. We believe that the net proceeds from this offering, together with our existing cash and cash equivalents will be sufficient to fund our operations and capital expenditure requirements for at least the next 12 months. However, we have based this estimate on assumptions that may prove to be wrong, and our operating plans may change as a result of many factors currently unknown to us. As a result, we could deplete our capital resources sooner than we currently expect.

Our future capital requirements will depend on many factors, including:

- the growth of our revenue;
- the growth of our employee base;
- the timing and launch of new products, for example QSP and QSTS consortia;
- the continued expansion of sales and marketing activities; and
- mergers and acquisitions of technologies or services complementing or extending our biosimulation, regulatory science and market access businesses.

In the event that we require additional financing, we may not be able to raise such financing on terms acceptable to us or at all. In addition, we may seek additional capital due to favorable market conditions or strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. If we are unable to raise additional capital on terms acceptable to us or at all or generate cash flows necessary to maintain or expand our operations and invest in our computational platform, we may not be able to compete successfully, which would harm our business, operations, and financial condition.

Our bookings might not accurately predict our future revenue, and we might not realize all or any part of the anticipated revenue reflected in our backlog.

Our bookings represent anticipated revenue for work not yet completed or performed under a signed contract or purchase order where there is sufficient or reasonable certainty about the customer's ability and intent to fund and commence the software or services. Bookings vary from period to period depending on numerous factors, including sales performance and the overall health of the biopharmaceutical industry, among others. Once work begins, we recognize direct revenue over the life of the contract based on our performance of services under the contract. Contracts may be terminated or delayed by our customers for reasons beyond our control. To the extent projects are delayed, the anticipated timing of our direct revenue could be materially affected.

In the event a customer terminates a contract, we are generally entitled to be paid for services rendered through the termination date and for services provided in winding down the project. However, we are generally not entitled to receive the full amount of direct revenue reflected in our bookings in the event of a contract termination. A number of factors may affect bookings and the direct revenue generated from our bookings, including:

- the size, complexity and duration of solutions;
- changes in the scope of work during the course of a project; and
- the cancellation or delay of a solution.

Our bookings for the year ended December 31, 2019 were \$259.5 million compared to bookings of \$227.5 million for the year ended December 31, 2018. Our bookings for the nine months ended September 30, 2020 were \$204.0 million. Although an increase in bookings will generally result in an increase in future direct revenue to be recognized over time (depending on future contract modifications, contract cancellations and other adjustments), an increase in bookings at a particular point in time does not necessarily correspond to an increase in direct revenues during a particular period. The timing and extent to which bookings will result in direct revenue depends on many factors, including the timing of commencement of work, the rate at which we perform services, scope changes, cancellations, delays, receipt of regulatory approvals and the nature, duration, size, complexity and phase of the studies. In addition, delayed projects remain in bookings until they are canceled. As a result of these factors, our bookings are not necessarily a reliable indicator of future direct revenue and we might not realize all or any part of the direct revenue from the authorizations in bookings as of any point in time.

Risks Related to Intellectual Property, Information Technology and Data Privacy

We rely upon third-party providers of cloud-based infrastructure to host our software solutions. Any disruption in the operations of these third-party providers, limitations on capacity or interference with our use could adversely affect our business, financial condition and results of operations.

We outsource substantially all of the infrastructure relating to our hosted software solutions to third-party hosting services. Customers of our hosted software solutions need to be able to access our software platform at any time, without interruption or degradation of performance, and we provide them with service-level

commitments with respect to uptime. Our hosted software solutions depend on protecting the virtual cloud infrastructure hosted by third-party hosting services by maintaining its configuration, architecture, features and interconnection specifications, as well as the information stored in these virtual data centers, which is transmitted by third-party internet service providers. Any limitation on the capacity of our third-party hosting services could impede our ability to onboard new customers or expand the usage of our existing customers, which could adversely affect our business, financial condition and results of operations. In addition, any incident affecting our third-party hosting services' infrastructure that may be caused by cyber-attacks, natural disasters, fire, flood, severe storm, earthquake, power loss, telecommunications failures, terrorist or other attacks and other similar events beyond our control could negatively affect our cloud-based solutions. Work-from-home and other measures introduced to mitigate the spread of the COVID-19 pandemic have impacted our third-party vendors by increasing operational challenges and risks, including vulnerabilities to cybersecurity and information technology infrastructure threats. A prolonged service disruption affecting our cloud-based solutions for any of the foregoing reasons would negatively impact our ability to serve our customers and could damage our reputation with current and potential customers, expose us to liability, cause us to lose customers or otherwise harm our business. We may also incur significant costs for using alternative equipment or taking other actions in preparation for, or in reaction to, events that damage the third-party hosting services we use.

In the event that our service agreements with our third-party hosting services are terminated, or there is a lapse of service, elimination of services or features that we utilize, interruption of internet service provider connectivity or damage to such facilities, we could experience interruptions in access to our platform as well as significant delays and additional expense in arranging or creating new facilities and services and/or re-architecting our hosted software solutions for deployment on a different cloud infrastructure service provider, which could adversely affect our business, financial condition and results of operations.

If we are not able to reliably meet our data storage and management requirements, or if we experience any failure or interruption in the delivery of our services over the internet, customer satisfaction and our reputation could be harmed and customer contracts may be terminated.

As part of our current business model, the portion of our software that is delivered over the internet as SaaS is increasing, and we store and manage significant data for our customers, resulting in substantial information technology infrastructure and ongoing technological challenges, which we expect to continue to increase over time. If we do not reliably meet these data storage and management requirements, or if we experience any failure or interruption in the delivery of our services over the internet, customer satisfaction and our reputation could be harmed, leading to reduced revenues and increased expenses. Our hosting services are subject to service-level agreements and, in the event that we fail to meet guaranteed service or performance levels, we could be subject to customer credits or termination of these customer contracts. If the cost of meeting these data storage and management requirements increases, our results of operations could be harmed.

Our software solutions utilize third-party open source software, and any failure to comply with the terms of one or more of these open source licenses could adversely affect our business, subject us to litigation and create potential liability.

Some of our software solutions utilize software covered by open source licenses, and we expect to continue to incorporate open source software in our solutions in the future. Open source software is typically freely accessible, usable and modifiable, and is used by our development team in an effort to reduce development costs and speed up the development process. Use of open source software also in some respects entails greater risks than use of third party commercial software, as open source licensors generally do not provide warranties or other contractual protections regarding infringement claims or the quality of the code, including with respect to security vulnerabilities.

Although we have processes intended to fully comply with all license requirements in our software, certain open source software licenses require, among other things, that a licensor that distributes the open source software as a component of the licensor's proprietary software, to provide or offer to provide to the customer-licensee part or all of the source code to the licensor's proprietary software. If the owner of the copyright of the relevant open source software were to allege that we had not complied with the conditions of one or more of these licenses, we could be required to incur significant legal expenses defending against such allegations and could be subject to significant damages, enjoined from the sale of our solutions that contain the open source software and required to comply with onerous conditions or restrictions on these solutions, which

could disrupt the distribution and sale of these solutions. Litigation or other enforcement actions initiated by a copyright owner could have a negative effect on our business, financial condition and results of operations, or require us to devote additional research and development resources to change our solutions. Moreover, we could effectively be required to publicly release the affected portions of our source code, re-engineer all or a portion of our solutions or otherwise be limited in the licensing of our solutions, each of which could reduce or eliminate the value of our solutions. Disclosing our proprietary source code could allow our competitors to create similar products with lower development effort and time and ultimately could result in a loss of sales. Any of these events could create liability for us and damage our reputation, which could have a material adverse effect on our revenue, business, results of operations and financial condition and the market price of our shares.

If our security measures are breached or unauthorized access to customer data is otherwise obtained, our solutions may be perceived as not being secure, customers may reduce the use of or stop using our solutions and we may incur significant liabilities.

The evolution of technology systems introduces ever more complex security risks that are difficult to predict and defend against. An increasing number of companies, including those with significant online operations, have recently disclosed breaches of their security, some of which involved sophisticated tactics and techniques allegedly attributable to criminal enterprises or nation-state actors. While we believe that we have taken appropriate measures to prevent unintended access to the data we hold (including implementing security and privacy controls, training our workforce and implementing new technology) and we continue to improve and enhance our systems in this regard, our efforts may not always be successful. In addition, we do not know whether our current practices will be deemed sufficient under applicable laws or whether new regulatory requirements might make our current practices insufficient.

Our solutions involve the collection, analysis and retention of our customers' proprietary information related to their drug development efforts, including clinical data. Unauthorized access to this information or data, whether by third-party action or employee error, and whether deliberate or unintentional, could result in the loss of information, litigation, indemnity obligations, damage to our reputation and other liability. Our increased reliance on remote access to our information systems due to the COVID-19 pandemic has increased our exposure to potential cybersecurity breaches and the risk of loss or exposure of such information and data. Despite measures designed to prevent, detect, address, and mitigate cybersecurity incidents, such incidents may occur. Additionally, we rely on third-parties and their security procedures for the secure storage, processing, maintenance, and transmission of information that is critical to our operations and such third-parties may also suffer cybersecurity incidents. Depending on their nature and scope, this could potentially result in the misappropriation, destruction or unavailability of critical data and confidential or proprietary information (our own or that of third parties, including information about our customers and employees) and the disruption of business operations.

If there is a cybersecurity incident and we know or suspect that certain personal information has been accessed, or used inappropriately, we may need to inform the affected individuals and may be subject to significant fines and penalties. Further, under certain regulatory schemes, such as the California Consumer Privacy Act (the "CCPA"), individuals may bring private claims and we may be liable for statutory damages. Further, if the technical and operational solutions we have adopted to maintain data security fail, our existing and potential customers may lose confidence in our ability to maintain the confidentiality of their intellectual property, we may be subject to breach of contract claims by our customers and we may suffer reputational and other harm as a result. Our insurance may not be adequate to cover losses associated with such events, and in any case, such insurance may not cover all of the types of costs, expenses and losses we could incur to respond to and remediate a security breach. Defending against investigations, claims or litigation based on any security breach or incident, regardless of their merit, will be costly and may cause reputation harm. The successful assertion of one or more large claims against us that exceed available insurance coverage, denial of coverage as to any specific claim, or any change or cessation in our insurance policies and coverages, including premium increases or the imposition of large deductible requirements, could have a material adverse effect on our reputation, business, financial condition and results of operations.

We are subject to numerous privacy and data security laws and related contractual requirements and our failure to comply with those obligations could cause us significant harm.

In the normal course of our business, we collect, process, use and disclose information about individuals, including protected health information and other patient data, as well as information relating to health

professionals and our employees. The collection, processing, use, disclosure, disposal and protection of such information is highly regulated both in the United States and other jurisdictions, including but not limited to, under HIPAA, as amended by HITECH; U.S. state privacy, security and breach notification and healthcare information laws; the European Union's GDPR; and other European privacy laws as well as privacy laws being adopted in other regions around the world. These laws and regulations are complex and their interpretation is rapidly evolving, making implementation and enforcement, and thus compliance requirements, ambiguous, uncertain and potentially inconsistent. In addition, our collection, processing, use, disclosure, and protection of information is subject to related contractual requirements. Compliance with such laws and related contractual requirements may require changes to our collection, use, transfer, disclosure, or other processing of information about individuals, and may thereby increase compliance costs. Failure to comply with such laws and/or related contractual obligations could result in regulatory enforcement or claims against us for breach of contract, or may lead third parties to terminate their contracts with us and/or choose not to work with us in the future. Should this occur, there could be a material adverse effect on our reputation, business, financial condition, and results of operations.

These regulations often govern the use, handling and disclosure of information about individuals, including medical information and require the use of standard contracts, privacy and security standards and other administrative simplification provisions. In relation to HIPAA, we do not consider our service offerings to generally cause us to be subject as a covered entity; however, in certain circumstances, we are subject to HIPAA as a business associate and may enter into business associate agreements.

Additionally, the Federal Trade Commission (the "FTC") and many state attorneys general are interpreting existing federal and state consumer protection laws to impose evolving standards for the online collection, use, dissemination and security of information about individuals, including health-related information. Courts may also adopt the standards for fair information practices promulgated by the FTC, which concern consumer notice, choice, security and access. Consumer protection laws require us to publish statements that describe how we handle information about individuals and choices individuals may have about the way we handle their information. If such information that we publish is considered untrue, we may be subject to government claims of unfair or deceptive trade practices, which could lead to significant liabilities and consequences. Furthermore, according to the FTC violating consumers' privacy rights or failing to take appropriate steps to keep information about consumers secure may constitute unfair acts or practices in or affecting commerce in violation of Section 5(a) of the FTC Act.

In addition, certain states have adopted robust privacy and security laws and regulations. Such laws and regulations will be subject to interpretation by various courts and other governmental authorities, thus creating potentially complex compliance issues for us and our future customers and strategic partners. For example, the CCPA, which took effect in 2020, imposes obligations and restrictions on businesses regarding their collection, use, and sharing of personal information and provides new and enhanced data privacy rights to California residents, such as affording them the right to access and delete their personal information and to opt out of certain sharing of personal information. Protected health information that is subject to HIPAA is excluded from the CCPA, however, information we hold about individuals which is not subject to HIPAA would be subject to the CCPA. It is unclear how HIPAA and the other exceptions may be applied under the CCPA. The CCPA may increase our compliance costs and potential liability. Many similar privacy laws have been proposed at the federal level and in other states.

The GDPR became enforceable on May 25, 2018. The GDPR regulates our processing of personal data, and imposes stringent requirements. The GDPR includes sanctions for violations up to the greater of €20 million or 4.0% of worldwide gross annual revenue and applies to services providers such as us. In addition, from the beginning of 2021 (when the transitional period following Brexit expires), we will have to comply with the GDPR and also the UK GDPR, with each regime having the ability to fine up to the greater of €20 million (£17 million) or 4% of global turnover. The relationship between the United Kingdom and the European Union in relation to certain aspects of data protection law remains unclear, for example how data transfers between EU member states and the United Kingdom will be treated and the role of the Information Commissioner's Office following the end of the transitional period. These changes will lead to additional costs and increase our overall risk exposure.

Recent legal developments in Europe have created complexity and uncertainty regarding transfers of personal data from the EEA to the United States, e.g. on July 16, 2020, the Court of Justice of the European Union

("CJEU") invalidated the EU-US Privacy Shield Framework ("Privacy Shield") under which personal data could be transferred from the EEA to U.S. entities who had self-certified under the Privacy Shield scheme. While the CJEU upheld the adequacy of the standard contractual clauses (a standard form of contract approved by the European Commission as an adequate personal data transfer mechanism, and potential alternative to the Privacy Shield), it made clear that reliance on them alone may not necessarily be sufficient in all circumstances; this has created uncertainty. We have previously relied on our own Privacy Shield certification and our relevant customers' and third parties' Privacy Shield certification(s) for the purposes of transferring personal data from the EEA to the United States in compliance with the GDPR's data export conditions. We also currently rely on the standard contractual clauses to transfer personal data outside the EEA, including to the United States.

We believe we maintain adequate processes and systems to ensure our and our customers' compliance with the requirements of the GDPR, but it is possible that we could fail to comply or that we could incur liability due to the acts or omissions of our customers. Further, these recent developments will require us to review and amend the legal mechanisms by which we make and/or receive personal data transfers to/ in the United States. In the event we are not able to secure indemnification or the indemnification and any insurance coverage is inadequate to cover our losses, we could suffer significant financial, operational, reputational and other harm and our business, results of operations, financial condition and/or cash flows could be materially adversely affected. Further, as supervisory authorities issue further guidance on personal data export mechanisms, including circumstances where the standard contractual clauses cannot be used, and/or start taking enforcement action, we could suffer additional costs, complaints and/or regulatory investigations or fines, and/or if we are otherwise unable to transfer personal data between and among countries and regions in which we operate, it could affect the manner in which we provide our services, the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results.

The United States, the European Union, and other jurisdictions where we operate continue to issue new, and enhance existing, privacy and data security protection regulations related to the collection, use, disclosure, disposal and protection of information about individuals, including medical information. Privacy and data security laws are rapidly evolving both in the United States and internationally, and the future interpretation of those laws is somewhat uncertain. For example, we do not know how E.U. regulators will interpret or enforce many aspects of the GDPR and some regulators may do so in an inconsistent manner. In the United States, privacy and data security is an area of emphasis for some but not all state regulators, and new legislation has been and likely will continue to be introduced at the state and/or federal level. For example, there is a new act on the ballot in California, the California Privacy Rights Act, which may go into effect in 2023. Additional legislation or regulation might, among other things, require us to implement new security measures and processes or bring within the legislation or regulation de-identified health or other information about individuals, each of which may require substantial expenditures or limit our ability to offer some of our services.

If we fail to comply with certain healthcare laws, including fraud and abuse laws, we could face substantial penalties and our business, results of operations, financial condition and prospects could be adversely affected.

Even though we do not order healthcare services or bill directly to Medicare, Medicaid or other third party payors, as a result of contractual, statutory or regulatory requirements, we may be subject to healthcare fraud and abuse laws of both the federal government and the states in which we conduct our business. Because of the breadth of these laws and the narrowness of available statutory and regulatory exceptions, it is possible that some of our business activities could be subject to challenge under one or more of such laws. If we or our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, imprisonment and the curtailment or restructuring of our operations, any of which could materially adversely affect our ability to operate our business and our financial results.

We may be unable to adequately enforce or defend our ownership and use of our intellectual property and other proprietary rights.

Our success is dependent upon our intellectual property and other proprietary rights. We rely upon a combination of trademark, trade secret, copyright, patent and unfair competition laws, as well as contractual provisions, to protect our intellectual property and other proprietary rights. In addition, we attempt to protect our intellectual property and proprietary information by enforcing cyber and physical security measures and

requiring our employees and certain of our consultants to enter into confidentiality, non-competition and assignment-of-inventions agreements. The steps we take to protect these rights may not be adequate to prevent misappropriation of our technology by third parties or may not be adequate under the laws of some foreign countries, which may not protect our intellectual property rights to the same extent as do the laws of the United States. Our attempts to protect our intellectual property may be challenged by others or invalidated through administrative process or litigation, and agreement terms that address non-competition are difficult to enforce in many jurisdictions and may not be enforceable in any particular case. In addition, there remains the possibility that others will “reverse engineer” our software products in order to introduce competing products, or that others will develop competing technology independently. If we resort to legal proceedings to enforce our intellectual property rights or to determine the validity and scope of the intellectual property or other proprietary rights of others, the proceedings could be burdensome and expensive, even if we were to prevail. The failure to adequately protect our intellectual property and other proprietary rights may have a material adverse effect on our business, results of operations or financial condition.

Third parties may initiate legal proceedings alleging that we are infringing, misappropriating or otherwise violating their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Our commercial success depends upon our ability to develop, market and sell our products and services, allowing our customers to use our proprietary technologies without infringing, misappropriating or otherwise violating the intellectual property and proprietary rights of third parties. There is considerable patent and other intellectual property litigation in the software, pharmaceutical and biotechnology industries. We may become party to, or be threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our technology and product candidates.

The legal threshold for initiating litigation or contested proceedings is low, so that even lawsuits or proceedings with a low probability of success might be initiated and require significant resources to defend. Litigation and contested proceedings can also be expensive and time-consuming, and our adversaries in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than we can. The risks of being involved in such litigation and proceedings may increase as we gain the greater visibility associated with being a public company. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future, regardless of merit. We may not be aware of all such intellectual property rights potentially relating to our technology, or we may incorrectly conclude that third-party intellectual property is invalid or that our activities do not infringe such intellectual property. Thus, we do not know with certainty that our technology does not and will not infringe, misappropriate or otherwise violate any third party’s intellectual property.

Third parties may assert that we are employing their proprietary technology without authorization. Because patent applications can take many years to issue, there may be currently pending patent applications which may later result in issued patents that the product candidates that we may identify may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. Moreover, as noted above, there may be existing patents that we are not aware of or that we have incorrectly concluded are invalid or not infringed by our activities.

Parties making claims against us may obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize the product candidates that we may identify. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages (including treble damages and attorneys’ fees for willful infringement), pay royalties, redesign our infringing products, be forced to indemnify our customers or collaborators or obtain one or more licenses from third parties, which may be impossible or require substantial time and monetary expenditure.

We may choose to take a license or, if we are found to infringe, misappropriate or otherwise violate a third party’s intellectual property rights, we could also be required to obtain a license from such third party to continue developing and marketing our technology. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors and other third parties access to the same technologies licensed to us and

could require us to make substantial licensing and royalty payments. We could be forced, including by court order, to cease developing and commercializing the infringing technology or product. A finding of infringement could prevent us from commercializing any product candidates or force us to cease some of our business operations, which could materially harm our business. In addition, we may be forced to redesign a product. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar material adverse effect on our reputation, business, financial condition and results of operations.

Risks Related to Our Indebtedness

Our indebtedness could materially adversely affect our financial condition and our ability to operate our business, react to changes in the economy or industry or pay our debts and meet our obligations under our debt and could divert our cash flow from operations to debt payments.

We have a significant amount of indebtedness. As of September 30, 2020, we had \$80.0 million of outstanding borrowings under our Loan Agreement and \$304.9 million in total borrowings under our Credit Agreement. Although we expect to use a substantial portion of the proceeds from this offering to repay indebtedness under our Loan Agreement and the term loan under our Credit Agreement, we will continue to have a significant amount of indebtedness. See “Use of Proceeds.” In addition, as of September 30, 2020, we had a \$20.0 million revolving credit facility under our Credit Agreement under which we had \$19.9 million of availability after giving effect to outstanding letters of credit. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Credit Facilities.” In addition, subject to restrictions in the agreements governing our Credit Facilities, we may incur additional debt.

Our debt could have important consequences to you, including the following:

- it may be difficult for us to satisfy our obligations, including debt service requirements under our outstanding debt, resulting in possible defaults on and acceleration of such indebtedness;
- our ability to obtain additional financing for working capital, capital expenditures, debt service requirements or other general corporate purposes may be impaired;
- a portion of cash flow from operations may be dedicated to the payment of principal and interest on our debt, therefore reducing our ability to use our cash flow to fund our operations, capital expenditures, future business opportunities, acquisitions and other purposes;
- we may be more vulnerable to economic downturns and adverse industry conditions and our flexibility to plan for, or react to, changes in our business or industry may be more limited;
- our ability to capitalize on business opportunities and to react to competitive pressures, as compared to our competitors, may be compromised due to our level of debt; and
- our ability to borrow additional funds or to refinance debt may be limited.

Furthermore, all of our debt under our Credit Agreement bears interest at variable rates. If these rates were to increase significantly, whether because of an increase in market interest rates or a decrease in our creditworthiness, our ability to borrow additional funds may be reduced and the risks related to our debt would intensify.

Servicing our debt requires a significant amount of cash. For the years ended December 31, 2018 and December 31, 2019 and the nine months ended September 30, 2020, we used cash of \$34.4 million, \$34.6 million and \$44.4 million, respectively, to service our debt. Our ability to generate sufficient cash depends on numerous factors beyond our control, and we may be unable to generate sufficient cash flow to service our debt obligations.

Our business may not generate sufficient cash flow from operating activities to service our debt obligations. Our ability to make payments on and to refinance our debt and to fund planned capital expenditures depends on our ability to generate cash in the future. To some extent, this is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control.

If we are unable to generate sufficient cash flow from operations to service our debt and meet our other commitments, we may need to refinance all or a portion of our debt, sell material assets or operations, delay capital expenditures or raise additional debt or equity capital. We may not be able to effect any of these actions on a timely basis, on commercially reasonable terms or at all, and these actions may not be sufficient to

meet our capital requirements. In addition, the terms of our existing or future debt agreements may restrict us from pursuing any of these alternatives.

Restrictive covenants in the agreements governing our Credit Facilities may restrict our ability to pursue our business strategies, and failure to comply with any of these restrictions could result in acceleration of our debt.

The operating and financial restrictions and covenants in one or more of the agreements governing our Credit Facilities may materially adversely affect our ability to finance future operations or capital needs or to engage in other business activities. Such agreements limit our ability, among other things, to:

- incur additional indebtedness and guarantee indebtedness;
- pay dividends on or make distributions in respect of our common stock or make other restricted payments;
- make certain acquisitions, investments, loans and advances;
- transfer or sell certain assets;
- create liens on certain assets;
- consolidate, merge, sell or otherwise dispose of all or substantially all of our assets;
- make certain payments in respect of certain junior debt obligations;
- create negative pledges;
- enter into certain transactions with our affiliates; and
- designate our subsidiaries as unrestricted subsidiaries.

In addition, the restrictive covenants in our Credit Agreement require us to maintain a specified first lien leverage ratio when a certain percentage of our revolving credit facility commitments are borrowed and outstanding as of the end of each fiscal quarter. In certain circumstances, our ability to meet this financial covenant may be affected by events beyond our control.

A breach of any of these covenants could result in a default under one or more of our Credit Facilities. Upon the occurrence of an event of default under our Credit Facilities, the lenders could elect to declare all amounts outstanding under our Credit Facilities to be immediately due and payable and terminate any commitments to extend further credit. If we were unable to repay those amounts, the lenders under our Credit Agreement could proceed against the collateral granted to them to secure that indebtedness. We have pledged substantially all of our assets as collateral to secure our Credit Agreement. In the event of an acceleration of our debt upon a default, we may not have or be able to obtain sufficient funds to make any accelerated payments.

Furthermore, the terms of any future indebtedness we may incur could have further additional restrictive covenants. We may not be able to maintain compliance with these covenants in the future, and in the event that we are not able to maintain compliance, we cannot assure you that we will be able to obtain waivers from the lenders or amend the covenants.

We and our subsidiaries may still be able to incur substantially more debt. This could further exacerbate the risks associated with our leverage.

We and our subsidiaries may be able to incur substantial additional debt in the future. Although the agreements governing our Credit Agreement contain restrictions on the incurrence of additional debt, these restrictions are subject to a number of qualifications and exceptions, and the debt incurred in compliance with these restrictions could be substantial. Additionally, we may successfully obtain waivers of these restrictions. If we incur additional debt above the levels currently in effect, the risks associated with our leverage, including those described above, would increase. Our Credit Agreement includes a revolving credit facility in an aggregate principal amount of \$20.0 million, with a sub-commitment for issuance of letters of credit of \$10.0 million, under which we had \$19.9 million of availability as of September 30, 2020, after giving effect to outstanding letters of credit.

Risks Related to our Financial Statements and Results

Impairment of goodwill or other intangible assets may adversely impact future results of operations.

We have intangible assets, including goodwill and other finite-lived and indefinite-lived intangibles, on our balance sheet due to our acquisitions of businesses. The initial identification and valuation of these intangible

assets and the determination of the estimated useful lives at the time of acquisition involve use of management judgments and estimates. These estimates are based on, among other factors, input from accredited valuation consultants, reviews of projected future income cash flows and statutory regulations. The use of alternative estimates and assumptions might have increased or decreased the estimated fair value of our goodwill and other intangible assets that could potentially result in a different impact to our results of operations. If the future growth and operating results of our business are not as strong as anticipated and/or our market capitalization declines, this could impact the assumptions used in calculating the fair value of goodwill or other indefinite-lived intangibles. To the extent goodwill or other indefinite-lived intangibles are impaired, their carrying value will be written down to its implied fair value and a charge will be made to our income from continuing operations. Such an impairment charge could materially and adversely affect our operating results. As of the years ended December 31, 2018 and 2019, and the nine months ended September 30, 2020, the carrying amount of goodwill and other intangibles was \$973.9, \$943.0 and \$919.8 million, respectively, on our consolidated balance sheet.

Our ability to use our NOLs and R&D tax credit carryforwards to offset future taxable income may be subject to certain limitations.

As of December 31, 2019, we had federal and state NOLs of approximately \$5.5 million and \$2.9 million, respectively, which are available to reduce future taxable income and expire between 2024 and 2036 and 2028 and 2038, respectively. As of December 31, 2019, we had federal and state R&D tax credit carryforwards of approximately \$2.2 million and \$0.8 million, respectively, to offset future income taxes, which expire between 2020 and 2039. We also had foreign tax credits of approximately \$8.5 million, which will start to expire in 2025. These carryforwards that may be utilized in a future period may be subject to limitations based upon changes in the ownership of our stock in a future period. Additionally, we carried forward foreign NOLs of approximately \$18.6 million which expire starting in 2023 and Canadian investment tax credits of approximately \$1.8 million which expire between 2030 and 2036. Our carryforwards are subject to review and possible adjustment by the appropriate taxing authorities.

In addition, in general, under Section 382 of the Internal Revenue Code of 1986, as amended (the “Code”), and corresponding provisions of state law, a corporation that undergoes an “ownership change,” generally defined as a greater than 50 percentage point change (by value) in its equity ownership by certain stockholders over a three year period, is subject to limitations on its ability to utilize its pre-change NOLs, R&D tax credit carryforwards and disallowed interest expense carryforwards to offset future taxable income. We have performed an analysis through August 15, 2017 and determined that an ownership change as of that date occurred. We may experience further ownership changes in the future as a result of this offering and/or subsequent changes in our stock ownership (which may be outside our control). As a result, if, and to the extent that, we earn net taxable income, our ability to use our pre-change NOLs, R&D tax credit carryforwards and disallowed interest expense carryforwards to offset such taxable income may be subject to limitations.

If our estimates or judgments relating to our critical accounting policies prove to be incorrect or financial reporting standards or interpretations change, our results of operations could be adversely affected.

The preparation of financial statements in conformity with generally accepted accounting principles in GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. We base our estimates on historical experience, known trends and events, and various other factors that we believe to be reasonable under the circumstances, as provided in “Management’s Discussion and Analysis of Financial Condition and Results of Operations— Critical Accounting Policies and Significant Judgments and Estimates.” The results of these estimates form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Significant assumptions and estimates used in preparing our consolidated financial statements include the estimated variable consideration included in the transaction price in our contracts with customers, equity-based compensation, and valuation of our equity investments in early-stage biotechnology companies. Our results of operations may be adversely affected if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our results of operations to fall below the expectations of securities analysts and investors, resulting in a decline in the trading price of our common stock.

Additionally, we regularly monitor our compliance with applicable financial reporting standards and review new pronouncements and drafts thereof that are relevant to us. As a result of new standards, changes to existing

standards and changes in their interpretation, we might be required to change our accounting policies, alter our operational policies, and implement new or enhance existing systems so that they reflect new or amended financial reporting standards, or we may be required to restate our published financial statements. Such changes to existing standards or changes in their interpretation may have an adverse effect on our reputation, business, financial position, and profit.

Changes in accounting standards issued by the Financial Accounting Standards Board (the “FASB”), or other standard-setting bodies may adversely affect trends and comparability of our financial results.

We are required to prepare our financial statements in accordance with GAAP, which is periodically revised and/or expanded. From time to time, we are required to adopt new or revised accounting standards issued by recognized authoritative bodies, including the FASB and the SEC. It is possible that future accounting standards we are required to adopt may require additional changes to the current accounting treatment that we apply to our financial statements and may result in significant changes to our results, disclosures and supporting reporting systems. Such changes could result in a material adverse impact on our results of operations and financial condition.

For example, effective January 1, 2019, we were required to adopt ASC 606, which outlines a single comprehensive model for entities to use in accounting for revenue from contracts with customers. Under ASC 606, third-party pass-through costs and reimbursed costs are included in our measurement of progress. This change in revenue recognition requires significant estimates of project costs that will need to be updated and adjusted on a regular basis. These updates and adjustments are likely to result in variability in our revenue recognition from period to period that may cause unexpected variability in our operating results. Additionally, effective January 1, 2022, we were required to adopt ASC Topic 842 (“ASC 842”), which required us to recognize certain operating leases in our consolidated balance sheet. See Note 2 to our audited consolidated financial statements included elsewhere in this prospectus for more information regarding ASC 606 and ASC 842.

Risks Related to this Offering and Ownership of Our Common Stock

No market currently exists for our common stock, and an active, liquid trading market for our common stock may not develop, which may cause our common stock to trade at a discount from the initial offering price and make it difficult for you to sell the common stock you purchase.

Prior to this offering, there has not been a public market for our common stock. We cannot predict the extent to which investor interest in us will lead to the development of a trading market on the Nasdaq or otherwise or how active and liquid that market may become. If an active and liquid trading market does not develop or continue, you may have difficulty selling any shares of our common stock that you purchase. The initial public offering price for the shares has been determined by negotiations between us, the selling stockholders and the underwriters and may not be indicative of prices that will prevail in the open market following this offering. The market price of our common stock may decline below the initial offering price, and you may not be able to sell your shares of our common stock at or above the price you paid in this offering, or at all.

We are an “emerging growth company” and the reduced disclosure requirements applicable to emerging growth companies may make our common stock less attractive to investors.

We are an “emerging growth company,” as defined in the JOBS Act. For so long as we remain an emerging growth company, we are permitted by SEC rules and plan to rely on exemptions from certain disclosure requirements that are applicable to other SEC-registered public companies that are not emerging growth companies. These exemptions include not being required to comply with the auditor attestation requirements of Section 404 of the SOX, not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements, reduced disclosure obligations regarding executive compensation and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. As a result, the information we provide stockholders will be different than the information that is available with respect to other public companies. In this prospectus, we have not included all of the executive compensation related information that would be required if we were not an emerging growth company. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions.

If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

You will incur immediate dilution in the net tangible book value of the shares you purchase in this offering.

The initial public offering price of our common stock is higher than the net tangible book value per share of outstanding common stock prior to completion of this offering. Based on our net tangible book value as of September 30, 2020, upon the issuance and sale of _____ shares of common stock by us at an assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, if you purchase our common stock in this offering, you will suffer immediate dilution of approximately \$ _____ per share in net tangible book value. Dilution is the amount by which the offering price paid by purchasers of our common stock in this offering will exceed the pro forma net tangible book value per share of our common stock upon completion of this offering. If the underwriters exercise their option to purchase additional shares, you will experience future dilution. A total of _____ and _____ shares of common stock have been reserved for future issuance under the 2020 Incentive Plan and 2020 Employee Stock Purchase Plan, respectively. You may experience additional dilution upon future equity issuances or the exercise of stock options to purchase common stock granted to our directors, officers and employees under our current and future stock incentive plans, including the 2020 Incentive Plan. See "Dilution."

Our stock price may change significantly following this offering, and you may not be able to resell shares of our common stock at or above the price you paid or at all, and you could lose all or part of your investment as a result.

The trading price of our common stock is likely to be volatile. The stock market has experienced extreme volatility. This volatility often has been unrelated or disproportionate to the operating performance of particular companies. We and the underwriters have negotiated to determine the initial public offering price. You may not be able to resell your shares at or above the initial public offering price due to a number of factors such as those listed in other portions of this "Risk Factors" section and the following:

- results of operations that vary from the expectations of securities analysts and investors;
- results of operations that vary from those of our competitors;
- changes in expectations as to our future financial performance, including financial estimates and investment recommendations by securities analysts and investors;
- declines in the market prices of stocks generally;
- strategic actions by us or our competitors;
- announcements by us or our competitors of significant contracts, new products, acquisitions, joint marketing relationships, joint ventures, other strategic relationships or capital commitments;
- changes in general economic or market conditions or trends in our industry or markets;
- changes in business or regulatory conditions;
- additions or departures of key management personnel;
- future sales of our common stock or other securities by us or our existing stockholders, or the perception of such future sales;
- investor perceptions of the investment opportunity associated with our common stock relative to other investment alternatives;
- the public's response to press releases or other public announcements by us or third parties, including our filings with the SEC;

- announcements relating to litigation;
- guidance, if any, that we provide to the public, any changes in this guidance or our failure to meet this guidance;
- the development and sustainability of an active trading market for our stock;
- changes in accounting principles; and
- other events or factors, including those resulting from natural disasters, war, acts of terrorism or responses to these events.

These broad market and industry fluctuations may materially adversely affect the market price of our common stock, regardless of our actual operating performance. In addition, price volatility may be greater if the public float and trading volume of our common stock are low.

In the past, following periods of market volatility, stockholders have instituted securities class action litigation. If we were involved in securities litigation, it could have a substantial cost and divert resources and the attention of executive management from our business regardless of the outcome of such litigation.

Our quarterly operating results fluctuate and may fall short of prior periods, our projections or the expectations of securities analysts or investors, which could materially adversely affect our stock price.

Our operating results have fluctuated from quarter to quarter at points in the past, and they may do so in the future. Therefore, results of any one fiscal quarter are not a reliable indication of results to be expected for any other fiscal quarter or for any year. If we fail to increase our results over prior periods, to achieve our projected results or to meet the expectations of securities analysts or investors, our stock price may decline, and the decrease in the stock price may be disproportionate to the shortfall in our financial performance. Results may be affected by various factors, including those described in these risk factors.

We are a holding company with no operations and rely on our operating subsidiaries to provide us with funds necessary to meet our financial obligations.

We are a holding company with no material direct operations. Our principal assets are the shares of common stock of Certara Holdco, Inc. ("Certara Holdco") that we hold indirectly through our subsidiaries. Certara Holdco, together with its subsidiaries, owns substantially all of our operating assets. As a result, we are dependent on loans, dividends and other payments from our subsidiaries to generate the funds necessary to meet our financial obligations. Our subsidiaries are legally distinct from us and may be prohibited or restricted from paying dividends or otherwise making funds available to us, including restrictions under the covenants of the agreements governing our Credit Facilities. If we are unable to obtain funds from our subsidiaries, we may be unable to meet our financial obligations.

We currently do not intend to declare dividends on our common stock in the foreseeable future and, as a result, your returns on your investment may depend solely on the appreciation of our common stock.

We currently do not expect to declare any dividends on our common stock in the foreseeable future. Instead, we anticipate that all of our earnings in the foreseeable future will be used to provide working capital, to support our operations and to finance the growth and development of our business. Any determination to declare or pay dividends in the future will be at the discretion of our board of directors, subject to applicable laws and dependent upon a number of factors, including our earnings, capital requirements and overall financial conditions. In addition, our ability to pay dividends on our common stock is currently limited by the covenants of our Credit Facilities and may be further restricted by the terms of any future debt or preferred securities. Accordingly, your only opportunity to achieve a return on your investment in our company may be if the market price of our common stock appreciates and you sell your shares at a profit. The market price for our common stock may never exceed, and may fall below, the price that you pay for such common stock.

If securities analysts do not publish research or reports about our business or if they downgrade our stock or our sector, our stock price and trading volume could decline.

The trading market for our common stock will rely in part on the research and reports that industry or financial analysts publish about us or our business or industry. We do not control these analysts. Furthermore, if one or more of the analysts who do cover us were to downgrade our stock or our industry, or the stock of any of our competitors, or publish inaccurate or unfavorable research about our business or industry, the price

of our stock could decline. If one or more of these analysts ceases coverage of us or fails to publish reports on us regularly, we could lose visibility in the market, which in turn could cause our stock price or trading volume to decline.

Future sales, or the perception of future sales, by us or our existing stockholders in the public market following this offering could cause the market price for our common stock to decline.

After this offering, the sale of shares of our common stock in the public market, or the perception that such sales could occur, could harm the prevailing market price of shares of our common stock. These sales, or the possibility that these sales may occur, also might make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate.

Upon consummation of this offering, we will have a total of _____ shares of common stock outstanding. All shares sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any shares held by our affiliates, as that term is defined under Rule 144 of the Securities Act ("Rule 144"), including our directors, executive officers and other affiliates (including EQT and Arsenal), which may be sold only in compliance with the limitations described in "Shares Eligible for Future Sale," and any shares purchased in our directed share program which are subject to the lock-up agreements described in "Underwriting."

The _____ shares held by EQT, Arsenal and certain of our directors, officers and employees immediately following the consummation of this offering will represent approximately _____ % of our total outstanding shares of common stock following this offering (which do not include any shares that may be purchased by these holders through our directed share program), based on the number of shares outstanding as of September 30, 2020. Such shares will be "restricted securities" within the meaning of Rule 144 and subject to certain restrictions on resale following the consummation of this offering. Restricted securities may be sold in the public market only if they are registered under the Securities Act or are sold pursuant to an exemption from registration such as Rule 144, as described in "Shares Eligible for Future Sale."

In connection with this offering, we, our directors and executive officers, and holders of substantially all of our common stock prior to this offering have each agreed with the underwriters, subject to certain exceptions, not to dispose of or hedge any of our or their common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of certain representatives of the underwriters. See "Underwriting" for a description of these lock-up agreements.

Upon the expiration of the contractual lock-up agreements pertaining to this offering, up to an additional _____ shares will be eligible for sale in the public market, of which _____ are held by directors, executive officers and other affiliates and will be subject to volume, manner of sale and other limitations under Rule 144. Following completion of this offering, shares covered by registration rights would represent approximately _____ % of our outstanding common stock (or _____ %, if the underwriters exercise in full their option to purchase additional shares). Registration of any of these outstanding shares of common stock would result in such shares becoming freely tradable without compliance with Rule 144 upon effectiveness of the registration statement. See "Shares Eligible for Future Sale."

As restrictions on resale end or if these stockholders exercise their registration rights, the market price of our shares of common stock could drop significantly if the holders of these shares sell them or are perceived by the market as intending to sell them. These factors could also make it more difficult for us to raise additional funds through future offerings of our shares of common stock or other securities.

In addition, the shares of our common stock reserved for future issuance under the 2020 Incentive Plan or our 2020 Employee Stock Purchase Plan will become eligible for sale in the public market once those shares are issued, subject to provisions relating to various vesting agreements, lock-up agreements and Rule 144, as applicable. A total of _____ and _____ shares of common stock have been reserved for future issuance under the 2020 Incentive Plan and our 2020 Employee Stock Purchase Plan, respectively.

In the future, we may also issue our securities in connection with investments or acquisitions. The amount of shares of our common stock issued in connection with an investment or acquisition could constitute a

material portion of our then-outstanding shares of our common stock. Any issuance of additional securities in connection with investments or acquisitions may result in additional dilution to you.

Provisions in our organizational documents could delay or prevent a change of control.

Certain provisions of our amended and restated certificate of incorporation, amended and restated bylaws and stockholders agreement may have the effect of delaying or preventing a merger, acquisition, tender offer, takeover attempt or other change of control transaction that a stockholder might consider to be in its best interest, including attempts that might result in a premium over the market price of our common stock.

These provisions provide for, among other things:

- the division of our board of directors into three classes, as nearly equal in size as possible, with directors in each class serving three-year terms and with terms of the directors of only one class expiring in any given year;
- that at any time when EQT and certain of its affiliates beneficially own, in the aggregate, less than 40% in voting power of the stock of our company entitled to vote generally in the election of directors, directors may only be removed for cause, and only by the affirmative vote of the holders of at least two-thirds in voting power of all the then-outstanding shares of stock entitled to vote thereon, voting together as a single class;
- the ability of our board of directors to issue one or more series of preferred stock with voting or other rights or preferences that could have the effect of impeding the success of an attempt to acquire us or otherwise effect a change of control;
- advance notice for nominations of directors by stockholders and for stockholders to include matters to be considered at stockholder meetings;
- the right of EQT and certain of its affiliates to nominate to our board of directors a number of nominees equal to (i) the total number of directors comprising our board of directors at such time, multiplied by (ii) the percentage of our outstanding common stock held from time to time by EQT and such affiliates and the obligation of certain of our other pre-IPO stockholders to support such nominees;
- that special stockholder meetings may be called only by or at the direction of our board of directors or the chairman of our board of directors; *provided, however*, that at any time when EQT and certain of its affiliates beneficially own, in the aggregate, at least 40% in voting power of our stock entitled to vote generally in the election of directors, EQT may request a special stockholder meeting be held, which provision may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of our Company; and
- that certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws pertaining to amendments, our board of directors, limitation of director liability, stockholder consents, annual and special stockholder meetings, competition and corporate opportunities and business combinations, may be amended only by the affirmative vote of the holders of at least two-thirds in voting power of all the then-outstanding shares of our stock entitled to vote thereon, voting together as a single class, if EQT and certain of its affiliates beneficially own, in the aggregate, less than 40% in voting power of our stock entitled to vote generally in the election of directors, which limitation may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of our Company.

These provisions could make it more difficult for a third party to acquire us, even if the third party's offer may be considered beneficial by many of our stockholders. As a result, our stockholders may be limited in their ability to obtain a premium for their shares. See "Description of Capital Stock."

We are controlled by EQT, whose interests may be different than the interests of other holders of our common stock.

Upon the completion of this offering, EQT will own approximately % of our outstanding common stock, or approximately % if the underwriters exercise in full their option to purchase additional shares, and will have the ability to nominate a majority of the members of our board of directors. As a result, EQT will be able to control actions to be taken by us, including future issuances of our common stock or other securities, the payment of dividends, if any, on our common stock, amendments to our organizational documents and the

approval of significant corporate transactions, including mergers, sales of substantially all of our assets, distributions of our assets, the incurrence of indebtedness and any incurrence of liens on our assets.

The interests of EQT may be materially different than the interests of our other stakeholders. In addition, EQT may have an interest in pursuing acquisitions, divestitures and other transactions that, in their judgment, could enhance their investment, even though such transactions might involve risks to you. For example, EQT may cause us to take actions or pursue strategies that could impact our ability to make payments under our Credit Facilities or cause a change of control. In addition, to the extent permitted by agreements governing our Credit Facilities, EQT may cause us to pay dividends rather than make capital expenditures or repay debt. EQT is in the business of making investments in companies and may from time to time acquire and hold interests in businesses that compete directly or indirectly with us. Our amended and restated certificate of incorporation will provide that none of EQT, any of their respective affiliates or any director who is not employed by us (including any non-employee director who serves as one of our officers in both his director and officer capacities) or his or her affiliates will have any duty to refrain from engaging, directly or indirectly, in the same business activities or similar business activities or lines of business in which we operate. EQT also may pursue acquisition opportunities that may be complementary to our business, and, as a result, those acquisition opportunities may not be available to us.

So long as EQT continues to own a significant amount of our outstanding common stock, even if such amount is less than 50%, they will continue to be able to strongly influence or effectively control our decisions and, so long as EQT continues to own shares of our outstanding common stock, EQT will have the ability to nominate individuals to our board of directors pursuant to a stockholders agreement to be entered into in connection with this offering. See “Certain Relationships and Related Party Transactions — Stockholders Agreement.” In addition, EQT will be able to determine the outcome of all matters requiring stockholder approval and will be able to cause or prevent a change of control of our company or a change in the composition of our board of directors and could preclude any unsolicited acquisition of our company. The concentration of ownership could deprive you of an opportunity to receive a premium for your shares of common stock as part of a sale of our company and ultimately might affect the market price of our common stock.

We will be a “controlled company” within the meaning of the Nasdaq rules and the rules of the SEC. As a result, we will qualify for exemptions from certain corporate governance requirements that provide protection to stockholders of other companies.

After completion of this offering, EQT will continue to own a majority of our outstanding common stock. As a result, we will be a “controlled company” within the meaning of the corporate governance standards of the Nasdaq. Under these rules, a company of which more than 50% of the voting power is held by an individual, group or another company is a “controlled company” and may elect not to comply with certain corporate governance requirements, including:

- the requirement that a majority of our board of directors consist of “independent directors” as defined under the rules of the Nasdaq;
- the requirement that we have a compensation committee that is composed entirely of directors who meet the Nasdaq independence standards for compensation committee members with a written charter addressing the committee’s purpose and responsibilities; and
- the requirement that our director nominations be made, or recommended to our full board of directors, by our independent directors or by a nominations committee that consists entirely of independent directors and that we adopt a written charter or board resolution addressing the nominations process.

Following this offering, we do not intend to utilize these exemptions. However, if we utilize any of these exemptions in the future, you will not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance requirements of the Nasdaq.

Failure to comply with requirements to design, implement and maintain effective internal controls could have a material adverse effect on our business and stock price.

As a privately-held company, we were not required to evaluate our internal control over financial reporting in a manner that meets the standards of publicly traded companies required by Section 404(a) the SOX (“Section 404”). As a public company, we will have significant requirements for enhanced financial reporting and internal controls. The process of designing and implementing effective internal controls is a continuous

effort that requires us to anticipate and react to changes in our business and the economic and regulatory environments and to expend significant resources to maintain a system of internal controls that is adequate to satisfy our reporting obligations as a public company. If we are unable to establish or maintain appropriate internal financial reporting controls and procedures, it could cause us to fail to meet our reporting obligations on a timely basis, result in material misstatements in our consolidated financial statements and harm our results of operations. In addition, we will be required, pursuant to Section 404, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting in the second annual report following the completion of this offering. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. The rules governing the standards that must be met for our management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation. Testing internal controls may divert our management's attention from other matters that are important to our business. Our independent registered public accounting firm may be required to issue an attestation report on effectiveness of our internal controls following the completion of this offering. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm.

In connection with the implementation of the necessary procedures and practices related to internal control over financial reporting, we may identify deficiencies that we may not be able to remediate in time to meet the deadline imposed by the SOX for compliance with the requirements of Section 404. In addition, we may encounter problems or delays in completing the remediation of any deficiencies identified by our independent registered public accounting firm in connection with the issuance of their attestation report.

Our testing, or the subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses. A material weakness in internal controls could result in our failure to detect a material misstatement of our annual or quarterly consolidated financial statements or disclosures. We may not be able to conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404. If we are unable to conclude that we have effective internal controls over financial reporting, investors could lose confidence in our reported financial information, which could have a material adverse effect on the trading price of our common stock.

Our amended and restated certificate of incorporation will provide, subject to limited exceptions, that the Court of Chancery of the State of Delaware and, to the extent enforceable, the federal district courts of the United States of America will be the sole and exclusive forums for certain stockholder litigation matters, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our current and former directors, officers, employees or stockholders.

Our amended and restated certificate of incorporation will provide, subject to limited exceptions, that unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall, to the fullest extent permitted by law, be the sole and exclusive forum for any (i) derivative action or proceeding brought on behalf of our company, (ii) action asserting a claim of breach of a fiduciary duty owed by any current or former director, officer, employee or stockholder of our company to the Company or our stockholders, (iii) action asserting a claim against the Company or any current or former director, officer, employee or stockholder of the Company arising pursuant to any provision of the DGCL, or our amended and restated certificate of incorporation or our amended and restated bylaws (as either might be amended from time to time) or (iv) action asserting a claim governed by the internal affairs doctrine of the State of Delaware. Unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the federal securities laws of the United States of America. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to the forum provisions in our amended and restated certificate of incorporation.

These choice of forum provisions may limit a stockholder's ability to bring a claim in a different judicial forum, including one that it may find favorable or convenient for disputes with us or any of our directors, officers or other employees which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provisions that will be contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable with respect to one or more of the specified types of actions or

proceedings, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, operating results and financial condition.

Our board of directors will be authorized to issue and designate shares of our preferred stock in additional series without stockholder approval.

Our amended and restated certificate of incorporation will authorize our board of directors, without the approval of our stockholders, to issue _____ shares of our preferred stock, subject to limitations prescribed by applicable law, rules and regulations and the provisions of our amended and restated certificate of incorporation, as shares of preferred stock in series, to establish from time to time the number of shares to be included in each such series and to fix the designation, powers, preferences and rights of the shares of each such series and the qualifications, limitations or restrictions thereof. The powers, preferences and rights of these additional series of preferred stock may be senior to or on parity with our common stock, which may reduce its value.

We will incur increased costs as a result of operating as a publicly traded company, and our management will be required to devote substantial time to new compliance initiatives.

As a publicly traded company, and particularly after we are no longer an emerging growth company, we will incur additional legal, accounting, and other expenses that we did not previously incur. Although we are currently unable to estimate these costs with any degree of certainty, they may be material in amount. In addition, the SOX, the Dodd-Frank Wall Street Reform and Consumer Protection Act, and the rules of the SEC, and the stock exchange on which our common shares are listed, have imposed various requirements on public companies. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives as well as investor relations. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to incur additional costs to maintain the same or similar coverage.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Statements made in this prospectus that are not statements of historical fact, including statements about our beliefs and expectations, are forward-looking statements, and should be evaluated as such. Forward-looking statements include information concerning possible or assumed future results of operations, including descriptions of our business plan and strategies. These statements often include words such as “anticipate,” “expect,” “suggest,” “plan,” “believe,” “intend,” “project,” “forecast,” “estimates,” “targets,” “projections,” “should,” “could,” “would,” “may,” “might,” “will,” and other similar expressions. These forward-looking statements are contained throughout this prospectus, including the sections entitled “Prospectus Summary,” “Risk Factors,” “Capitalization,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business.”

We base these forward-looking statements or projections on our current expectations, plans and assumptions, which we have made in light of our experience in the industry, as well as our perceptions of historical trends, current conditions, expected future developments and other factors we believe are appropriate under the circumstances and at this time. As you read and consider this prospectus, you should understand that these statements are not guarantees of performance or results. The forward-looking statements and projections contained herein are subject to and involve risks, uncertainties and assumptions, and therefore you should not place undue reliance on these forward-looking statements or projections. Although we believe that these forward-looking statements and projections are based on reasonable assumptions at the time they are made, you should be aware that many factors could affect our actual financial results, and therefore actual results might differ materially from those expressed in the forward-looking statements and projections. Factors that might materially affect such forward-looking statements and projections include:

- our ability to compete within our market;
- any deceleration in, or resistance to, the acceptance of model-informed biopharmaceutical discovery;
- changes or delays in government regulation relating to the biopharmaceutical industry;
- increasing competition, regulation and other cost pressures within the pharmaceutical and biotechnology industries;
- trends in R&D spending, the use of third parties by biopharmaceutical companies and a shift toward more R&D occurring at smaller biotechnology companies;
- consolidation within the biopharmaceutical industry;
- reduction in the use of our products by academic institutions;
- pricing pressures due to increased customer utilization of our products;
- our ability to successfully enter new markets, increase our customer base and expand our relationships with existing customers;
- the occurrence of natural disasters and epidemic diseases, such as the recent COVID-19 pandemic;
- any delays or defects in our release of new or enhanced software or other biosimulation tools;
- failure of our existing customers to renew their software licenses or any delays or terminations of contracts or reductions in scope of work by our existing customers;
- our ability to accurately estimate costs associated with our fixed-fee contracts;
- our ability to retain key personnel or recruit additional qualified personnel;
- risks related to our contracts with government customers, including the ability of third parties to challenge our receipt of such contracts;
- our ability to sustain recent growth rates;
- any future acquisitions and our ability to successfully integrate such acquisitions;
- the accuracy of our addressable market estimates;
- the length and unpredictability of our software and service sales cycles;
- our ability to successfully operate a global business;

- our ability to comply with applicable anti-corruption, trade compliance and economic sanctions laws and regulations;
- risks related to litigation against us;
- the adequacy of our insurance coverage and our ability to obtain adequate insurance coverage in the future;
- our ability to perform our services in accordance with contractual requirements, regulatory standards and ethical considerations;
- the loss of more than one of our major customers;
- our future capital needs;
- the ability or inability of our bookings to accurately predict our future revenue and our ability to realize the anticipated revenue reflected in our backlog;
- any disruption in the operations of the third-party providers who host our software solutions or any limitations on their capacity or interference with our use;
- our ability to reliably meet our data storage and management requirements, or the experience of any failures or interruptions in the delivery of our services over the internet;
- our ability to comply with the terms of any licenses governing our use of third-party open source software utilized in our software solutions;
- any breach of our security measures or unauthorized access to customer data;
- our ability to comply with applicable privacy and data security laws;
- our ability to adequately enforce or defend our ownership and use of our intellectual property and other proprietary rights;
- any allegations that we are infringing, misappropriating or otherwise violating a third party's intellectual property rights;
- our ability to meet the obligations under our current or future indebtedness as they become due and have sufficient capital to operate our business and react to changes in the economy or industry;
- any limitations on our ability to pursue our business strategies due to restrictions under our current or future indebtedness or inability to comply with any restrictions under such indebtedness;
- any impairment of goodwill or other intangible assets;
- our ability to use our NOLs and R&D tax credit carryforwards to offset future taxable income;
- the accuracy of our estimates and judgments relating to our critical accounting policies and any changes in financial reporting standards or interpretations;
- actions by our controlling stockholders;
- any inability to design, implement, and maintain effective internal controls when required by law;
- the costs and management time associated with operating as a publicly traded company; and
- the other factors discussed under "Risk Factors."

The preceding list is not intended to be an exhaustive list of all of our forward-looking statements. The forward-looking statements are based on our beliefs, assumptions and expectations of future performance, taking into account the information currently available to us. These statements are only predictions based upon our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements. Other sections of this prospectus may include additional factors that could adversely impact our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time and it is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. Before investing in our common stock, investors should be aware that the occurrence of the events described under the caption "Risk Factors" and elsewhere in this prospectus could have a material adverse effect on our business, results of operations and future financial performance.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance and events and circumstances reflected in the forward-looking statements will be achieved or occur. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations.

USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately \$ _____ million from the sale of shares of our common stock in this offering, based on an assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, and after deducting the underwriting discounts and commissions and estimated offering expenses.

We will not receive any proceeds from the sale of shares of our common stock by the selling stockholders.

We intend to use the net proceeds received by us from this offering to repay outstanding indebtedness under the Loan Agreement, a portion of our term loan under our Credit Agreement and the remainder for general corporate purposes. To the extent we raise more proceeds in this offering than currently estimated, the amount of cash on hand used would be reduced, and to the extent the proceeds exceed the amount required to repay outstanding indebtedness under the Loan Agreement and a portion of our term loan under our Credit Agreement, we will use such excess proceeds for general corporate purposes, which may include, among other things, further repayment of indebtedness. To the extent we raise less proceeds in this offering than currently estimated, the amount of cash on hand used to repay the aforementioned indebtedness would be increased. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Indebtedness" for additional information.

As of September 30, 2020, we had \$80.0 million principal amount outstanding under the Loan Agreement, \$304.9 million of outstanding borrowings on the first lien term loan under our Credit Agreement, \$0.0 million of outstanding borrowings under the revolving credit facility under our Credit Agreement and outstanding letters of credit of \$0.1 million under the Credit Agreement. The Loan Agreement matures on August 14, 2025 and bears interest at a rate per annum equal to 8.25%. The Credit Agreement matures on August 14, 2024, with respect to the term loan thereunder, and August 15, 2022, with respect to the revolving credit facility thereunder. Borrowings under the Credit Agreement currently bear interest at a rate per annum equal to either (a) the Eurocurrency rate, with a floor of 0.00%, as adjusted for the reserve percentage required under regulations issued by the Federal Reserve Board for determining maximum reserve requirements with respect to Eurocurrency funding, plus an applicable margin rate of 3.50% for the term loan and between 4.00% and 3.50% for revolving credit loans, depending on the applicable first lien leverage ratio or (b) an alternate base rate ("ABR"), with a floor of 1.00%, plus an applicable margin rate of 2.50% for the term loan or between 3.00% and 2.50% for revolving credit loans, depending on the applicable first lien leverage ratio. The ABR is determined as the greatest of (a) the prime rate, (b) the federal funds effective rate, plus 0.50% or (c) the Eurocurrency rate plus 1.00%. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Indebtedness" for additional information regarding our Credit Facilities. Certain of the underwriters and/or certain of their affiliates are lenders under our Credit Agreement and, as a result, will receive a portion of the net proceeds from this offering.

A \$1.00 increase (decrease) in the assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase (decrease) the net proceeds to us from this offering by \$ _____ million, assuming the number of shares offered by us, as set forth on the front cover of this prospectus, remains the same and after deducting the assumed underwriting discounts and commissions and estimated offering expenses payable by us. An increase (decrease) of 100,000 shares from the expected number of shares to be sold by us in this offering, assuming no change in the assumed initial public offering price per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase (decrease) our net proceeds from this offering by \$ _____ million.

DIVIDEND POLICY

We currently do not expect to declare any dividends on our common stock in the foreseeable future. Instead, we anticipate that all of our earnings in the foreseeable future will be used to provide working capital, to support our operations, to finance the growth and development of our business and to reduce our net debt. Any determination to declare dividends in the future will be at the discretion of our board of directors, subject to applicable laws, and will be dependent on a number of factors, including our earnings, capital requirements and overall financial condition. In addition, because we are a holding company, our ability to pay dividends on our common stock may be limited by restrictions on our ability to obtain sufficient funds through dividends from subsidiaries, including restrictions under the covenants of the agreements governing our Credit Facilities, and may be further restricted by the terms of any future debt or preferred securities. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Indebtedness” for more information about our Credit Facilities.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of September 30, 2020:

- on an actual basis; and
- on an as adjusted basis, giving effect to (i) the sale by us of _____ shares of our common stock in this offering at an assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us and (ii) the application of the net proceeds received by us from this offering to repay outstanding indebtedness under the Loan Agreement and a portion of our term loan under our Credit Agreement, as described in “Use of Proceeds.”

You should read this table together with “Selected Consolidated Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the related notes appearing elsewhere in this prospectus.

	AS OF SEPTEMBER 30, 2020	
	ACTUAL	AS ADJUSTED
	(IN THOUSANDS)	
Cash and cash equivalents	<u>\$ 29,937</u>	<u>\$</u>
Long term debt, including current portion of long-term debt:		
Credit Agreements:		
Term loans	384,888	
Revolving credit facility	—	
Debt issuance costs	(5,698)	
Total debt	<u>379,190</u>	
Stockholders’ Equity:		
Common stock, \$0.01 par value, voting common stock; 1,000 shares authorized, actual, 100 shares issued and outstanding, actual, _____ shares authorized, as adjusted, _____ shares issued and outstanding, as adjusted		
Additional paid-in capital	511,943	
Accumulated deficit	(7,891)	
Accumulated other comprehensive loss	(6,514)	
Total stockholders’ equity	<u>497,538</u>	
Total capitalization	<u>\$876,728</u>	

A \$1.00 increase or decrease in the assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase or decrease, as applicable, on a pro forma as adjusted basis, cash and cash equivalents, additional paid-in capital, total stockholders’ equity and total capitalization by \$ _____ million, assuming the number of shares offered by us, as set forth on the front cover of this prospectus, remains the same and after deducting assumed underwriting discounts and commissions and estimated offering expenses payable by us and the application of the net proceeds thereof as described in “Use of Proceeds.” An increase or decrease of 100,000 shares in the number of shares sold in this offering by us would increase or decrease, as applicable, on a pro forma as adjusted basis, cash and cash equivalents, additional paid-in capital, total stockholders’ equity and total capitalization by \$ _____ million, assuming an initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us and the application of the net proceeds thereof as described in “Use of Proceeds.”

The number of shares of our common stock to be outstanding immediately after this offering is based on _____ shares outstanding as of September 30, 2020 (after giving effect to the _____ for 1 forward stock split to be effected upon the filing of our amended and restated certificate of incorporation in connection with this offering) and:

- assumes the issuance of _____ shares of common stock to be issued to the Former Unit Holders in connection with the closing of this offering (which amount of shares is based upon an assumed initial public offering price of \$ _____ per share which is the midpoint of the range set forth on the cover page of this prospectus; and
- does not reflect _____ shares of common stock available for future issuance under the 2020 Incentive Plan or _____ shares of common stock available for future issuance under our 2020 Employee Stock Purchase Plan.

A \$1.00 increase in the assumed initial public offering price referred to above shall modify the forward stock-split ratio and the number of shares to be received by the Former Unit Holders resulting in an increase to the number of shares of common stock to be outstanding immediately after this offering by _____ shares and an increase of _____ shares to be received by the Former Unit Holders.

A \$1.00 decrease in the assumed initial public offering price referred to above shall modify the forward stock-split ratio and the number of shares to be received by the Former Unit Holders resulting in a decrease to the number of shares of common stock to be outstanding immediately after this offering by _____ shares and a decrease of _____ shares to be received by the Former Unit Holders.

DILUTION

If you invest in our common stock in this offering, your ownership interest in us will be diluted to the extent of the difference between the initial public offering price per share of our common stock and the net tangible book value per share of our common stock as adjusted to give effect to this offering. Dilution results from the fact that the per share offering price of the common stock is substantially in excess of the book value per share attributable to the shares of common stock held by existing stockholders.

Our net tangible book value as of September 30, 2020 was approximately \$ million or \$ per share. We calculate net tangible book value per share by taking the amount of our total tangible assets, reduced by the amount of our total liabilities, and then dividing that amount by the total number of shares of common stock outstanding.

After giving effect to our sale of the shares in this offering at an assumed initial public offering price of \$ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us and after giving effect to the application of the net proceeds from this offering as described under "Use of Proceeds," our net tangible book value (deficit) as adjusted to give effect to this offering on September 30, 2020 would have been \$ million, or \$ per share. This amount represents an immediate increase in net tangible book value of \$ per share to existing stockholders and an immediate dilution in net tangible book value of \$ per share to new investors purchasing shares in this offering at the initial public offering price.

The following table illustrates this dilution on a per share basis:

Initial public offering price per share	\$
Net tangible book value per share as of September 30, 2020 before giving effect to this offering	\$
Increase in net tangible book value per share attributable to new investors purchasing shares in this offering	_____
Net tangible book value (deficit) per share as adjusted to give effect to this offering	_____
Dilution per share to new investors in this offering	\$ _____

Dilution is determined by subtracting net tangible book value per share of common stock as adjusted to give effect to this offering, from the initial public offering price per share of common stock.

The following table summarizes, on a pro forma basis as of September 30, 2020, after giving effect to the adoption and filing of our amended and restated certificate of incorporation prior to the completion of this offering, the differences between the number of shares purchased from us, the total consideration paid to us, and the average price per share paid by existing stockholders and by new investors. As the table shows, new investors purchasing shares in this offering will pay an average price per share substantially higher than our existing stockholders paid. The table below is based on shares of common stock outstanding immediately after the consummation of this offering and does not give effect to shares of common stock reserved for future issuance under the 2020 Incentive Plan and our 2020 Employee Stock Purchase Plan. A total of shares of common stock have been reserved for future issuance under the 2020 Incentive Plan. The table below is based on an assumed initial public offering price of \$ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, for shares purchased in this offering and excludes underwriting discounts and commissions and estimated offering expenses payable by us:

	SHARES PURCHASED		TOTAL CONSIDERATION ⁽¹⁾		AVERAGE PRICE PER SHARE
	NUMBER	PERCENT	AMOUNT (IN MILLIONS)	PERCENT	
Existing stockholders			\$		\$
New investors					
Total		100.0%	\$	100.0%	

⁽¹⁾ Assumes no exercise by the underwriters of their option to purchase up to additional shares of common stock from us.

Sales of shares of our common stock by the selling stockholders in this offering will reduce the number of shares of common stock held by existing stockholders to , or approximately % of the total shares of common stock outstanding after the completion of this offering, and will increase the number of shares held by investors purchasing shares in this offering to , or approximately % of the total shares of common stock outstanding after the completion of this offering.

If the underwriters were to fully exercise the underwriters' option to purchase additional shares of our common stock, the percentage of shares of our common stock held by existing stockholders would be % of the aggregate number of shares of common stock outstanding after this offering after giving effect to sales by the selling stockholders, and the percentage of shares of our common stock held by new investors would be % of the aggregate number of shares of common stock outstanding after this offering after giving effect to sales by the selling stockholders.

Assuming the number of shares offered by us, as set forth on the front cover of this prospectus, remains the same, excluding assumed underwriting discounts and estimated commissions and offering expenses payable by us, a \$1.00 increase or decrease in the assumed initial public offering price of \$ per share, which is the midpoint of the price range set forth on the front cover of this prospectus, would increase or decrease total consideration paid by new investors and total consideration paid by all stockholders by approximately \$ million.

SELECTED CONSOLIDATED FINANCIAL DATA

The following table sets forth the selected consolidated financial data of the Company and its consolidated subsidiaries for the periods and dates indicated.

The balance sheet data as of September 30, 2020 and the statements of operations and comprehensive income (loss) and cash flow data for the nine months ended September 30, 2020 and 2019 have been derived from our unaudited condensed consolidated financial statements included elsewhere in this prospectus. The balance sheet data as of December 31, 2019 and 2018 and the statements of operations and comprehensive income (loss) and cash flow data for the years ended December 31, 2019 and 2018 have been derived from our audited consolidated financial statements included elsewhere in this prospectus.

The selected consolidated financial data set forth below should be read in conjunction with “Risk Factors,” “Capitalization,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our unaudited condensed consolidated financial statements and audited consolidated financial statements included elsewhere in this prospectus.

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
	2020	2019	2019	2018
	(in thousands)			
Statement of operations data and comprehensive income (loss):				
Revenues	\$ 178,889	\$ 154,654	\$ 208,511	\$ 163,719
Cost of revenues	65,860	57,817	79,770	71,043
Operating expenses:				
Sales and marketing	8,773	7,946	10,732	9,416
Research and development	9,139	8,651	11,633	10,478
General and administrative	36,125	35,630	47,926	43,393
Intangible asset amortization	28,056	26,908	36,241	31,625
Depreciation and amortization expense	1,836	2,140	2,596	2,416
Total operating expenses	<u>83,929</u>	<u>81,275</u>	<u>109,128</u>	<u>97,328</u>
Income (loss) from operations	29,100	15,562	19,613	(4,652)
Other expenses:				
Interest expenses	(19,810)	(21,011)	(28,004)	(27,802)
Miscellaneous, net	456	(163)	(760)	(107)
Total other expenses	<u>(19,354)</u>	<u>(21,174)</u>	<u>(28,764)</u>	<u>(27,909)</u>
Income (loss) before income taxes	9,746	(5,612)	(9,151)	(32,561)
Provision for (benefit from) income taxes	4,696	(2,701)	(225)	697
Net income (loss)	5,050	(2,911)	(8,926)	(33,258)
Other comprehensive (loss):				
Foreign currency translation adjustment	513	(3,383)	433	(16,721)
Change in fair value of interest rate swap, net of tax	(1,530)	(4,441)	(4,283)	1,079
Total other comprehensive loss	<u>(1,017)</u>	<u>(7,824)</u>	<u>(3,850)</u>	<u>(15,642)</u>
Comprehensive income (loss)	<u>\$ 4,033</u>	<u>\$ (10,735)</u>	<u>\$ (12,776)</u>	<u>\$ (48,900)</u>

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
	2020	2019	2019	2018
Per share data:				
Income (loss) per share attributable to common stockholders:				
Basic	\$ 50,500	\$ (29,110)	\$ (89,260)	\$ (332,580)
Diluted	50,500	(29,110)	(89,260)	(332,580)
Weighted average common shares outstanding:				
Basic	100	100	100	100
Diluted	100	100	100	100

	NINE MONTHS ENDED SEPTEMBER 30,		YEAR ENDED DECEMBER 31,	
	2020	2019	2019	2018
(in thousands)				
Cash flow data:				
Net cash provided by (used in):				
Operating activities	\$ 32,129	\$ 15,783	\$ 38,025	\$ 11,592
Investing activities	(7,209)	(6,866)	(9,517)	(73,905)
Financing activities	(24,103)	(7,640)	(8,489)	57,296
Cash paid for interest	21,077	21,407	26,428	25,713
Cash paid for income taxes, net	6,675	3,149	4,109	3,165

	AS OF SEPTEMBER 30,		AS OF DECEMBER 31,	
	2020	2019	2019	2018
(in thousands)				
Balance sheet data:				
Cash and cash equivalents	\$ 29,937	\$ 29,256	\$ 29,256	\$ 11,684
Accounts receivable, net of allowance for doubtful accounts	48,830	49,642	49,642	46,493
Property and equipment, net	4,355	4,623	4,623	5,401
Goodwill	515,587	514,996	514,996	514,274
Intangible assets, net of accumulated amortization	404,255	427,998	427,998	459,623
Total assets	1,020,380	1,037,069	1,037,069	1,051,493
Total liabilities	522,842	545,021	545,021	558,724
Total stockholders' equity	497,538	492,048	492,048	492,769

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion summarizes the significant factors affecting the operating results, financial condition, liquidity, and cash flows of our Company as of and for the periods presented below. The following discussion and analysis should be read in conjunction with "Selected Consolidated Financial Data," the condensed consolidated financial statements and the related notes thereto and the consolidated financial statements and the related notes thereto all included elsewhere in this prospectus. The statements in this discussion regarding industry outlook, our expectations regarding our future performance, liquidity, and capital resources, and all other non-historical statements in this discussion are forward-looking statements and are based on the beliefs of our management, as well as assumptions made by, and information currently available to, our management. Actual results could differ materially from those discussed in or implied by forward-looking statements as a result of various factors, including those discussed below and elsewhere in this prospectus, particularly in the sections entitled "Special Note Regarding Forward-Looking Statements" and "Risk Factors."

Executive Overview

We accelerate medicines to patients using biosimulation software and technology to transform traditional drug discovery and development. Biosimulation is a powerful technology used to conduct virtual trials using virtual patients to predict how drugs behave in different individuals. Biopharmaceutical companies use our proprietary biosimulation software throughout drug discovery and development to inform critical decisions that not only save significant time and money but also advance drug safety and efficacy, improving millions of lives each year.

As a global leader in biosimulation based on 2019 revenue, we provide an integrated, end-to-end platform used by more than 1,600 biopharmaceutical companies and academic institutions across 60 countries, including all of the top 35 biopharmaceutical companies by R&D spend in 2019. Since 2014, customers who use our biosimulation software and technology-enabled services have received over 90% of all new drug approvals by the FDA. Moreover, 17 global regulatory authorities license our biosimulation software to independently analyze, verify, and review regulatory submissions, including the FDA, Europe's EMA, Health Canada, Japan's PMDA, and China's NMPA. Demand for our offerings continues to expand rapidly.

We build our biosimulation technology on first principles of biology, chemistry, and pharmacology with proprietary mathematical algorithms that model how medicines and diseases behave in the body. For over two decades, we have honed and validated our biosimulation technology with an abundance of data from scientific literature, lab research, and preclinical and clinical studies. In turn, our customers use biosimulation to conduct virtual trials to answer critical questions, such as: What will be the human response to a drug based on preclinical data? How will other drugs interfere with this new drug? What is a safe and efficacious dose for children, the elderly, or patients with pre-existing conditions? Virtual trials may be used to optimize dosing on populations that are otherwise difficult to study for ethical or logistical reasons, such as infants, pregnant women, the elderly, and cancer patients.

Biosimulation results need to be incorporated into regulatory documents for compelling submissions. Accordingly, we provide regulatory science solutions and integrate them with biosimulation so that our customers can navigate the complex and evolving regulatory landscape and maximize their chances of approval. Our differentiated regulatory services are powered by submissions management software and natural language processing for scalability and speed, allowing us to deliver more than 200 regulatory submissions over the past four years. Our team of more than 200 regulatory professionals has extensive experience applying industry guidelines and global regulatory requirements.

The final hurdle to delivering medicines to patients is market access, defined as strategies, processes, and activities to ensure that therapies are available to patients at the right price. We believe that biosimulation and market access will continue to be increasingly intertwined as health systems and countries move toward outcomes-based pricing. We have recently expanded into technology-enabled market access solutions, which help our customers understand the real-world impact of therapies and dosing regimens earlier in the process and

effectively communicate this to payors and health authorities. Our solutions are underpinned by technologies such as Bayesian statistical software and SaaS-based value communication tools.

With continued innovation in and adoption of our biosimulation software and technology-enabled services, we believe more biopharmaceutical companies worldwide will leverage more of our end-to-end platform to reduce cost, accelerate speed to market, and ensure safety and efficacy of medicines for all patients.

Key Factors Affecting Our Performance

We believe that the growth of and future success of our business depends on many factors. While each of these factors presents significant opportunities for our business, they also pose important challenges that we must successfully address to sustain our growth and improve results of operations.

Customer Retention and Expansion

Our future operating results depend, in part, on our ability to successfully enter new markets, increase our customer base, and retain and expand our relationships with existing customers. We monitor two key performance indicators to evaluate retention and expansion: new bookings and renewal rates.

- **Bookings:** Our new bookings represent a signed contract or purchase order where there is sufficient or reasonable certainty about the customer's ability and intent to fund and commence the software and/or services. Bookings vary from period to period depending on numerous factors, including the overall health of the biopharmaceutical industry, regulatory developments, industry consolidation, and sales performance. Bookings have varied and will continue to vary significantly from quarter to quarter and from year to year. See "Risk Factors — Risks Related to Our Business — Our bookings might not accurately predict our future revenue, and we might not realize all or any part of the anticipated revenue reflected in our backlog."
- **Renewal Rates:** Our renewal rates measure the percentage of software customers who renew their licenses or subscriptions at the end of the license or subscription periods. The renewal rate is based on revenues and excludes the effect of price increases or expansions.

The table below summarizes our quarterly bookings and renewal rate trends:

	2018	2018	2018	2018	2018	2019	2019	2019	2019	2019	2020	2020	2020	YTD	YTD
	Q1	Q2	Q3	Q4	FULL YEAR	Q1	Q2	Q3	Q4	FULL YEAR	Q1	Q2	Q3	2019	2020
Bookings	53.4	45.3	46.0	82.9	227.5	66.6	74.7	48.5	69.6	259.5	61.0	70.1	72.9	189.9	204.0
Renewal Rate	93%	94%	96%	92%	94%	93%	89% ⁽¹⁾	95%	95%	93%	92%	96%	84% ⁽²⁾	92%	91%

⁽¹⁾ Due to late renewals by several large biosimulation software customers.

⁽²⁾ Due to the completion of a large contract for a regulatory submission software.

Investments in Growth

We have invested and intend to continue to invest in expanding the breadth and depth of our solutions, including through acquisitions and international expansion. We expect to continue to invest (i) in scientific talent to expand our ability to deliver solutions across the drug development spectrum; (ii) in sales and marketing to promote our solutions to new and existing customers and in existing and expanded geographies; (iii) in research and development to support existing solutions and innovate new technology; and (iv) in other operational and administrative functions to support our expected growth. We expect that our headcount will increase over time and also expect our total operating expenses will continue to increase over time, albeit, at a rate lower than revenue growth.

Our Operating Environment

The acceptance of model-informed biopharmaceutical discovery and development by regulatory authorities affects the demand for our products and services. Support for the use of biosimulation in discovery and development from regulatory bodies, such as the FDA and EMA, has been critical to its rapid adoption by the

biopharmaceutical industry. There has been a steady increase in the recognition by regulatory and academic institutions of the role that modeling and simulation can play in the biopharmaceutical development and approval process, as demonstrated by new regulations and guidance documents describing and encouraging the use of modeling and simulation in the biopharmaceutical discovery, development, testing, and approval process, which has directly led to an increase in the demand for our services. Changes in government or regulatory policy, or a reversal in the trend toward increasing the acceptance of and reliance upon *in silico* data in the drug approval process, could decrease the demand for our products and services or lead regulatory authorities to cease use of, or to recommend against the use of, our products and services.

Governmental agencies throughout the world, but particularly in the United States where the majority of our customers are based, strictly regulate the biopharmaceutical development process. Our business involves helping biopharmaceutical companies strategically and tactically navigate the regulatory approval process. New or amended regulations are expected to result in higher regulatory standards and often additional revenues for companies that service these industries. However, some changes in regulations, such as a relaxation in regulatory requirements or the introduction of streamlined or expedited approval procedures, or an increase in regulatory requirements that we have difficulty satisfying or that make our regulatory strategy services less competitive, could eliminate or substantially reduce the demand for our regulatory services.

Competition

The market for our biosimulation products and related services for the biopharmaceutical industry is competitive and highly fragmented. In biosimulation software, we compete with other scientific software providers, technology companies, in-house development by biopharmaceutical companies, and certain open source solutions. In the technology-enabled services market, we compete with specialized companies, in-house teams at biopharmaceutical companies, and academic and government institutions. In some standard biosimulation services, and in regulatory and market access, we also compete with contract research organizations. Some of our competitors and potential competitors have longer operating histories in certain segments of our industry than we do and could have greater financial, technical, marketing, R&D, and other resources. Some of our competitors offer products and services directed at more specific markets than those we target, enabling these competitors to focus a greater proportion of their efforts and resources on those specific markets. Some competing products are developed and made available at lower cost by government organizations and academic institutions, and these entities may be able to devote substantial resources to product development. Some clinical research organizations or technology companies may decide to enter into or expand their offerings in the biosimulation area, whether through acquisition or internal development. We also face competition from open source software initiatives, in which developers provide software and intellectual property free of charge, such as R and PK-Sim software. In addition, some of our customers spend significant internal resources in order to develop their own solutions.

Impact of COVID-19

The continued spread of COVID-19 may adversely impact our business, financial condition or results of operations as a result of increased costs, negative impacts to our healthy workforce or a sustained economic downturn. The extent to which the COVID-19 pandemic may impact our business in the future is highly uncertain and cannot be predicted. In addition, a recession or a prolonged period of depressed economic activity related to COVID-19 and measures taken to mitigate its spread could have a material adverse effect on our business, financial condition and results of operations. As of September 30, 2020, there have been no material adverse impacts on the Company's financial condition, results of operations or cash flows.

Non-GAAP Measures

Management uses various financial metrics, including total revenues, income from operations, net income, and certain metrics that are not required by, or presented in accordance with, GAAP, such as Adjusted EBITDA, to measure and assess the performance of our business, to evaluate the effectiveness of our business strategies, to make budgeting decisions, to make certain compensation decisions, and to compare our performance against that of other peer companies using similar measures. We believe that presentation of the GAAP and the non-GAAP metrics in this prospectus will aid investors in understanding our business.

Management measures operating performance based on Adjusted EBITDA defined for a particular period as net income (loss) excluding interest expense, provision (benefit) for income taxes, depreciation and amortization expense, intangible asset amortization, equity-based compensation expense, acquisition and integration expense, and other items not indicative of our ongoing operating performance.

We believe Adjusted EBITDA is helpful to investors, analysts, and other interested parties because it can assist in providing a more consistent and comparable overview of our operations across our historical periods. In addition, this measure is frequently used by analysts, investors, and other interested parties to evaluate and assess performance.

Adjusted EBITDA is a non-GAAP measure and is presented for supplemental purposes only and should not be considered as an alternative or substitute to financial information presented in accordance with GAAP. Adjusted EBITDA has certain limitations in that it does not include the impact of certain expenses that are reflected in our consolidated statement of operations that are necessary to run our business. Other companies, including other companies in our industry, may not use this measure and may calculate it differently than as presented on this prospectus, limiting the usefulness as a comparative measure. See footnote (1) under "Prospectus Summary — Summary Consolidated Financial Data" for more information about our non-GAAP measures and a reconciliation of Adjusted EBITDA to net income (loss), the nearest measure calculated in accordance with GAAP.

Components of Results of Operations

Revenues

Our business generates revenue from the sales of software products and delivery of consulting services.

- **Software.** Our software business generates revenues from software licenses, software subscriptions and software maintenance as follows:
 - *Software licenses:* We recognize revenue for software license fees upfront, upon delivery of the software license.
 - *Software subscription:* Subscription revenue consists of subscription fees to provide our customers access to and related support for our cloud-based solutions. We recognize subscription fees ratably over the term of the subscription, usually one to three years. Any subscription revenue paid upfront that is not recognized in the current period is included in deferred revenue in our consolidated balance sheet until earned.
 - *Software maintenance:* Software maintenance revenue includes fees for providing updates and technical support for software offerings. Software maintenance revenue is recognized ratably over the contract term, usually one year.
- **Services.** Our services business generates revenues primarily from technology-enabled services and professional services, which include software implementation services. Our service arrangements are time and materials, fixed fee, or prepaid. Revenues are recognized over the time services are performed for time and materials, and over time by estimating progress to completion for fixed fee and prepaid services.

Cost of Revenues

Cost of revenues consists primarily of employee related expenses, equity-based compensation, the costs of third-party subcontractors, travel costs, distributor fees, amortization of capitalized software and allocated overhead. We may add or expand computing infrastructure service providers, make additional investments in the availability and security of our solutions, or add resources to support our growth.

Operating Expenses

- **Sales and Marketing.** Sales and marketing expense consists primarily of employee-related expenses, sales commissions, brand development, advertising, travel-related expenses and industry conferences and events. We plan to continue to invest in sales and marketing to increase penetration of our existing client base and expand to new clients.
- **Research and Development.** Research and development expense accounts for a significant portion of our operating expenses. We recognize expenses as incurred. Research and development expenses consist

primarily of employee-related expenses, third-party consulting, allocated software costs and tax credits. We plan to continue to invest in our R&D efforts to enhance and scale our software product offerings by development of new features and increased functionality.

- **General and Administrative.** General and administrative expense consists of personnel-related expenses associated with our executive, legal, finance, human resources, information technology, and other administrative functions, including salaries, benefits, bonuses, and equity-based compensation. General and administrative expense also includes professional fees for external legal, accounting and other consulting services, allocated overhead costs, and other general operating expenses.

We expect to increase the size of our general and administrative staff to support the anticipated growth of our business. Following the completion of this offering, we expect to incur additional expenses as a result of operating as a public company, including costs to comply with the rules and regulations applicable to companies listed on a U.S. securities exchange and costs related to compliance and reporting obligations pursuant to the rules and regulations of the SEC. In addition, as a public company, we expect to incur increased expenses such as insurance and professional services. As a result, we expect the dollar amount of our general and administrative expense to increase for the foreseeable future. Excluding public company expenses, we expect general and administrative expense to grow at a rate lower than revenues.

- **Intangible Asset Amortization.** Intangible asset amortization consists primarily of amortization expense related to intangible assets recorded in connection with acquisitions and amortization of capitalized software development costs.
- **Depreciation and Amortization Expense.** Depreciation and amortization expense consists of depreciation of property and equipment and amortization of leasehold improvements.

Other Expenses

- **Interest Expense.** Interest expense consists primarily of interest expense associated with the Credit Facilities, including amortization of debt issuance costs and discounts. We expect interest expense to decline as a result of lower outstanding indebtedness going forward.
- **Miscellaneous.** Miscellaneous expense consists of miscellaneous non-operating expenses primarily comprised of foreign exchange transaction gains and losses.
- **Provision for (Benefit from) Income Taxes.** Provision for (benefit from) income taxes consists of U.S. federal and state income taxes and income taxes in certain foreign jurisdictions in which we conduct business. We expect income tax expense to increase over time as the Company continues to grow net income.

Acquisitions

BaseCase Acquisition

On January 25, 2018, we acquired 100% of the equity of BaseCase, a SaaS company in the life sciences industry. The purchase price of \$25.3 million was funded through proceeds of \$25.0 million received from an additional tranche of term debt and cash on hand. See Note 5, "Business Combinations," of the consolidated financial statements included elsewhere in this prospectus.

Analytica Laser Acquisition

On April 3, 2018, we acquired 100% of the equity of Analytica Laser, a provider of real-world evidence and health economics outcomes research, value and access consultancy, cost and comparative effectiveness modeling, and collection and analysis of real-world data for use in market and payor communications. The purchase price of \$40.0 million was funded through proceeds of \$40.0 million received from an additional tranche of term debt and cash on hand. See Note 5, "Business Combinations," of the consolidated financial statements included elsewhere in this prospectus.

Impacts of the Initial Public Offering

Impact of Debt Extinguishment

Assuming the net proceeds after expenses to us of \$ _____ million in connection with the sale of common stock in this offering, based on an assumed initial public offering price of \$ _____ per share, which is the

midpoint of the price range set forth on the cover of this prospectus, together with cash on hand, are used to repay outstanding indebtedness under the Loan Agreement and a portion of our term loans under our Credit Agreement, as described in “Use of Proceeds,” we expect to incur debt extinguishment costs of \$ million related to the write-off of debt issuance and debt modification costs and \$ million related to the write-off of unamortized debt discounts. We also expect interest expense to be lower in future periods based on the reduction in debt.

Public Company Expenses

Following our initial public offering, we will incur significant expenses on an ongoing basis that we did not incur as a private company. Those costs include additional director and officer liability insurance expenses, as well as third-party and internal resources related to accounting, auditing, SOX compliance, legal, and investor and public relations expenses. These costs will generally be general and administrative expenses.

Equity-Based Compensation Expense

Following our initial public offering, unvested performance-vesting Class B Units (or the restricted shares of common stock for which they will be exchanged in connection with this offering) will be eligible to vest as and when the Initial EQT Sponsors (as defined in the 2017 Incentive Plan) sell shares of our common stock if the Initial EQT Sponsors realize certain multiples of invested capital in connection with such sales. See Note 12, “Equity-based Compensation”, to our audited consolidated financial statements included elsewhere in this prospectus for additional information on our unit-based compensation plan.

As of the time of this offering, we have determined that the vesting criteria of the performance-vesting Class B Units (or the restricted shares of common stock for which they will be exchanged in connection with this offering) is not probable and, accordingly, have not recognized any expense related to those awards. Unamortized compensation expense of \$10.3 million in respect of the performance-vesting awards as of September 30, 2020 will be amortized over the remaining requisite service period if and when we determine that vesting is probable. Upon completion of the offering, we expect that \$3.4 million of the unamortized compensation expense will be recognized related to the performance-based Class B Units that are expected to vest. In connection with this offering, we expect to implement a new long-term equity incentive plan during 2020 to align our equity compensation program with public company plans and practices. See “Executive Compensation — Stock Incentive Plans — 2020 Incentive Plan” for additional details.

Results of Operations

We have included the results of operations of acquired companies in our consolidated results of operations from the date of their respective acquisitions, which impacts the comparability of our results of operations when comparing results for the nine months ended September 30, 2020 to the nine months ended September 30, 2019 and the year ended December 31, 2019 to the year ended December 31, 2018.

Nine Months Ended September 30, 2020 Versus Nine Months Ended September 30, 2019

The following table summarizes our unaudited statements of operations data for the nine months ended September 30, 2019 and 2020:

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	\$	%
	(dollars in thousands)			
Statement of operations data:				
Revenues	\$ 178,889	\$ 154,654	\$ 24,235	16%
Cost of revenues	65,860	57,817	8,043	14%
Operating expenses:				
Sales and marketing	8,773	7,946	827	10%
Research and development	9,139	8,651	488	6%
General and administrative	36,125	35,630	495	1%
Intangible asset amortization	28,056	26,908	1,148	4%
Depreciation and amortization expense	1,836	2,140	(304)	(14)%
Total operating expenses	83,929	81,275	2,654	3%
Income from operations	29,100	15,562	13,538	87%
Other expenses:				
Interest expense	(19,810)	(21,011)	(1,201)	6%
Miscellaneous, net	456	(163)	619	nm
Total other expenses	(19,354)	(21,174)	1,820	(9)%
Income (loss) before income taxes	9,746	(5,612)	15,358	nm
Provision for (benefit from) income taxes	4,696	(2,701)	7,397	nm
Net income (loss)	\$ 5,050	\$ (2,911)	7,961	nm

Note: "nm" means not meaningful.

Revenues

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	\$	%
	(dollars in thousands)			
Software	\$ 55,925	\$ 51,453	\$ 4,472	9%
Services	122,964	103,201	19,763	19%
Total revenues	\$ 178,889	\$ 154,654	\$24,235	16%

Revenues increased \$24.2 million, or 16%, to \$178.9 million for the nine months ended September 30, 2020 as compared to the same period in 2019. The increase in revenues was a direct result of growth in our services and software product offerings, primarily related to strong renewal rates and client expansions in software, as well as growth in our technology-enabled services, primarily in biosimulation and regulatory writing product lines, partially offset by a decline in our professional services offerings.

Software revenue increased by \$4.4 million, or 9%, to \$55.9 million for the nine months ended September 30, 2020 as compared to the same period in 2019, driven primarily by growth in sales of our software licenses of 14%, or \$3.5 million, as well as growth in our subscriptions products of 6%, or \$1.4 million, partially offset by a 13% decline, or \$0.5 million in software maintenance.

Services revenue increased by \$19.8 million, or 19%, to \$123.0 million for the nine months ended September 30, 2020 as compared to the same period in 2019, driven by growth in our technology-enabled

services, primarily in biosimulation and regulatory writing offerings, of 21%, or \$20.7 million, partially offset by a decrease in our professional service products of 21%, or \$0.9 million.

Cost of Revenues

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	\$	%
	(dollars in thousands)			
Cost of revenues	\$ 65,860	\$ 57,817	\$8,043	14%

Cost of revenues increased by \$8.0 million to \$65.9 million for the nine months ended September 30, 2020 as compared to the same period in 2019. This increase was primarily due to the growth in revenue driving increases in employee-related costs, consulting costs, distributor fees, bonus expense and software capitalization, partially offset by decreases in travel and entertainment and software expenses.

Sales and Marketing Expense

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	\$	%
	(dollars in thousands)			
Sales and marketing	\$ 8,773	\$ 7,946	\$827	10%
% of total revenues	5%	5%		

Sales and marketing expenses increased by \$0.8 million, or 10%, to \$8.8 million for the nine months ended September 30, 2020 as compared to the same period in 2019. Sales and marketing expenses increased primarily due to increases in sales commissions, employee-related costs and website costs, partially offset by decreases in travel and entertainment, consulting expenses, trade shows and advertising costs.

Research and Development Expense

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	\$	%
	(dollars in thousands)			
Research and development	\$ 9,139	\$ 8,651	\$488	6%
% of total revenues	5%	6%		

Research and development expenses increased by \$0.5 million, or 6%, to \$9.1 million for the nine months ended September 30, 2020 as compared to the same period in 2019. The increase in R&D expenses was primarily due to increases in employee-related, consulting, and software costs, partially offset by higher software capitalization and tax credits and decreases in travel and entertainment costs.

General and Administrative Expense

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	\$	%
	(dollars in thousands)			
General and administrative	\$ 36,125	\$ 35,630	\$495	1%
% of total revenues	20%	23%		

General and administrative expenses increased by \$0.5 million, or 1%, to \$36.1 million for the nine months ended September 30, 2020 as compared to the same period in 2019. The increase in general and administrative expenses was primarily due to increases in equity-based compensation, bonus expense, initial public offering

costs, software expenses, facilities costs and accounting and tax fees. The increases were partially offset by decreases in severance, integration, reorganization, legal, consulting and travel and entertainment costs.

Intangible Asset Amortization Expense

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	\$	%
	(dollars in thousands)			
Intangible asset amortization	\$ 28,056	\$ 26,908	\$1,148	4%
% of total revenues	16%	17%		

Intangible asset amortization expense increased by \$1.1 million, or 4%, to \$28.1 million for the nine months ended September 30, 2020 as compared to the same period in 2019. The increase in intangible asset amortization expense is a direct result of increased capitalized software development costs.

Depreciation and Amortization Expense

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	\$	%
	(dollars in thousands)			
Depreciation and amortization	\$ 1,836	\$ 2,140	\$(304)	(14)%
% of total revenues	1%	1%		

Depreciation and amortization expense decreased by \$0.3 million, or 14%, to \$1.8 million for the nine months ended September 30, 2020 as compared to the same period in 2019. The decrease in depreciation and amortization expense is directly due to lower capital expenditure investments period over period.

Interest Expense

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	\$	%
	(dollars in thousands)			
Interest expense	\$ 19,810	\$ 21,011	\$(1,201)	(6)%
% of total revenues	11%	14%		

Interest expense decreased by \$1.2 million, or 6%, to \$19.8 million for the nine months ended September 30, 2020 as compared to the same period in 2019. The decrease in interest expense was directly due to lower interest rates on our variable rate debt and lower outstanding principal amounts on our credit facilities.

Miscellaneous, net

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	\$	%
	(dollars in thousands)			
Miscellaneous, net	\$ 456	\$ (163)	\$619	nm
% of total revenues	0%	0%		

Miscellaneous income was \$0.5 million for the nine months ended September 30, 2020 as compared to miscellaneous expenses of \$0.2 million for the same period in 2019. The change was primarily due to foreign currency exchange rate fluctuations.

Provision for (Benefit from) Income Taxes

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	\$	%
	(dollars in thousands)			
Provision for (benefit from) income taxes	\$ 4,696	\$ (2,701)	\$7,397	nm
Effective tax rate	48%	48%		

Our income tax expense was \$4.7 million, resulting in an effective income tax rate of 48% for the nine months ended September 30, 2020 as compared to an income tax benefit of \$2.7 million, or an effective income tax rate of 48%, for the same period in 2019. Our income tax expense (benefit) for the nine months ended September 30, 2020 and 2019 was primarily due to the tax effects of U.S. pre-tax income, the effects of tax elections made for U.K. earnings, and the impact of tax law and tax rate changes in certain jurisdictions. The effective income tax rate remained consistent between periods and is susceptible to changes in the mix of domestic and international earnings.

Net Income (Loss)

	NINE MONTHS ENDED SEPTEMBER 30,		CHANGE	
	2020	2019	\$	%
	(dollars in thousands)			
Net income (loss)	\$ 5,050	\$ (2,911)	\$7,961	nm

Net income was \$5.1 million for the nine months ended September 30, 2020 as compared to a net loss of \$2.9 million for the same period in 2019. The change was primarily due to an increase in operating income as well as a decrease in other expenses, partially offset by an increase in tax expense, each as described above.

Year Ended December 31, 2019 Versus Year Ended December 31, 2018

The following table summarizes our audited statements of operations data for the years ended December 31, 2018 and 2019:

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	\$	%
(in thousands)				
Statement of operations data:				
Revenues	\$ 208,511	\$ 163,719	\$44,792	27%
Cost of revenues	79,770	71,043	8,727	12%
Operating expenses:				
Sales and marketing	10,732	9,416	1,316	14%
Research and development	11,633	10,478	1,155	11%
General and administrative	47,926	43,393	4,533	10%
Intangible asset amortization	36,241	31,625	4,616	15%
Depreciation and amortization expense	2,596	2,416	180	7%
Total operating expenses	109,128	97,328	11,800	12%
Income (loss) from operations	19,613	(4,652)	24,265	nm
Other expenses:				
Interest expense	(28,004)	(27,802)	(202)	1%
Miscellaneous, net	(760)	(107)	(653)	610%
Total other expenses	(28,764)	(27,909)	(855)	3%
Loss from operations before income taxes	(9,151)	(32,561)	23,410	(72)%
(Benefit from) provision for income taxes	(225)	697	(922)	nm
Net loss	(8,926)	(33,258)	24,332	(73)%

Revenues

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	\$	%
(dollars in thousands)				
Software	\$ 68,341	\$ 46,849	\$21,492	46%
Services	140,170	116,870	23,300	20%
Total revenues	\$ 208,511	\$ 163,719	\$44,792	27%

Revenues increased by \$44.8 million, or 27%, to \$208.5 million for the year ended December 31, 2019 as compared to the same period in 2018. The increase in revenues was a direct result of growth in our services and software product offerings, strong renewal rates and client expansions in software, as well as growth in our technology-enabled services, primarily in biosimulation, market access, and regulatory writing offerings.

Software revenue increased by \$21.5 million, or 46%, to \$68.3 million for the year ended December 31, 2019 as compared to the same period in 2018, driven primarily by an increase in sales of our software licenses of 16%, or \$4.6 million, as well as an increase in subscriptions revenue of 8%, or \$2.3 million, and software maintenance revenue of 8%, or \$0.3 million. In addition to organic growth, we incurred a reduction in 2018 software licenses and software subscriptions of \$8.3 million and \$6.1 million respectively, as compared to \$0 and \$0.3 million in 2019, relating to purchase accounting fair value adjustments of deferred revenue.

Services revenue increased by \$23.3 million, or 20%, to \$140.2 million for the year ended December 31, 2019 as compared to the same period in 2018, primarily driven by both organic and acquisition growth in our technology-enabled services (primarily in our biosimulation and regulatory offerings) and professional services offerings of 21% and 10%, respectively.

Cost of Revenues

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	\$	%
	(dollars in thousands)			
Cost of revenues	\$ 79,770	\$ 71,043	\$8,727	12%

Cost of revenues increased by \$8.7 million, or 12%, to \$79.8 million for the year ended December 31, 2019 as compared to 2018. The increase in cost of revenues was primarily due to increases in employee-related costs, consulting costs, distributor fees, and software expenses, partially offset by a decrease in amortization of software development costs and integration costs.

Sales and Marketing Expense

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	\$	%
	(dollars in thousands)			
Sales and marketing	\$ 10,732	\$ 9,416	\$1,316	14%
% of total revenues	5%	6%		

Sales and marketing increased by \$1.3 million, or 14%, to \$10.7 million for the year ended December 31, 2019 as compared to 2018. Sales and marketing increased primarily due to due to increases in employee-related costs, sales commissions, consulting expenses, and travel and entertainment costs, partially offset by a decrease in other marketing costs.

Research and Development Expense

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	\$	%
	(dollars in thousands)			
Research and development	\$ 11,633	\$ 10,478	\$1,155	11%
% of total revenues	6%	6%		

Research and development expenses increased by \$1.2 million, or 11%, to \$11.6 million for the year ended December 31, 2019 as compared to 2018. The increase in R&D expenses was primarily due to increases in employee-related, consulting, and software costs, partially offset by higher capitalization of software development costs, tax credits, and a decrease in startup costs.

General and Administrative Expense

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	\$	%
	(dollars in thousands)			
General and administrative	\$ 47,926	\$ 43,393	\$4,533	10%
% of total revenues	23%	27%		

General and administrative expenses increased by \$4.5 million, or 10%, to \$47.9 million for the year ended December 31, 2019 as compared to 2018. The increase in general and administrative expenses was primarily due to increases in employee-related costs, facilities costs, software expenses, accounting fees, and severance, integration, restructuring, and reorganization costs, partially offset by decreases in travel and entertainment costs and acquisition-related synergies.

Intangible Asset Amortization Expense

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	\$	%
	(dollars in thousands)			
Intangibles asset amortization	\$ 36,241	\$ 31,625	\$4,616	15%
% of total revenues	17%	19%		

Intangible asset amortization expense increased by \$4.6 million, or 15%, to \$36.2 million for the year ended December 31, 2019 as compared to 2018. The increase in intangible asset amortization was a direct result of increases in capitalized software development costs and increases in acquired intangible assets.

Depreciation and Amortization Expense

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	\$	%
	(dollars in thousands)			
Depreciation and amortization	\$ 2,596	\$ 2,416	\$180	7%
% of total revenues	1%	1%		

Depreciation and amortization expense of \$2.6 million was relatively flat for the year ended December 31, 2019 as compared to 2018.

Interest Expense

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	\$	%
	(dollars in thousands)			
Interest expense	\$ 28,004	\$ 27,802	\$202	1%
% of total revenues	13%	17%		

Interest expense increased by \$0.2 million, or 1%, to \$28.0 million for the year ended December 31, 2019 as compared to 2018. The increase in interest expense was primarily due to the full year effect of interest on acquisition-related borrowings.

Miscellaneous, net

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	\$	%
	(dollars in thousands)			
Miscellaneous, net	\$ 760	\$ 107	\$653	610%
% of total revenues	0%	0%		

Miscellaneous expenses increased by \$0.7 million, or 610%, to \$0.8 million for the year ended December 31, 2019 as compared to 2018. The increase in miscellaneous expenses was primarily due to unfavorable foreign exchange rates compared to the U.S. dollar, particularly with the pound sterling.

(Benefit from) Provision for Income Taxes

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	\$	%
	(dollars in thousands)			
(Benefit from) provision for income taxes	\$ (225)	\$ 697	\$922	nm
Effective income tax rate	2.5%	(2.1%)		

Our income tax benefit was \$0.2 million, resulting in an effective income tax rate of 2.5%, for the year ended December 31, 2019, as compared to an income tax expense of \$0.7 million, or an effective income tax rate

of (2.1%), in 2018. Our income tax benefit for the year ended December 31, 2019 was primarily due to the tax effects of the U.S. pre-tax loss and the impact of tax rate changes in certain jurisdictions.

Net Loss

	YEAR ENDED DECEMBER 31,		CHANGE	
	2019	2018	\$	%
	(dollars in thousands)			
Net loss	\$ (8,926)	\$ (33,258)	\$24,332	(73)%

Net loss decreased by \$24.5 million, or 73%, to \$8.9 million for the year ended December 31, 2019 as compared to the same period in 2018. The decrease was primarily due to an increase in operating income and positive change in taxes, partially offset by increase in other expenses, each as described above.

Liquidity and Capital Resources

We assess our liquidity in terms of our ability to generate adequate amounts of cash to meet current and future needs. Our expected primary uses on a short-term and long-term basis are for repayment of debt, interest payments, working capital, capital expenditures, geographic or service offering expansion, acquisitions, investments, and other general corporate purposes. We have historically funded our operations primarily through cash generated from operations. We have historically used long-term debt and cash on hand to fund acquisitions. We hold our cash balances in the United States and numerous locations in the rest of the world.

As of September 30, 2020, we had cash and cash equivalents \$29.9 million, of which \$17.4 million represents cash and cash equivalents held outside of the United States.

Cash Flows

The following table presents a summary of our cash flows for the periods shown:

	NINE MONTHS ENDED		YEAR ENDED DECEMBER 31,	
	2020	2019	2019	2018
	(in thousands)			
Net cash provided by operating activities	\$ 32,129	\$ 15,783	\$ 38,025	\$ 11,592
Net cash used in investing activities	(7,209)	(6,866)	(9,517)	(73,905)
Net cash (used in) provided by financing activities	(24,103)	(7,640)	(8,489)	57,296
Effect due to foreign exchange rate changes on cash, cash equivalents, and restricted cash	1,170	1,546	(2,444)	(1,337)
Net increase (decrease) in cash, cash equivalents and restricted cash	\$ 1,987	\$ 2,823	\$ 17,575	\$ (6,354)
Cash paid for interest	\$ 21,077	21,407	26,428	25,713
Cash paid for income taxes	\$ 6,675	3,149	4,109	3,165

Operating Activities

During the year ended December 31, 2019, operating activities provided approximately \$38.0 million of cash and cash equivalents, primarily resulting from a net loss of \$8.9 million, offset by \$38.2 million of non-cash operating expenses inclusive of depreciation and amortization, amortization of debt issuance costs, equity-based compensation costs, and deferred income taxes. Changes in our operating assets and liabilities provided cash and cash equivalents of approximately \$8.7 million.

During the year ended December 31, 2018, operating activities provided approximately \$11.6 million of cash and cash equivalents, primarily resulting from a net loss of \$33.3 million, offset by \$36.4 million of non-cash

operating expenses inclusive of depreciation and amortization, amortization of debt issuance cost, equity-based compensation costs, deferred income taxes, and a \$0.1 million non-cash loss on retirement of assets. Changes in our operating assets and liabilities provided cash and cash equivalents of approximately \$8.3 million.

During the nine months ended September 30, 2020, operating activities provided approximately \$32.1 million of cash and cash equivalents, primarily resulting from net income of \$5.1 million, plus \$36.3 million of non-cash operating expenses inclusive of depreciation and amortization, amortization of debt issuance cost, provision for doubtful accounts, loss on retirement of assets, equity-based compensation costs and deferred income taxes. Changes in our operating assets and liabilities used cash and cash equivalents of approximately \$9.3 million.

During the nine months ended September 30, 2019, operating activities provided approximately \$15.8 million of cash and cash equivalents, primarily resulting from a net loss of \$2.9 million, offset by \$26.7 million of non-cash operating expenses inclusive of depreciation and amortization, amortization of debt issuance cost, loss on retirement of assets, equity-based compensation costs and deferred income taxes. Changes in our operating assets and liabilities used cash and cash equivalents of approximately \$8.0 million.

Investing Activities

During the year ended December 31, 2019, investing activities used approximately \$9.5 million of cash, primarily for investing in capital expenditures and capitalized software development to support our growth.

During the year ended December 31, 2018, investing activities used approximately \$73.9 million of cash, primarily for business acquisitions of \$62.4 million, and investing in capital expenditures and capitalized software development to support our growth.

During the nine months ended September 30, 2020, investing activities used approximately \$7.2 million of cash, primarily for investing in capitalized software development, capital expenditures and business acquisition to support our growth.

During the nine months ended September 30, 2019, investing activities used approximately \$6.9 million of cash, primarily for investing in capitalized software development and capital expenditures to support our growth.

Financing Activities

During the year ended December 31, 2019, financing activities used approximately \$8.5 million of cash, primarily attributable to payments on long-term debt, capital lease obligations, and our revolving credit facility, and unit repurchases, partially offset by proceeds from capital contributions.

During the year ended December 31, 2018, financing activities provided approximately \$57.3 million of cash, consisting of proceeds from borrowings on long-term debt and our revolving credit facility, and capital contributions, partially offset by payments on contingent consideration obligations, long-term debt, capital lease obligations, and our revolving credit facility, units repurchases, and debt issuance costs.

During the nine months ended September 30, 2020, financing activities used approximately \$24.1 million of cash, primarily attributable to payments on long-term debt and capital lease obligations and units repurchases partially offset by proceeds from capital contribution and borrowings from affiliates.

During the nine months ended September 30, 2019, financing activities used approximately \$7.6 million of cash, primarily due to units repurchases and payments on long-term debt and capital lease obligations and our revolving credit facility, partially offset by proceeds from capital contribution.

Funding Requirements

We believe that our existing cash and cash equivalents will be sufficient to fund our operations and capital expenditure requirements for the foreseeable future. Our future capital requirements will depend on many factors, including funding for potential acquisitions, investments, and other growth and strategic opportunities that might require use of existing cash, borrowings under our revolving credit facility, or additional long-term financing. We may also use existing cash and cash flows from operations to pay down long-term debt from time to time.

While we believe we have sufficient liquidity to fund our operations for the foreseeable future, our sources of liquidity could be affected by factors described under “Risk Factors” elsewhere in this prospectus.

Indebtedness

Credit Facilities

Loan Agreement

We are party to a Loan Agreement providing for a \$100.0 million senior unsecured term loan. The Loan Agreement matures on August 14, 2025.

Borrowings under the Loan Agreement bear interest at a rate per annum equal to 8.25%, payable on each January 15th and July 15th and on the final maturity date. There is no scheduled amortization under the Loan Agreement.

We may voluntarily repay outstanding loans under the Loan Agreement at any time without premium or penalty.

The Loan Agreement contains certain customary representations and warranties. In addition, the lender under the Loan Agreement will be permitted to accelerate the loan upon the occurrence of certain events of default, subject to certain grace periods and exceptions, which include, among others, payment defaults, breaches of representations and warranties, the making of certain dividends (other than certain specified exceptions), certain events of bankruptcy and insolvency, and any change of control.

As of September 30, 2020, we had \$80.0 million of outstanding borrowings under the Loan Agreement.

Credit Agreement

Certain of our wholly owned indirect subsidiaries, Certara Holdco, Inc. and Certara USA, Inc. (collectively, the “Borrowers”), are party to a Credit Agreement that provides for a \$250.0 million senior secured term loan and commitments under a revolving credit facility in an aggregate principal amount of \$20.0 million, with a sub-commitment for issuance of letters of credit of \$10.0 million. The Credit Agreement matures on August 14, 2024, with respect to the term loan thereunder, and August 14, 2022, with respect to the revolving credit facility thereunder.

In January 2018, the Borrowers amended the Credit Agreement to borrow incremental term loans in the amount of \$25.0 million to be used for general corporate purposes. Additionally, in April 2018, the Borrowers amended the Credit Agreement to (i) borrow incremental term loans in the amount of \$40.0 million to be used for general corporate purposes and (ii) provide a reduction of 50 basis points in the margin under the term loan. The terms of such incremental term loans were the same as the terms of the Borrowers’ existing term loans, including in respect of maturity, and are considered an increase in the aggregate principal amount of the existing term loans outstanding under the Credit Agreement and are part of the existing term loan.

Borrowings under the Credit Agreement currently bear interest at a rate per annum equal to either (i) the Eurocurrency rate, with a floor of 0.00%, as adjusted for the reserve percentage required under regulations issued by the Federal Reserve Board for determining maximum reserve requirements with respect to Eurocurrency funding, plus an applicable margin rate of 3.50% for the term loan and between 4.00% and 3.50% for revolving credit loans, depending on the applicable first lien leverage ratio, (ii) an ABR, with a floor of 1.00%, plus an applicable margin rate of 2.50% for the term loan or between 3.00% and 2.50% for revolving credit loans, depending on the applicable first lien leverage ratio. The ABR is determined as the greatest of (a) the prime rate, (b) the federal funds effective rate, plus 0.50% and (iii) the Eurocurrency rate plus 1.00%.

Additionally, we are obligated to pay under the revolving credit facility (i) a commitment fee of between 0.50% and 0.25% per annum of the unused amount of the revolving credit facility, depending on the applicable first lien leverage ratio, (ii) customary letter of credit issuance and participation fees, and (iii) other customary fees and expenses of the letter of credit issuers.

The Credit Agreement provides that the Borrowers may request increased commitments and additional term loans or additional term or revolving facilities under the Credit Agreement, in each case, subject to certain conditions and in an aggregate principal amount not to exceed the sum of (a) the greater of (i) \$50.0 million and (ii) 100% of Consolidated Adjusted EBITDA (as defined in the Credit Agreement) for the most recently

completed four fiscal quarter period for which internal financial statements have been delivered (or are required to be delivered) prior to the date of any such incurrence, plus (b) an additional amount, subject to compliance on a pro forma basis with (i) a consolidated first lien leverage ratio of no greater than 5.00 to 1.00 for incremental first lien debt or (ii) if incurred in connection with a permitted acquisition, the first lien leverage ratio immediately prior to such acquisition, plus (c) certain other amounts as specified in the Credit Agreement. The Credit Agreement also provides for the incurrence of junior secured and unsecured debt, subject to certain conditions and ratios specified in the Credit Agreement.

The term loan under the Credit Agreement amortizes at a rate of approximately 1.00% per annum, paid in quarterly installments approximately equal to the product of (a) 0.25% times (b) the aggregate principal amount of the initial term loan outstanding immediately after the borrowing of the initial term loan on the closing date and each incremental term loan outstanding immediately after the borrowing thereof on the applicable closing date (with respect to each term loan repayment date prior to the term loan maturity date, as such product may be reduced by, and after giving pro forma effect to, any voluntary and mandatory prepayments as described in the Credit Agreement).

The Credit Agreement requires the Borrowers to prepay, subject to certain exceptions, outstanding term loans thereunder with:

- 50% (which percentage will be reduced to 25% and 0% based upon the achievement and maintenance of first lien leverage ratios equal to or less than 4.50 to 1.00 and 4.00 to 1.00, respectively) of the Borrowers' annual excess cash flow;
- 100% (which percentage will be reduced to 50% and 0% based upon the achievement and maintenance of first lien leverage ratios equal to or less than 4.50 to 1.00 and 4.00 to 1.00, respectively) of net cash proceeds of certain non-ordinary course asset sales or other dispositions of property, in excess of certain amounts specified in the Credit Agreement and subject to customary reinvestment rights; and
- 100% of net cash proceeds of certain issuances of debt obligations of the Borrowers and their restricted subsidiaries, except as permitted under the Credit Agreement.

There is no scheduled amortization under the revolving credit facility. The Borrowers may voluntarily reduce the unutilized portion of the commitment amount and repay outstanding loans under the Credit Agreement at any time without premium or penalty.

All obligations under the Credit Agreement are unconditionally guaranteed by our wholly owned indirect subsidiary and the parent of the Borrowers, Certara Intermediate, Inc. ("Holdings"), the Borrowers and certain of the Borrowers' existing and future direct and indirect wholly owned domestic subsidiaries, subject to certain exceptions. All obligations under the Credit Agreement, and the guarantees of those obligations, are secured on a first lien basis, subject to certain exceptions, by substantially all of Holdings' and the Borrowers' assets and the assets of the other guarantors.

The Credit Agreement contains covenants that, among other things, limit the ability of the Borrowers to incur additional debt; create liens against their assets; make acquisitions; pay dividends on their capital stock or redeem, repurchase, or retire their capital stock; make investments, acquisitions, loans, and advances; create negative pledges; merge or consolidate with another entity; transfer or sell assets; and enter into certain transactions with their affiliates.

In addition, the revolving credit facility under the Credit Agreement is subject to a first lien leverage ratio test of 7.50 to 1.00, tested quarterly if, and only if, on the last day of any fiscal quarter, the revolving credit facility and letters of credit (to the extent not cash collateralized or backstopped or, in the aggregate, not in excess of \$5.0 million) are outstanding and/or issued, as applicable, in an aggregate principal amount exceeding 35% of the total amount of the revolving credit facility commitments thereunder.

The Credit Agreement also contains certain customary representations and warranties, affirmative covenants and reporting obligations. In addition, the lenders under the Credit Agreement will be permitted to accelerate the loans and terminate commitments thereunder or exercise other specified remedies available to secured creditors upon the occurrence of certain events of default, subject to certain grace periods and exceptions, which include, among others, payment defaults, breaches of representations and warranties, covenant defaults,

cross-defaults to certain material indebtedness, certain events of bankruptcy and insolvency, certain pension plan related events, material judgments, and any change of control.

As of September 30, 2020, we had \$304.9 million of outstanding borrowings on the term loan, and \$19.9 million of availability under the revolving credit facility, and outstanding letters of credit of \$0.1 million under the Credit Agreement.

As of September 30, 2020, we and the Borrowers were in compliance with the covenants of each of the Credit Facilities.

Contractual Obligations and Commercial Commitments

We enter into long-term contractual obligations and commitments in the normal course of business, including operating leases.

The following table summarizes our contractual obligations as of December 31, 2019:

	TOTAL	LESS THAN 1 YEAR	1 TO 3 YEARS	3 TO 5 YEARS	MORE THAN 5 YEARS
	(in thousands)				
Lease obligations: ⁽¹⁾					
Operating leases	\$ 25,770	\$ 6,286	\$ 12,597	\$ 4,546	\$ 2,341
Capital leases	56	56	—	—	—
Principal payments of long-term debt ⁽²⁾	408,170	4,209	9,459	394,502	—
Interest on long-term debt ⁽³⁾	123,935	25,380	74,886	23,669	—
Total	<u>\$557,931</u>	<u>\$ 35,931</u>	<u>\$ 96,942</u>	<u>\$ 422,717</u>	<u>\$ 2,341</u>

(1) Includes the initial lease term and optional renewal terms that are included in the lease term of our headquarters and other office leases.

(2) Not reflected in this table is the expected repayment of our outstanding indebtedness under the Loan Agreement and of a portion of our term loans under our Credit Agreement as detailed in "Use of Proceeds."

(3) Represents the expected cash payments for interest on our long-term debt based on the amounts outstanding as of the end of each period and the interest rates applicable on such debt as of December 31, 2019.

As of September 30, 2020, contractual obligations for lease obligations increased by \$0.6 million from December 31, 2019, due to additional IT equipment financed, partially offset by payments on such financing. As of September 30, 2020, contractual obligations for principal payments of long-term debt and interest on debt decreased by \$23.3 million and \$47.6 million, respectively, from December 31, 2019. The decrease in principal payments of long-term debt is due to scheduled payments on term loans plus a \$20.0 million prepayment on the Loan Agreement. The decrease in interest on debt is due to lower outstanding debt balances and lower interest rates.

Income Taxes

We recorded income tax expense of \$4.7 million for the nine months ended September 30, 2020 and income tax benefit of \$2.7 million for the nine months ended September 30, 2019.

As of December 31, 2019, we had federal and state NOLs of approximately \$5.5 million and \$2.9 million, respectively, which are available to reduce future taxable income and expire between 2024 and 2036 and 2028 and 2038, respectively. We had federal and state R&D tax credit carryforwards of approximately \$2.2 million and \$0.8 million, respectively, to offset future income taxes, which expire between 2020 and 2039. We also had foreign tax credits of approximately \$8.5 million, which will start to expire in 2025. These carryforwards that may be utilized in a future period may be subject to limitations based upon changes in the ownership of our stock in a future period. Additionally, we carried forward foreign NOLs of approximately \$18.6 million which expire starting in 2023 and Canadian investment tax credits of approximately \$1.8 million which expire between 2030 and 2036. Our carryforwards are subject to review and possible adjustment by the appropriate taxing authorities.

As required by Accounting Standards Codification (“ASC”) Topic 740, Income Taxes, our management has evaluated the positive and negative evidence bearing upon the realizability of our deferred tax assets, which are composed principally of NOL carryforwards, R&D credit carryforwards, interest expense limitation carryforward, and foreign tax credit carryforwards. Management has determined that it is more likely than not that we will not realize the benefits of foreign tax credit carryforwards, certain R&D credit carryforwards, a portion of the interest expense limitation carryforward, and a portion of federal NOL carryforwards in the United States. At the foreign subsidiaries, management has determined that it is more likely than not that we will not realize the benefits of NOL carryforwards and investment tax credits. As a result, a valuation allowance of \$20.5 million was established at December 31, 2019. As of September 30, 2020, the valuation allowance remained unchanged from December 31, 2019, with the exception of a release of \$2.8 million related to the interest expense limitation carryforward due to changes implemented by the Coronavirus Aid, Relief, and Economic Security Act (“CARES Act”).

Off-Balance Sheet Arrangements

During the periods presented, we did not have, and currently we do not have, any off-balance sheet arrangements, as defined under the rules and regulations of the SEC.

Critical Accounting Policies and Estimates

Our management’s discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these consolidated financial statements requires us to make judgments and estimates that affect the reported amounts of assets, liabilities, revenues, and expenses and the disclosure of contingent assets and liabilities in our consolidated financial statements. We base our estimates on historical experience, known trends and events, and various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. On an ongoing basis, we evaluate our judgments and estimates in light of changes in circumstances, facts, and experience. The effects of material revisions in estimates, if any, are reflected in the consolidated financial statements prospectively from the date of change in estimates.

While our significant accounting policies are described in more detail in the notes to our consolidated financial statements appearing elsewhere in this prospectus, we believe the following accounting policies used in the preparation of our consolidated financial statements require the most significant judgments and estimates.

Revenues

Our revenue is primarily derived from the sale of software products and delivery of consulting services.

On January 1, 2019, we adopted ASC 606, Revenue from Contracts with Customers, on a modified retrospective basis. Prior to January 1, 2019 we applied ASC 605, Revenues Recognition, and Recognized Revenue, when the following criteria have been met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the price is fixed and determinable; and (4) collectability is reasonably assured.

Under ASC 606, we recognize revenue when control of the promised good or service is transferred to the customer in an amount that reflects the consideration for which we are expected to be entitled in exchange for those services.

Software Licenses and Support

License revenue includes perpetual license fees and term license fees, which provide customers with the same functionality and differ mainly in the duration over which the customer benefits from the use of software. Both revenues from perpetual license and term license performance obligations are generally recognized up front at the point in time when the software license has been delivered. A source of software license revenue is from term and bundled licenses that are time-based arrangements for one or multiple software products sold

together with maintenance and support for the term of the license arrangement. We have determined that post-customer support and the right to unspecified enhancements and upgrades on a “when-and-if-available” basis included with term licenses is an immaterial component of the transaction price and, therefore, recognize these performance obligation components up front with the license when delivered.

Software Services

For contracts that include multiple performance obligations, such as a software license plus software training, implementation, and/or maintenance/support, or in contracts where there are multiple software licenses, the transaction price is allocated to each of the performance obligations on a pro-rata basis based on the relative standalone selling price of each performance obligation. Maintenance services agreements consist of fees for providing software updates and for providing technical support for software products for a specified term. Revenues allocated to maintenance services are recognized ratably over the contract term beginning on the delivery date of each offering. Maintenance contracts generally have a term of one year. Expenses related to maintenance and subscription are recognized as incurred. While transfer of control of the software training and implementation performance obligations are performed over time, the services are typically started and completed within a few days. Due to the quick nature of the performance obligation from start to finish and the immaterial amounts, we recognize any software training or implementation revenue at the completion of the service. Any unrecognized portion of amounts paid in advance for licenses and services is recorded as deferred revenue.

License revenue and post-contract services are combined and reported as software revenue on the consolidated statements of operations and comprehensive income (loss).

Subscription Revenues

Subscription revenue consists of subscription fees for access to, and related support for, our cloud-based solutions. We typically invoice subscription fees in advance in annual installments and recognize subscription revenue ratably over the term of the applicable agreement, usually one to three years, which is initially deferred and recognized ratably over the life of the contract. Unearned maintenance and subscription revenues are recorded as deferred revenue. Our subscription services arrangements are generally non-cancelable and do not contain refund-type provisions. In rare instances that subscription services arrangements are deemed cancelable, we will adjust the transaction price and period for revenue recognition accordingly to be reflective of the contract term.

Services and Other Revenues

Services primarily represent advisory services, which may be either strategic consulting services, reporting and analysis services, regulatory writing services, or any combination of the three. Strategic consulting services consists of consulting, training, and process redesign that enables customers to identify which uncertainties are greatest and matter most and then to design development programs, trial sequences, and individual trials in such a way that those trials systematically reduce the identified uncertainties, in the most rapid and cost-effective manner possible. Our professional services contracts are time and materials, fixed fee, or prepaid. Services revenues are generally recognized over time as the services are performed. Revenues for fixed price services and prepaid are generally recognized over time applying input methods to estimate progress to completion. Training revenues are recognized as the services are performed over time.

Consortium revenues consist of contractual agreements with customers where the customer receives multiple benefits as part of their contract with the Company, as follows: access to the latest version simulator software, which has at least one new release per year, free access to a preset number of training workshops, a block of consulting hours to be used at the customer’s discretion, as well as voting rights at the annual consortium meeting where development priorities for the upcoming year are set. The Company’s consortium contracts are generally for three years with an annual termination clause and annual upfront billings. Consortium revenues are recognized over time as the benefits of the consortium arrangement are realized over the course of the contract. Both the training and consulting services performance obligations will utilize an output method to measure the progress at the end of each reporting period. As the simulation license was determined to be a functional license with the right to access, the license revenue is recognized evenly over the contract period.

Revenues Recognition under ASC 606

The adoption of ASC 606 changed the way we recognize revenue related to term and bundled license agreements. Prior to ASC 606, the Company recognized software licenses and support revenue in accordance

with ASC 985, Software. Revenues from software license agreements are recognized when all of the following criteria are met as set forth in ASC 985: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred; (3) the fee is fixed or determinable; and (4) collectability is reasonably assured.

A source of software license revenue is from term and bundled licenses that are time-based arrangements for one or multiple software products that are sold together with maintenance and support for the term of the license arrangement. The Company does not have vendor specific objective evidence ("VSOE") to determine fair value of the maintenance and support in term arrangements and, therefore, recognizes revenues from these bundled time-based licenses ratably over the license term, which typically ranges from one to three years.

We allocate revenues from perpetual software arrangements involving multiple elements to each element based on the relative fair values as determined by the VSOE for each element. We limit our assessment of VSOE for each element to the price charged when the same element is sold separately. We analyzed all of the elements included in multiple-element arrangements and determined that the Company has sufficient VSOE to allocate revenues to maintenance and support, deployment, and training. We sell training separately and have established VSOE on this basis. VSOE for maintenance and support is determined based upon the renewal rates in contracts themselves, which is based on a fixed percentage of the current perpetual license list price. Deployment services are charged based on standard hourly rates. Accordingly, assuming all other revenue recognition criteria are met, revenues from perpetual licenses are recognized upon delivery of the software using the residual method in accordance with ASC 985.

Software maintenance agreements provide for technical support and the right to unspecified enhancements and upgrades on a "when-and-if-available" basis. Post-contract support revenues on perpetual agreements are recognized ratably over the term of the support period (generally one year). Deployment, training, and other service revenues are recognized as the related services are provided. Any unrecognized portion of amounts paid in advance for licenses and services is recorded as deferred revenue.

Equity-Based Compensation

We estimated the fair value of the Class B Units granted by the EQT Investor to certain Company employees using the Monte Carlo option pricing model in 2019 and the Black-Scholes option-pricing model in 2018. In order to derive an estimate of each security class of the EQT Investor, we first determined the enterprise value of the EQT Investor. To do this we used the enterprise value of the Company as a proxy because the primary asset of the EQT Investor is its investment in the Company and therefore the total enterprise value was assumed to be the same.

The three valuation methodologies used to determine the enterprise value, each of which was given equal weighting, include the following:

- The Discounted Cash Flow Method (the "DCF Method"), a form of the Income Approach, was used to estimate the enterprise value by discounting the projected future free cash flows using an appropriate discount rate. We performed the DCF Method using a "debt-free" analysis, which entails estimating the free cash flows available to both debt and equity investors. The DCF Method incorporates several variables of observable and unobservable inputs, including, but not limited to, the Company's prospective financial information and assumes outlays for capital expenditures, future terminal values, an effective tax rate assumption and a discount rate based on a number of factors including market interest rates, a weighted average cost of capital analysis based on an assumed capital structure, and includes adjustments for market risk and company specific risk.
- The Guideline Public Company Method (the "GPC Method"), a form of the Market Approach, was used to estimate the enterprise value by multiplying historical and anticipated financial metrics by a multiple that was derived from an analysis of comparable publicly traded companies. The GPC Method estimates enterprise value based on a comparison of our company to comparable public companies in a similar line of business. From the comparable companies, a representative market multiple is determined and subsequently applied to our historical and prospective financial results to estimate the enterprise value.
- The Merger and Acquisition Method, a form of the Market Approach, was used to estimate the enterprise value by multiplying historical financial metrics by a multiple that was derived from an analysis of companies that were the target of a merger or acquisition transaction.

Application of these approaches involves the use of estimates, judgments and assumptions that are highly complex and subjective, including those regarding our future expected revenue, expenses, cash flows, discount rates, market multiples, the selection of comparable public companies and the probability of future events. Changes in any or all of these estimates and assumptions impact our valuations at each valuation date and may have a material impact on the valuation of the EQT Investor's Class A Units and various Class B Units.

We then subtracted the interest-bearing debt from the enterprise value to determine the operating equity value. The operating equity value is then adjusted for cash and cash equivalents to determine the total equity value.

We then allocated the total equity value of the EQT Investor to the Class A Units and the various Class B Units, by utilizing the appropriate option pricing framework. We concluded on the fair value of the Class A Units and the various Class B Units by taking into consideration the relative rights and privileges of the various security classes as well as the following assumptions of the option pricing framework:

Expected Exercise Term. We estimate the expected life of equity awards based upon historical experience and the timing of a potential liquidity event.

Expected Equity Volatility. Since the Company is private and does not trade on any exchange, the selected equity volatility is based on the historical and implied volatility of comparable publicly traded companies over a similar expected term. This is representative of the expected future equity volatility of the Company and of the equity volatility of the EQT Investor since their equity is similar.

Risk-Free Interest Rates. We based the risk-free interest rate on the rate for a U.S. Treasury zero-coupon issue with a term that closely approximates the expected life of the option grant at the date nearest the option grant date.

The concluded fair value of the Class A Units was taken into consideration as the strike price of some of the newly issued Class B Units through an iterative process, in order to determine the fair value of those newly issued Class B Units, since management's intent was to issue those units as at-the-money equity awards.

If any assumptions used in the option-pricing models we use change significantly, equity-based compensation for future awards may differ materially compared with the awards granted previously.

The assumptions underlying these valuations represent management's best estimates, which involve inherent uncertainties and the application of management's judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our equity-based compensation expense could be materially different. Following the completion of this offering, the fair value of our common stock will be determined based on the quoted market price.

Goodwill and Other Intangible Assets

Goodwill is tested for impairment at the reporting unit level, which is one level below or the same as an operating segment. When testing goodwill for impairment, the Company first performs a qualitative assessment to determine whether it is necessary to perform step one of a two-step annual goodwill impairment test for each reporting unit. The Company is required to perform step one only if it concludes that it is more likely than not that a reporting unit's fair value is less than its carrying value. Should this be the case, the first step of the two-step process is to identify whether a potential impairment exists by comparing the estimated fair values of the Company's reporting units with their respective book values, including goodwill. If the estimated fair value of the reporting unit exceeds book value, goodwill is considered not to be impaired, and no additional steps are necessary. If, however, the fair value of the reporting unit is less than book value, then the second step is performed to determine if goodwill is impaired and to measure the amount of impairment loss, if any. The amount of the impairment loss is the excess of the carrying amount of the goodwill over its implied fair value. The estimate of implied fair value of goodwill is primarily based on an estimate of the discounted cash flows expected to result from that reporting unit but may require valuations of certain internally generated and unrecognized intangible assets such as the Company's software, technology, patents, and trademarks. If the carrying amount of goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized in an amount equal to the excess.

Other identifiable intangible assets with finite lives, such as software products acquired in acquisitions, non-compete agreements, trade names, and customer relationship assets, are amortized over their estimated lives

using either a straight-line method or a method based on pattern of expected economic benefit of the asset as follows: acquired software — three to ten years; non-compete agreements — two to five years; trade names — 20 years; customer relationships — 11 to 16 years; and tradenames — 10 to 17 years. The Company evaluates finite intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset might not be recoverable. An impairment loss is recognized when estimated undiscounted future cash flows expected to result from the use of the asset are less than its carrying amount.

Software Development Costs

Software development costs are accounted for in accordance with ASC Subtopic 985-20 if the software is to be sold, leased or otherwise marketed, or by ASC Subtopic 350-40 if the software is for internal use. After the technological feasibility of the software has been established (for software to be marketed), or at the beginning of application development (for internal-use software), software development costs, which include primarily salaries and related payroll costs and costs of independent contractors incurred during development, are capitalized. Research and development costs incurred prior to the establishment of technological feasibility (for software to be marketed), or prior to application development (for internal-use software), are expensed as incurred. Software development costs are amortized on a product-by-product basis commencing on the date of general release of the products (for software to be marketed) or the date placed in service (for internal-use software).

JOBS Act Election

We qualify as an “emerging growth company” as defined in the JOBS Act. An emerging growth company may take advantage of reduced reporting requirements that are not otherwise applicable to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements and only two years of related “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our periodic reports and registration statements, including in this prospectus;
- not being required to comply with the auditor attestation requirements on the effectiveness of our internal controls over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements (auditor discussion of critical audit matters);
- reduced disclosure obligations regarding executive compensation arrangements in our periodic reports, proxy statements and registration statements, including in this prospectus; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may use these provisions until the last day of our fiscal year in which the fifth anniversary of the completion of this offering occurs. However, if certain events occur prior to the end of such five-year period, including if we become a “large accelerated filer,” our annual gross revenues exceed \$1.07 billion, or we issue more than \$1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our stockholders may be different than the information you receive from other public companies in which you hold stock.

The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards, until those standards apply to private companies. We have elected to take advantage of the benefits of this extended transition period and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. Our financial statements may therefore not be comparable to those of companies that comply with such new or revised accounting standards. Until the date that we are no longer an emerging growth company or affirmatively and irrevocably opt out of the exemption provided by Section 7(a)(2)(B) of the

Securities Act of 1933, as amended, upon issuance of a new or revised accounting standard that applies to our financial statements and that has a different effective date for public and private companies, we will disclose the date on which we will adopt the recently issued accounting standard.

Recently Adopted and Issued Accounting Standards

We have reviewed all recently issued standards and have determined that, other than as disclosed in Note 2 to our consolidated financial statements appearing elsewhere in this prospectus, such standards will not have a material impact on our consolidated financial statements or do not otherwise apply to our operations.

Quantitative and Qualitative Disclosures About Market Risk

Market risk is broadly defined as potential economic losses due to adverse changes in the fair value of a financial instrument. In the normal course of business, we are exposed to market risks, including foreign currency exchange rate risk and interest rate risk.

Foreign Currency Exchange Rate Risk

We are exposed to foreign currency exchange rate risk by virtue of our international operations. This risk arises because we use different currencies to recognize revenue and pay operating expenses. We derived 27% of our revenue for the year ended December 31, 2019 from operations outside of the United States. Our strategy for managing foreign currency risk relies on efforts to negotiate customer contracts to receive payment in the same currency used to pay expenses. As of December 31, 2019, we had no outstanding foreign currency forward contracts. Foreign currency exchange rate risk is evidenced in our consolidated financial statements through translation risk and transaction and re-measurement risk.

Translation Risk

We are exposed to movements in foreign currencies, predominately in U.S. dollars, pounds sterling, euros, or Japanese yen, with the majority in U.S. dollars. The vast majority of our contracts are entered into by our U.S. and U.K., E.U., and Japanese subsidiaries. Contracts entered into by our U.S. subsidiaries are almost always denominated in U.S. dollars. Contracts entered into by our other subsidiaries are generally denominated in U.S. dollars, pounds sterling, euros, or Japanese yen, with the majority in U.S. dollars. If the U.S. dollar had weakened 10% relative to the pound sterling, the euro, and the Japanese yen in the year ended December 31, 2019, income from operations would have been lower by approximately \$1.2 million, based on revenues and costs related to our foreign operations.

Changes in exchange rates between the applicable foreign currency and the U.S. dollar will affect the translation of foreign subsidiaries' financial results into U.S. dollars for purposes of reporting our consolidated financial results. The process by which we translate each foreign subsidiary's financial results to U.S. dollars is as follows:

- we translate statement of operations accounts at the exchange rates on the dates those elements are recognized or the average exchange rates for the relevant monthly period;
- we translate balance sheet asset and liability accounts at the end of period exchange rates; and
- we translate equity accounts at historical exchange rates.

Translation of the balance sheet in this manner affects stockholders' equity through the foreign currency translation adjustment account. This account exists only in the foreign subsidiary's U.S. dollar balance sheet and is necessary to keep the foreign balance sheet, stated in U.S. dollars, in balance.

We report translation adjustments within accumulated other comprehensive loss as a separate component of stockholders' deficit on our consolidated balance sheets. Gains or losses from translating amounts in foreign currencies are recorded in other comprehensive income or other comprehensive loss on our consolidated statements of operations and comprehensive income (loss).

Transaction and Re-measurement Risk

We have currency risk resulting from the passage of time between the recognition of revenue, invoicing of customers under contracts, and the collection of payment. If a contract is denominated in a currency other

than the subsidiary's functional currency, we recognize an unbilled services asset at the time of revenue recognition and a receivable at the time of invoicing for the local currency equivalent of the foreign currency invoice amount. Changes in exchange rates from the time we recognize revenue until the time the customer pays will result in our receiving either more or less in local currency than the amount that was originally invoiced. We recognize this difference as a foreign currency transaction gain or loss, as applicable.

We also have currency risk as a result of intercompany loans or other intercompany borrowings throughout our organization when such intercompany debt is denominated in a currency other than the subsidiary's functional currency. Changes in exchange rates from the time a subsidiary records the intercompany debt until the time the subsidiary pays the intercompany debt will result in a foreign currency transaction gain or loss. We record all foreign currency transaction and re-measurement gains and losses as other income (expense), net on the consolidated statement of operations and comprehensive income (loss). We do not have significant operations in countries considered highly inflationary.

Interest Rate Risk

We have borrowings under our Credit Agreement that bear interest at a rate per annum equal to either (a) the Eurocurrency rate, with a floor of 0.0%, as adjusted for the reserve percentage required under regulations issued by the Federal Reserve Board for determining maximum reserve requirements with respect to Eurocurrency funding, plus an applicable margin rate of 3.5% for the term loan and between 4.0% and 3.5% for revolving credit loans, depending on the applicable first lien leverage ratio or (b) an ABR, with a floor of 1.00%, plus an applicable margin rate of 2.5% for the term loan or between 3.0% and 2.5% for revolving credit loans, depending on the applicable first lien leverage ratio.

The ABR is determined as the greatest of (a) the prime rate, (b) the federal funds effective rate, plus 0.5% or (c) the Eurocurrency rate plus 1.0%. As of December 31, 2019, we had \$308.2 million of outstanding borrowings on the term loan, no outstanding borrowings under the revolving credit facility and an outstanding letter of credit of \$0.1 million under the Credit Agreement.

As of September 30, 2020, we had \$304.9 million of outstanding borrowings on the term loans, and \$0.0 million of outstanding borrowings under the revolving credit facility, and an outstanding letter of credit of \$0.1 million, under the Credit Agreement.

Each quarter-point increase in the Eurocurrency rate would increase interest expense on our current variable rate debt by approximately \$0.2 million for the nine months ended September 30, 2020. Our exposure to interest rate risk is minimized by our interest rate swaps. As of September 30, 2020, we recorded the fair value of our interest rate swaps in the amount of \$4.2 million as a derivative liability (see Note 2 to our unaudited condensed consolidated financial statements included elsewhere in this prospectus for more information regarding derivative instruments).

Other Risk

Although we perform services for customers located in a number of jurisdictions, we have not experienced any material difficulties in receiving funds remitted from foreign countries. However, new or modified exchange control restrictions could have an adverse effect on our ability to repatriate cash to fund our operations and make principal and interest payments, when necessary.

BUSINESS

Our Company

We accelerate medicines to patients using biosimulation software and technology to transform traditional drug discovery and development.

Biosimulation is a powerful technology used to conduct virtual trials using virtual patients to better understand how drugs behave in different individuals. Biopharmaceutical companies use our proprietary biosimulation software throughout drug discovery and development to inform critical decisions that not only save significant time and money but also advance drug safety and efficacy, improving millions of lives each year.

As a global leader in biosimulation based on 2019 revenue, we provide an integrated, end-to-end platform used by more than 1,600 biopharmaceutical companies and academic institutions across 60 countries, including all of the top 35 biopharmaceutical companies by R&D spend in 2019. Since 2014, customers who use our biosimulation software and technology-enabled services have received over 90% of all new drug approvals by the FDA. Moreover, 17 global regulatory authorities license our biosimulation software to independently analyze, verify, and review regulatory submissions, including the FDA, Europe's EMA, Health Canada, Japan's PMDA, and China's NMPA. Demand for our offerings continues to expand rapidly.

While traditional drug development has led to meaningful therapies, such as vaccines and chemotherapy, many patients still wait for life-saving medicines, which can take more than 10 years and \$2 billion to bring to market. In 2019, according to EvaluatePharma, worldwide biopharmaceutical R&D expenditures reached \$186 billion, but the return on investment at the world's 12 leading biopharmaceutical companies was below 2%, down from 10% in 2010, according to a report by the Deloitte Center for Health Solutions. Change is necessary to continue delivering remarkable gains in human health at an accelerated pace. We, and many others in the biopharmaceutical industry, believe that biosimulation enables this change.

We build our biosimulation technology on first principles of biology, chemistry, and pharmacology with proprietary mathematical algorithms that model how medicines and diseases behave in the body. For over two decades, we have honed and validated our biosimulation technology with an abundance of data from scientific literature, lab research, and preclinical and clinical studies. In turn, our customers use biosimulation to conduct virtual trials to answer critical questions, such as: What will be the human response to a drug based on preclinical data? How will other drugs interfere with this new drug? What is a safe and efficacious dose for children, the elderly, or patients with pre-existing conditions? Virtual trials may be used to optimize dosing on populations that are otherwise difficult to study for ethical or logistical reasons, such as infants, pregnant women, the elderly, and cancer patients.

The benefits of biosimulation are significant. One of our customers, a top ten global biopharmaceutical company by R&D spend, estimated that they saved more than half a billion dollars over three years using biosimulation to inform key decisions. Biosimulation can reduce the size of and cost of human trials, the most expensive and time-consuming part of drug development, and in some cases, eliminate certain human trials completely. An analysis published on Applied Clinical Trials Online, to which we contributed, estimated that \$1 billion was saved in clinical trial costs using biosimulation for a cancer drug due to consistently shorter completion times in the later phase clinical trials. According to such analysis, the Phase III trial for this cancer drug, which generated more than \$10 billion in revenue in 2019, was more than a year shorter than the length of trials for two comparable cancer drugs that did not use biosimulation as extensively. Another global biopharmaceutical customer avoided a Phase III trial after submitting our biosimulation analysis to the FDA for their central nervous system (CNS) therapy, which we believe saved \$60 million and 24 months. This is a conservative estimate of savings given that the average duration of a Phase III trial is 32 months and the out-of-pocket cost of the clinical phase is \$351 million for a CNS drug, according to the Office of Health Economics.

We develop and apply our biosimulation technology throughout drug discovery and development with what we believe to be the largest and best team of scientists with deep expertise in biosimulation. Our scientists are recognized key opinion leaders who are at the forefront of the science and technology underpinning the rapidly emerging biosimulation field. We have collaborated on more than 5,000 customer projects in the past

decade in therapeutic areas ranging from cancer and hematology to diabetes and hundreds of rare diseases. Over the past year, we have worked on more than 24 medicines and vaccines to combat COVID-19.

Biosimulation results need to be incorporated into regulatory documents for compelling submissions. Accordingly, we provide regulatory science solutions and integrate them with biosimulation, so that our customers can navigate the complex and evolving regulatory landscape and maximize their chances of approval. Our differentiated regulatory services are powered by submissions management software and natural language processing for scalability and speed, allowing us to deliver more than 200 regulatory submissions over the past four years. Our team of more than 200 regulatory professionals has extensive experience applying industry guidelines and global regulatory requirements.

The final hurdle to delivering medicines to patients is market access, defined as strategies, processes, and activities to ensure that therapies are available to patients at the right price. We believe that biosimulation and market access will continue to be increasingly intertwined as healthcare systems and countries move toward outcomes-based pricing. We have recently expanded into technology-enabled market access solutions, which help our customers understand the real-world impact of therapies and dosing regimens earlier in the process and effectively communicate this to payors and health authorities. Our solutions are underpinned by technologies such as Bayesian statistical software and SaaS-based value communication tools.

We have a proven track record of steady growth, driven by higher adoption of biosimulation, expansion of our technology portfolio, strategic acquisitions, and cross-selling of biosimulation, regulatory science, and market access solutions across our end-to-end platform:

- From 2018 to 2019, our revenue increased by 27% from \$163.7 million to \$208.5 million.
- From 2018 to 2019, our net loss decreased by 73%, from \$33.3 million to \$8.9 million.
- The number of customers with ACV of \$100,000 or more in revenue increased from 197 in 2018 to 228 in 2019, and revenue from these customers grew by 20% from 2018 to 2019.
- The number of customers with ACV of \$1,000,000 or more in revenue increased from 37 in 2018 to 44 in 2019.
- Of our top 300 customers, 67% purchased two or more of our four major solution areas (Simcyp, Phoenix and other software, biosimulation services, regulatory science & market access services) in 2019, up from 55% in 2018. We believe there is a significant ongoing opportunity to continue cross-selling our integrated suite of solutions to our existing customers.

We believe that biosimulation is at an inflection point, driven by increasing global regulatory adoption and advancements in technology. For example, 33% of new drug applications approved by the FDA used our Simcyp biosimulation software in 2019, an increase from 13% in 2014. We believe we are well-positioned to capture the significant market opportunity ahead of us. Our growth strategy is to build out the depth and breadth of our scalable, end-to-end biopharmaceutical platform to advance all stages of the continuum, from discovery and development to regulatory submission and market access. We continue to innovate and introduce new functionality and uses of biosimulation and technology-enabled solutions. We increasingly integrate the science and data we obtain across this end-to-end platform to inform critical decisions. We further reduce the cost and time of human trials to materially accelerate the speed of development and availability of therapies to patients worldwide. As exciting, new research areas arise, we attract and hire specialized talent and acquire businesses to expand our offerings to address these market opportunities.

With continued innovation in and adoption of our biosimulation software and technology-enabled services, we believe more biopharmaceutical companies worldwide will leverage more of our end-to-end platform to reduce cost, accelerate speed to market, and ensure safety and efficacy of medicines for all patients.

Our Markets

We believe our addressable market within the biopharmaceutical industry is large and rapidly expanding. The current total addressable market for our solutions represents an estimated \$10 billion today and is expected to grow at a CAGR of approximately 12 to 15% annually over the next five to seven years. Our total addressable market estimate includes the biosimulation market estimated at \$2 billion, which is estimated to grow at

15% CAGR over such period according to Grand View Research; the regulatory science market estimated at \$7 billion, which is estimated to grow at 12% CAGR over such period according to Grand View Research; and the market access market estimated at \$1 billion, which is estimated to grow at 13% CAGR over such period according to SpendEdge. With increasing adoption of technology across all stages of drug discovery and development, we believe our end-to-end platform and growth strategies position us to further penetrate the rapidly growing technology-enabled biopharmaceutical R&D market of the future.

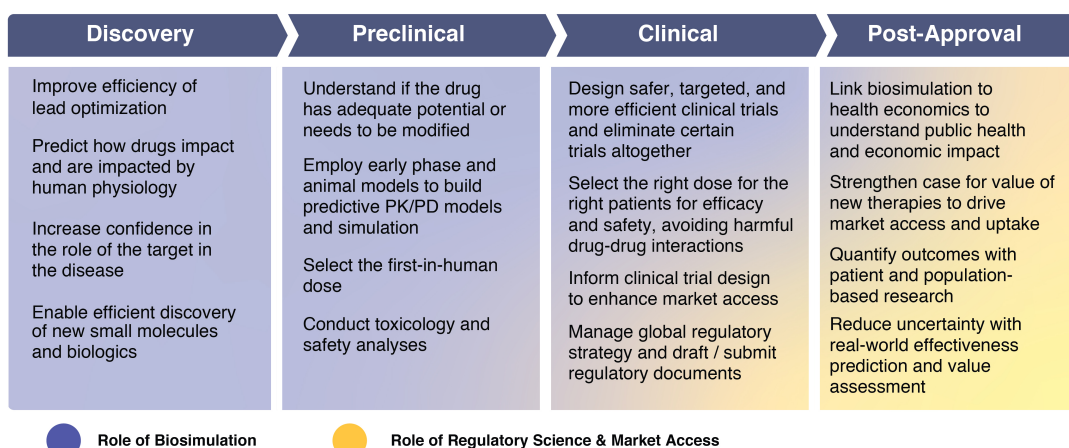
Traditional drug discovery and development is costly and prone to failure. The biopharmaceutical industry was estimated to have spent a total of approximately \$186 billion in 2019 on R&D. It takes more than 10 years to bring a drug to market, and the cost has grown significantly in the past decade from \$1.2 billion in 2010 to \$2.0 billion in 2019. The probability of success of compounds entering Phase I trials is only 7%. With only 53% of Phase III drugs reaching the market, late-stage failures are common and especially painful as sponsors have already incurred significant cost and time. At the same time, scientific advances are driving increased complexity as the R&D pipeline shifts from small molecules to biologics and cell and gene therapies. The increasing cost, time and complexity of developing drugs have driven down the rate of return on R&D to less than 2% in 2019 for the 12 leading biopharmaceutical companies analyzed in a report by the Deloitte Center for Health Solutions.

With greater investment dollars being spent and increasing competition in the race to develop novel medicines, the speed and efficiency with which drugs are developed and brought to market have never been more critical. As a result, the demand for and willingness to adopt innovative approaches to discovery, development, and commercialization are rapidly increasing. Continued development and innovation in software and technology such as biosimulation, virtual trials, and real-world evidence tools are helping biopharmaceutical companies increase efficiency and decrease costs. This is further supported by regulatory agencies that have increasingly issued guidance on the adoption of many of these innovations. As technology and analytics become increasingly powerful and the application of new solutions is validated, we anticipate this will drive further demand for these innovations. We believe we are still in the early stages of a long-term trend that will continue to advance traditional drug discovery and development into a technology-enabled era of advanced modeling and analytics.

In addition, as a result of the COVID-19 pandemic, we believe that the demand for innovative technology solutions in drug discovery and development is accelerating. Disruption of clinical trials during the pandemic has highlighted some of the limitations of human trials and is expected to drive increased utilization of technology during and after the pandemic. Sponsors, regulators, and their partners have adopted a number of technology-driven solutions and procedures, which we believe they will continue to utilize and benefit from in the post-COVID environment. Moving forward, we believe there will be an increase in adoption of software and technology-enabled solutions as a means to proactively mitigate the future risks of disruptions to clinical trials. We believe that these trends will only serve to accelerate our market opportunity.

We have purpose-built our innovative end-to-end platform to capitalize on industry trends by delivering biosimulation technology and technology-enabled services that span all stages of the drug discovery and development continuum.

Role of Our Platform across the Stages of Drug Discovery and Development



Our core markets today include:

- Biosimulation:** Biosimulation is the mathematical modeling of biological processes and systems to simulate how a drug affects the body, how the body affects the drug, how potential doses will affect different patient groups, and how patients will respond under various clinical scenarios. Biosimulation informs every stage of the drug discovery and development process and brings value through:
 - Identifying potential winners and losers at an earlier stage and allowing programs to “fail faster”;
 - Streamlining preclinical and clinical studies or eliminating certain ones altogether;
 - Optimizing dosing for different populations for enhanced safety and efficacy; and
 - Increasing probability of success and return on R&D, amongst others.
- Regulatory Science:** Regulatory science is the development and application of scientific methods, tools, and approaches to support regulatory and other policy objectives. Expert management of these processes is critical to drugs receiving regulatory approval and ultimately reaching patients and generating sales. Providers of regulatory technology and expertise drive significant value for biopharmaceutical companies through:
 - Utilizing best-in-class technology to reduce time-intensive regulatory writing activities and the need for regulatory writing staff;
 - Managing submission timelines and other requirements of global regulatory agencies;
 - Generating clear, accurate applications and submissions; and
 - Developing comprehensive global regulatory strategies, amongst others.
- Market Access:** To achieve commercial access, sponsors must assess, optimize and persuasively communicate the value of a new therapy, both therapeutic and economic, that stakeholders such as payors and health care providers will accept and act on. Market access services, including real-world evidence and health economics outcomes research, generate value by:
 - Creating cost and comparative effectiveness models to support pricing and payor reimbursement;
 - Analyzing payor needs and using economic models to develop contracting strategies that optimize value; and
 - Collecting and analyzing real-world data for use in market and payor communications, amongst others.

We believe that our end-to-end platform is well-positioned to continue benefiting from market trends. In addition to continued growth in our core markets, we expect to capture a broader share of overall biopharmaceutical R&D spend as we continue to innovate and add new solutions to our end-to-end platform.

Our Competitive Strengths

We compete by offering a broad and deep combination of industry-standard biosimulation software and technology-enabled services across all stages of the continuum, from discovery and development to regulatory approval and market access. We have cultivated the following competitive strengths for more than two decades:

Our Proprietary, Scalable Biosimulation Software

Our proprietary, scalable biosimulation software, built on first principles and including more than 9.3 million lines of code, integrates biosimulation models, scientific knowledge, and data, which we believe would require years of effort, immense resources, and scarce expertise to duplicate. Our versatile biosimulation software is deployed to public and private cloud networks, on-premises, and data centers. Scientists can run multiple simulation projects on a cloud compute platform or internal clusters. We protect our proprietary technology through intellectual property rights, including copyrights, patents, trade secrets, know-how, and trademarks.

Our Integrated End-to-End Platform

We have developed a differentiated, integrated end-to-end platform of software and technology-enabled services, powered by proprietary technology and unique talent, spanning discovery through market access. Our customers, facing declining R&D productivity and an increasingly complex regulatory and market access environment, seek trusted partners to accelerate their R&D programs and achieve regulatory and commercial success. Our integrated set of solutions uniquely positions us to be their first-choice partner. Ninety percent of our top 50 customers by revenue use both our biosimulation solutions and regulatory and market access offerings.

Our Innovation Framework

We are at the forefront of innovation in biosimulation. Beyond our sustained R&D investment (\$18.9 million or 9.1% of revenues in 2019), our innovation framework advances both incremental and breakthrough innovations in biosimulation to transform traditional drug discovery and development.

- **Customer-Centricity:** Through our consortium model and approximately 1,000 biosimulation projects and workshops annually, we derive significant insights that inform the development of our biosimulation software. These insights help us to anticipate and align our technology roadmap with our customers' needs and priorities.
- **Regulatory Alignment:** As we continuously engage with regulators through our customers' programs, training workshops, and attendance at FDA and other regulator meetings, we develop an in-depth understanding of how to align our biosimulation software and services to meet evolving regulatory expectations and requirements.
- **Scalable Data Collection and Curation:** Using artificial intelligence and our scientific team, we have curated data from more than 8,000 clinical studies and 18,000 peer-reviewed manuscripts. We have created 25 different virtual patient populations, more than 90 compound drug files, more than 40 clinical outcomes databases, and advanced mathematical models for ten organs.
- **Scientific Research:** We work with our customers, a scientific advisory board of thought leaders, and more than 120 academic institutions to innovate bottom-up, mechanistic models of drug, disease, and human biology. Each mathematical equation or parameter estimation is based on up-to-date scientific knowledge and data. We use scientific literature, lab data, and our customers' preclinical and clinical studies to refine, verify, and validate these models to ensure that they meet rigorous scientific and quality standards.

Our Trusted, Long-Term Customer and Regulatory Partnerships

We work continuously and closely with our customers to provide software and technology-enabled services from drug discovery and development to regulatory science and market access, applying biosimulation throughout the continuum to maximize R&D productivity and increase the probability of success. We have substantial repeat business and long-term partnerships. Our top 30 customers by revenue in 2019 have been with us for more than nine years on average. We are often favored by our customers for follow-on projects throughout a

drug's lifecycle, leveraging our early engagements in preclinical or Phase I to provide continuous support in later phases such as dose optimization for a Phase III study or a new drug application regulatory filing.

- **Consortium Model with Biopharmaceutical Companies:** Our Simcyp Platform benefits from a unique business and customer collaboration model that we term a "consortium." Established 20 years ago, our consortium model provides for intense and detailed customer input into software enhancements. This R&D feedback loop, driven by customer needs, results in ongoing advancement and incorporation of more scientific data that increases the value of our Simcyp Platform over time. Our consortium members, consisting of scientists from leading global biopharmaceutical companies, sign multi-year contracts and actively participate in consortium meetings, so that we continuously extend our scientific and commercial leadership.
- **Long-Standing Regulatory Partnerships:** Seventeen regulatory agencies license our biosimulation software. In addition, our scientists are regularly invited by U.S., European, and Japanese regulatory agencies to teach and participate in their workshops. We have received four grants and a Cooperative Research and Development Agreement from the FDA as well as grants from six European organizations, including the EU Commission, to develop biosimulation models and conduct biosimulation analyses.
- **Academic Centers of Excellence:** We work closely with the global academic community on research, publications, and training of the next generation of biopharmaceutical scientists. We have established nine Centers of Excellence worldwide, which use our biosimulation software in their courses and scientific research. Additionally, nearly 400 academic institutions worldwide license our biosimulation software.
- **Certara University:** We recognize that education in the theory and practice of biosimulation is pivotal to adoption and achieving the benefits of biosimulation. Certara University provides in-person and online training on biosimulation and the use of our biosimulation software to more than 4,500 scientists in the past three years.

The Deep Expertise of Our People and Our Culture of Innovation

We are led by a diverse, global, and talented team of scientists, software engineers, and subject matter experts who not only advance our technology but also seek to understand and tackle our customers' greatest challenges. Over the last decade, we have worked on more than 5,000 customer projects, leading to extensive experience, which our customers highly value. As of November 9, 2020, approximately 300 of our employees held PhD, PharmD, or MD degrees and an additional 266 held graduate or other advanced degrees. Our team of nearly 100 software engineers and technologists excels at applying computer science, engineering, and scientific and mathematical principles in designing and developing complex software with consistent execution. World-leading experts in biosimulation, drug discovery and development, software development, regulatory science, and market access work and thrive at Certara.

Our global executive management team brings together extensive experience in science, technology, and business. Sharing core values of dedication, quality, and respect, the executive management team is focused on fostering our passion for science and growing our culture of innovation, excellence, collaboration, and customer-centricity as well as delivering exceptional performance.

Our Growth Strategy

Our growth strategy is to build upon our scalable, end-to-end platform. We continue to innovate in biosimulation, engage with regulatory agencies, and land and expand our customer partnerships. We remain focused on reducing the cost, time, and probability of failure of clinical trials for our customers, so that they can materially accelerate the availability of future therapies that are needed by patients worldwide. As exciting, new research areas arise, such as cell and gene therapy, we attract and hire specialized talent and acquire businesses to expand our offerings accordingly.

Advance Our Technology

The science, technology, and data behind biosimulation continue to advance rapidly, and our top investment priority is to develop additional functionality and uses for biosimulation to improve patient outcomes. We release new software, additional features, and upgrades on a frequent and regular basis. In the past two years, we

have introduced more than 10 new software applications and upgrades, including D360 Biologics Scientific Informatics, Simcyp Immuno-oncology Quantitative Systems Pharmacology, and COVID-19 Quantitative Systems Pharmacology.

We are investing in three major areas to elevate our technology:

- ***Spearheading the Frontier of QSP and Toxicology***, an emerging approach with enormous potential for industry-wide transformation to optimize decisions in both drug discovery and development. In addition to QSP for immunogenicity, immuno-oncology, and COVID-19, we are ramping up our QSP consortia for neurodegenerative diseases, such as Alzheimer's and Parkinson's, and for quantitative systems toxicology and safety ("QSTS"). Neuroscience is expected to have the most growth in QSP modeling over the next several years, followed by oncology and autoimmune disorders. All of our mechanistic simulators communicate seamlessly with each other, which is a major advantage for complex drug discovery and development programs;
- ***Continuing to Develop Cloud-Based Solutions***, such as Certara Integral Data Repository, CODEx Clinical Outcomes Databases, and BaseCase Value Communication Software, which enhance computing scalability, significantly reduce maintenance time and cost, and promote access, collaboration and mobility. This also allows us to easily deliver new features and explore new business models; and
- ***Architecting an Ecosystem of Interconnected Software Applications*** to facilitate seamless workflows and sharing of data across the drug discovery and development continuum for efficiency and speed.

Grow Within Our Existing Customers

As we continue to expand our portfolio of offerings, we integrate our solutions and sell more across our end-to-end platform. Our scientists and regulatory and market access experts, business developers, marketing professionals, and business leaders work together to ensure a high-quality customer experience and nurture long-term partnerships. As a result, our customer relationships grow steadily over time, driven by higher adoption of biosimulation with additional user licenses and more modules. For example, for our top 300 customers in 2019 by revenue, our Phoenix revenues grew by more than 15% from 2018 to 2019 as customers purchased more annual user licenses and adopted more modules, such as our new PK Submit software, which was recently recognized as a finalist in R&D's 100 Awards.

We also cross-sell our software and technology-enabled services throughout our end-to-end platform. Many of our customers who use biosimulation also rely on us for regulatory strategy, writing, and submissions support, including the majority of our top 50 customers. Of our top 300 customers in 2019 by revenue, 67% purchased two or more of our four major solution areas in 2019, up from 55% in 2018, a 22% increase. The number of customers with annual customer value of \$100,000 or more in revenue increased from 197 in 2018 to 228 in 2019, a 16% increase. The success of our land and expand approach is further demonstrated by our high re-occurring revenue streams with a net revenue retention rate (defined as the level of software revenue generated from our existing customers from period to period, accounting for expansion and churn) of 106% for our 1,401 Simcyp and Phoenix software customers from 2018 to 2019 and net revenue repeat rate (defined as the level of technology-enabled services revenue generated from our existing customers from period to period, accounting for expansion and churn) of 110% for our 770 technology-enabled services customers from 2018 to 2019.

Expand Our Customer Base Globally

We are growing our footprint globally to match that of the biopharmaceutical industry. There are more than 4,800 biopharmaceutical companies worldwide with active R&D pipelines, up from nearly 2,400 in 2011, according to Informa's Pharma R&D Annual Review 2020. Informa also estimates that the R&D pipeline encompasses approximately 18,000 drug programs in 2020. As drug discovery and development in Asia Pacific grows, we are investing heavily to expand our presence in the region to work with these customers where they are, just as we already have in North America, Europe and Japan. In Europe, we have more than 300 employees and partner with all of the top ten European-based biopharmaceutical companies by R&D spend. In Asia Pacific, we have more than 100 employees in Japan, India, Philippines, and Australia. We work with all of the top ten biopharmaceutical companies based in Japan, by R&D spend. In China, our revenue from biopharmaceutical companies and academic institutions increased by more than 50% from 2018 to 2019. We continue to build our sales and marketing capabilities and capacity to expand our global reach. In October 2020, we opened an office in Shanghai, China.

Scale Through Acquisitions

Biosimulation is an exciting technology with many promising, future developments, and we believe there are numerous opportunities to pursue strategic acquisitions to accelerate our development roadmap. We have a proven record of successfully acquiring and integrating software and services companies. To date, we have acquired 12 companies of which nine included software or technology such as Simcyp, the core of our mechanistic biosimulation platform, and Xenologiq, which jumpstarted our biosimulation initiative using QSP. As we build out the depth and breadth of our biosimulation platform, we continually seek and assess a range of highly focused opportunities in our immediately addressable market and in related adjacent markets, whether through acquisitions, licenses, or partnerships.

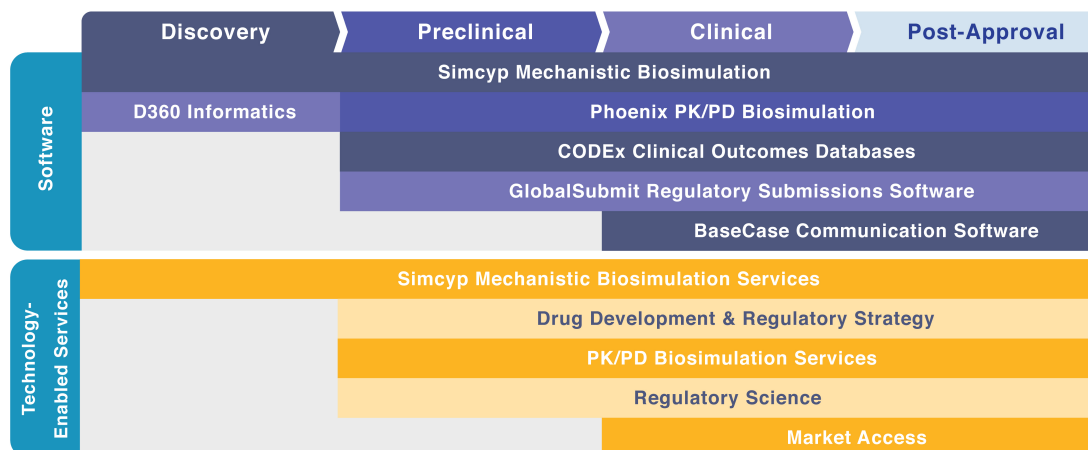
Inspire Our People

Our people, 900 strong, are the key to our success. The diversity and depth of expertise, experience, and backgrounds in our vibrant community bring richness of ideas, problem-solving capabilities, and mutual respect. We are dedicated to attracting, retaining, and growing leading scientists and experts who are passionate about developing medicines that matter. We strive to encourage intellectual curiosity and offer a myriad of professional development opportunities. We continue to invest in our people to help them thrive and solidify our position as an employer of choice in our industry.

The Certara End-to-End Platform

We provide both software and technology-enabled services to enable customers to realize the full benefits of biosimulation in drug discovery, preclinical and clinical research, regulatory submission, and market access. Our software is primarily subscription-based with licenses ranging from one to three years. We estimate that 65% of our revenue in 2019 came from the application of our solutions in the clinical stage, the most expensive and time-consuming part of the drug discovery and development process, according to Nature Reviews Drug Discovery. We estimate that in 2019, 10% of our total revenues were attributed to the use of our solutions in the discovery stage, 15% in the preclinical stage and 10% in the post-approval stage.

Certara End-to-end Platform



Software

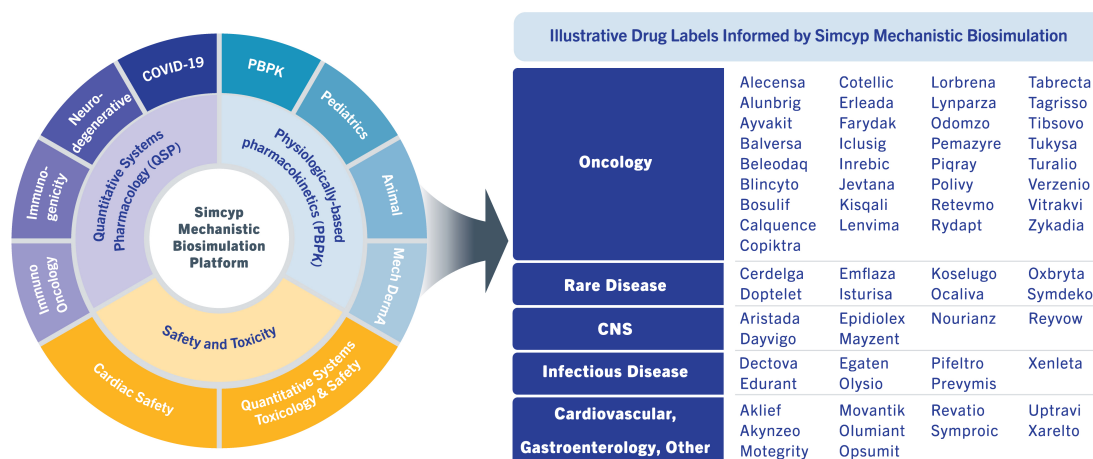
Our software, utilized by more than 20,000 licensed users in biosimulation and 28,000 more in regulatory and market access, addresses six main applications: 1) mechanistic biosimulation; 2) empirical pharmacokinetic and pharmacodynamic biosimulation; 3) scientific informatics; 4) clinical outcomes databases for biosimulation; 5) authoring and management of regulatory submissions; and 6) market access communication. We deploy our software to customers on public and private cloud networks, on-premises, and in data centers.

- **Mechanistic Biosimulation Platform (Simcyp):** Mechanistic biosimulation predicts both how a drug is handled within the body (known as “pharmacokinetics” or “PK”) and drug effect (known as

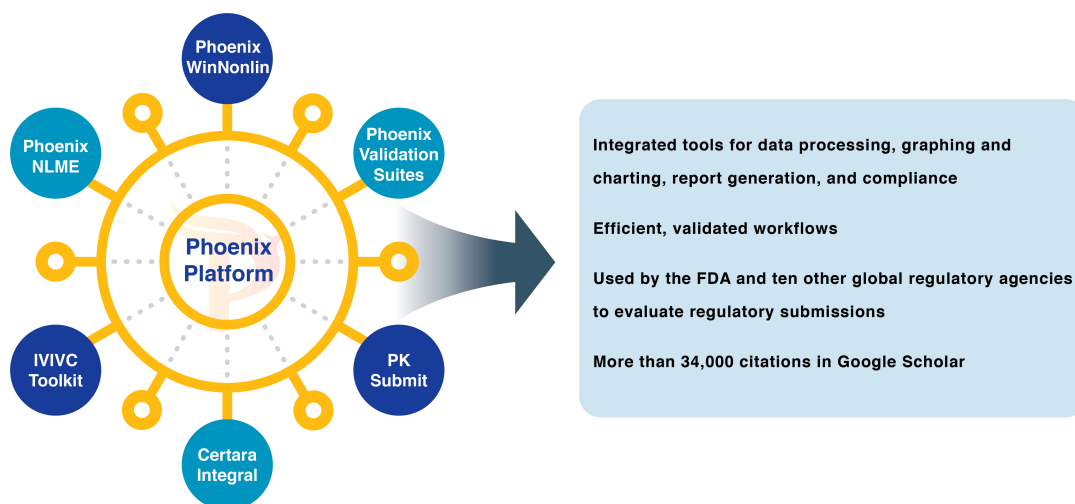
“pharmacodynamics” or “PD”), *without the need for actual in vivo human or animal studies*. Seventeen of the top 20 biopharmaceutical companies by R&D spend in 2019 licensed Simcyp. Simcyp includes three main modules:

- **Physiologically-based pharmacokinetic (“PBPK”) modeling and simulation:** Our industry-standard Simcyp PBPK Simulator includes a whole-body PBPK model to run virtual “what if?” scenarios without having to resort to human clinical studies. One benefit is understanding how dosing should be adjusted for special populations such as children or the elderly. A second is to identify potential drug-drug interactions so they can be included on drug labels to make the product safer. Simcyp is used by 11 regulatory agencies to evaluate submissions.
- **Quantitative systems pharmacology:** A rapidly growing field in biosimulation, QSP combines computational modeling and vast amounts of ‘omics (e.g., genomics, proteomics, metabolomics) data to predict clinical efficacy outcomes for novel targets, drug modalities, and combination therapies. By using QSP to understand the physiological mechanisms driving efficacy, customers can terminate unpromising discovery programs earlier, and promote stronger candidates to clinical testing, thus reducing costly late-stage failures. Once marketed, the same physiological knowledge can differentiate launch messaging, helping the drug to stand out from the competition.
- **Quantitative systems toxicology and safety:** QSTS integrates toxicology with quantitative analysis of large networks of molecular and functional biological changes to identify drug toxicity and adverse drug reactions earlier.

Our biosimulation platform has generated results that inform approximately 200 label claims for more than 70 drugs. Had customers attempted to acquire the same information through conventional human trials, we believe they would have faced millions in additional costs and significant launch delays, given that clinical trials are estimated to take 1 to 2.5 years on average and cost many millions of dollars, according to Nature Reviews Drug Discovery.



- **Empirical PK/PD Biosimulation Platform (Phoenix):** Once our customers have empirical data from their actual trials assessing drug dissolution, blood concentration, and effect, they must interpret the data and make interpolations to inform dosing, handling of drug-drug interactions, and formulation decisions for subsequent trials and for patient use after launch. Phoenix includes multiple modules for the full empirical biosimulation workflow including conventional and biosimulation-driven interpretation (WinNonlin, NLME, and IVIVC), and related workflow modules for validated data handling, model management, and regulatory reporting (PK Submit, Certara Integral, Validation Suites). Customers benefit by gaining a validated, streamlined workflow for reporting their clinical pharmacology information to the FDA and other agencies. Furthermore, customers can be confident they are using the same tools used by regulators to evaluate their products.



- **Scientific Informatics Platform (D360):** D360 provides customers with self-service access and analytics to manage their small molecule and biologics discovery projects. The platform includes chemical structure search capabilities for structure-activity relationship analysis, molecular design tools and visualization solutions. The product connects seamlessly with biology and chemistry data systems from third-party companies, without extensive IT setup and maintenance. We estimate that more than 6,000 discovery research scientists worldwide use D360.
- **Clinical Outcomes Databases for Biosimulation (CODEx):** Our customers license our 40+ proprietary CODEx databases in a range of disease areas for meta-analysis of a new drug's safety and efficacy in relation to competitive products. The databases cover more than 8,000 clinical trials and observational studies and are accessible via an online portal with analytical and visualization tools. We recently introduced a new CODEx database for COVID-19.
- **Authoring and Management of Regulatory Submissions Platform (GlobalSubmit):** Our customers license our advanced, cloud-based electronic common technical document ("eCTD") software for publishing, review, validation, and electronic filing of regulatory submissions.
- **Market Access Communication Platform (BaseCase):** We license a cloud-based SaaS platform for drag-and-drop visualization of biosimulation results and other complex data. Customers use our software to communicate the value of a new therapy to payors and providers to gain formulary acceptance and reimbursement.

Technology-Enabled Services

Our technology-enabled, biosimulation services help customers who do not have staff capability or availability to gain the benefits of biosimulation. We also provide related, technology-enabled services to guide our customers' new drugs through the regulatory submission process and into the market. Our technology-enabled services include mechanistic biosimulation, empirical biosimulation, drug development and regulatory strategy, clinical pharmacology, model-based meta-analysis, regulatory writing and medical communications, regulatory operations, and market access. Regulatory agencies promote and endorse the use of biosimulation in drug development as "model informed drug discovery and development," which integrates our software and technology-enabled services to inform key decisions during drug discovery, development, approval, and subsequent market access.

- **Mechanistic Biosimulation:** We utilize our Simcyp Platform for predicting PK to determine first-in-human dose selection, design more efficient and effective clinical studies, evaluate new drug formulations, and predict drug-drug interactions. We use our QSP and QSTS software to advise customers on target selection and ranking and strategies for avoiding toxicities.
- **Empirical Biosimulation:** We use our Phoenix Platform and other tools to provide a wide range of quantitative biosimulation approaches such as non-compartmental analysis, PK/PD modeling, and population PK/PD analyses.

- **Drug Development and Regulatory Strategy:** We develop and deliver drug development and regulatory plans and provide high-level regulatory input to customer projects, incorporating biosimulation and supporting decision making through critical development and investment stage gates.
- **Clinical Pharmacology:** We provide early-phase development plans and study designs across the development life-cycle, often incorporating biosimulation. We use clinical pharmacology gap analysis and modeling to anticipate and manage development risks.
- **Model-Based Meta-Analysis:** We utilize curated clinical trial data from our CODEx clinical outcomes database platform together with model-based meta-analysis to assess a new drug's safety and efficacy in relation to competitive products.
- **Regulatory Writing and Medical Communications:** We support submissions from early-stage investigational new drugs to late-stage new drug applications, biologics license applications, and market authorization applications, by writing regulatory documents such as clinical study protocols/reports, safety submissions, and other summary documents for submission to the FDA and global regulatory authorities. We manage technical editing including transparency and disclosure services to ensure that our customers' regulatory documents are "filing-ready." Our team also offers advanced publication planning and writing support for scientific and medical publications. We deploy natural language processing software and other technology to enable efficient and scalable document creation.
- **Regulatory Operations:** We manage the submission of regulatory documents using our GlobalSubmit platform. Our submission management services include submission leadership, program management and planning, due diligence and readiness preparation, submission compilation, and eCTD publishing. We support applications to all major health agencies, including the FDA, Europe's EMA, Health Canada, Japan's PMDA, and China's NMPA.
- **Market Access:** We assist customers in demonstrating the value of new drugs and health technologies to payors and other stakeholders to support their efforts in securing reimbursement and access in global markets. These services include conducting real-world evidence and health economics outcomes research, delivering value and access consultancy solutions, creating cost and comparative effectiveness models to support pricing and payor reimbursement, and collecting and analyzing real-world data for use in market and payor communications. We use our proprietary technology called the Health Outcomes Performance Estimator (HOPE), based on a Bayesian engine, that translates clinical trial findings and population health knowledge into expected real-world impact.

Sales and Marketing

Our sales and marketing functions pursue a coordinated approach with a global commercial team of business development, product management, and marketing experts. Our global commercial team collaborates with our scientists, subject matter experts, and technologists to engage with customers and prospects to understand their needs and offer tailored solutions with our biosimulation software and technology-enabled services. Our marketing campaigns include integrated, multi-channel campaigns designed to highlight the benefits and differentiated capabilities of our biosimulation software and technology-enabled services to reach new audiences and generate and nurture leads. Furthermore, we invest significant time and resources on thought leadership. Our scientists and experts have authored thousands of scientific publications, posters, and articles to share biosimulation knowledge and methods and advance adoption. We also partner with software distributors in global regions to expand our reach.

Competition

The market for our biosimulation products and related services for the biopharmaceutical industry is competitive and highly fragmented. In biosimulation software, we primarily compete with companies smaller than ourselves, such as Simulations Plus and NONMEM, a division of ICON. Other competitors include Schrodinger, open-sourced solutions such as R and PK-Sim, and internally-developed software in biopharmaceutical companies. We generally compete in biosimulation software on the basis of the quality and capabilities of our products, our scientific and technical expertise, our ability to innovate and develop solutions attractive to customers, our customer and regulatory agency partnerships, and price, amongst other factors.

Our technology-enabled services generally compete with companies significantly smaller than ourselves, such as Nuventra, Metrum Research Group, and Simulations Plus. We also face competition in this space from in-house teams at biopharmaceutical companies and academic and government institutions. In some standard biosimulation services and in regulatory science and market access, we compete with contract research organizations. We generally compete in the technology-enabled services markets on the basis of our reputation and experience, our expertise and the qualifications of our team, our ability to offer services attractive to customers, and price, amongst other factors.

We believe that our competitive position is strong, and that we are able to effectively win new projects with our integrated, end-to-end platform.

Intellectual Property

We safeguard and enhance our innovative technology platforms, systems, processes, and databases with a full array of intellectual property rights, including copyrights, trade secrets and know-how, patents, and tradenames/trademarks.

All of our proprietary software products are copyright protected, and further reinforced by contractual provisions in our software license agreements prohibiting our users from reverse engineering, deriving, or otherwise using the source code and underlying algorithms for anything other than the permitted and intended use. Embedded within some of our biosimulation tools, including the Simcyp Simulator, are several decades' worth of proprietary data that have been compiled and collated from both public and private sources. These data, in tandem with our proprietary source code and algorithms, create powerful modeling tools that cannot be readily duplicated. Continual ongoing development of source code and algorithms as well as new version release of modelling tools also ensures that our proprietary software products are regularly updated such that copying is made more difficult. Our processes and systems are further protected by trade secrets and know-how, which we secure by requiring and strictly enforcing confidentiality obligations with our employees, contractors, customers, and other third parties, and invention assignment agreements with our employees, as well as through administrative and technical safeguards. However, trade secrets and confidential know-how are difficult to protect. Agreements may not always provide meaningful protection. These agreements may also be breached, and we may not have an adequate remedy for any such breach. In addition, our trade secrets and/or confidential know-how may become known or be independently developed by a third party, or misused by any collaborator to whom we disclose such information. Despite any measures taken to protect our intellectual property, unauthorized parties may attempt to copy aspects of our products or to obtain or use information that we regard as proprietary. Although we take steps to protect our proprietary information, third parties may independently develop the same or similar proprietary information or may otherwise gain access to our proprietary information. As a result, we may be unable to meaningfully protect our trade secrets and proprietary information. We license and use the intellectual property of third parties, primarily in our software development, although no one such license is considered to be material to the business as a whole.

We also maintain a portfolio of issued and pending patents in several of jurisdictions in which we do business. As of September 30, 2020, our patent portfolio consisted of 31 issued patents and four pending patent applications related to our software and technology. The Company does not currently consider any of its issued patents to be material to its business. Several of our most recently filed patent applications relate to our liquid biopsy project, and describe a method of gleaning information from a simple blood test that can be used to predict and optimize how that individual patient will absorb and metabolize a drug, thereby allowing a clinician to determine the optimal dosing of a drug on an individual basis. Our pending Virtual Twin patent application describes the use of our Simcyp Simulator to identify characteristics of a Virtual Twin to a real patient based on physiological and demographic characteristics of a real patient and estimate appropriate drug dosage levels for the real patient. We believe these patent applications, if issued, will accelerate our leadership in individualized precision dosing. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient proprietary protection from competitors.

We also have applied for and/or obtained and maintain registration in the United States and other countries for numerous trademarks, including Certara, Simcyp, Phoenix, Virtual Twin, WinNonlin, and BaseCase. We pursue trademark registrations to the extent we believe doing so would be beneficial to our competitive position.

We are not presently a party to any legal proceedings relating to intellectual property that, in the opinion of our management, would individually or taken together have a material adverse effect on our business, financial condition, results of operations or cash flows.

Human Capital

We are led by a diverse, global, and talented team of scientists, software developers, and subject matter experts who seek to understand our customers' challenges and are dedicated to tackling these challenges. As of November 9, 2020, we employed a total of 899 individuals, including 841 full-time employees and 58 part-time employees, of which 302 held Ph.Ds. in their respective disciplines, including clinical pharmacology and pharmacometrics, and an additional 266 employees held one or more graduate or other advanced degrees. As of November 9, 2020, we employed approximately 300 scientists, 220 regulatory experts, 100 market access specialists, and 100 software developers and technologists. Most of the senior management team and the members of our board of directors hold either PhDs and/or other advanced degrees. We are very proud to say that some of the world-leading experts in biosimulation, drug discovery and development, software development, regulatory science, and market access work and thrive at Certara. We offer employees a myriad of professional development opportunities and encourage a performance-driven environment. In 2020, we have focused on creating a robust culture in a remote work environment to encourage retention and engagement. None of our employees are represented by a labor union, and we have never experienced a work stoppage. We believe that our relations with our employees are positive.

Government Regulation

Regulation of Biopharmaceutical Products

The development, testing, manufacturing, labeling, approval, promotion, distribution and post-approval monitoring and reporting of biopharmaceutical products are subject to regulation by numerous governmental authorities at both the national and local levels, including the FDA in the United States, as well as those of other countries, such as the EMA in the European Union and the Medicines and Healthcare products Regulatory Agency in the United Kingdom. Although our biosimulation software products and platforms are not approved by the FDA or other government agencies, our customers' products are subject to these regulations, which may be applicable to us to the extent that the services and deliverables we provide to our customers are used in their marketing applications. Consequently, we must comply with relevant laws and regulations relating to certain aspects of the drug and biologic development and approval process. For example, our customers may require that documents or records we produce that may be used in the approval process be compliant with part 11 of Title 21 of the U.S. Code of Federal Regulations, which relates to the creation, modification, maintenance, storage, retrieval, or transmittal of electronic records submitted to the FDA. Further, certain portions of our business, such as the biosimulation work we conduct in connection with designing clinical trials, must comply with current Good Laboratory Practices ("GLP") and Good Clinical Practices ("GCP") requirements as established by the International Council on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use, as adopted by the FDA and similar regulatory authorities in other countries, which helps ensure the quality and integrity of the data we produce. To help ensure compliance with GLP and GCP, we have established a robust quality management system that includes standard operating procedures, working practice documents and processes, and quality assurance personnel to audit deliverables intended to be used in our customers' drug and biologic approval applications.

Privacy and Security Laws

The collection, processing, use, disclosure, disposal and protection of information about individuals, in particular healthcare data, is highly regulated both in the United States and other jurisdictions, including but not limited to, under HIPAA, as amended by HITECH; U.S. state privacy, security and breach notification and healthcare information laws; the GDPR; and other European privacy laws as well as privacy laws being adopted in other regions around the world. Although most of the clinical data we receive from our customers is de-identified, in certain parts of our business, such as our real-world data and analytics program, we hold confidential personal health and other information relating to persons who have been, are and may in the future be involved in clinical trials. The possession, retention, use and disclosure of such information is highly regulated, including under the laws and regulations described above. These data privacy and security regulations govern the use, handling and disclosure of information about individuals and, in the case of

HIPAA, require the use of standard contracts, privacy and security standards and other administrative simplification provisions. In relation to HIPAA, we do not consider our service offerings to generally cause us to be subject as a covered entity; however, in certain circumstances we are subject to HIPAA as a business associate and may enter into business associate agreements with our customers who are covered entities under HIPAA. These business associate agreements define our obligations to safeguard the personal health information of patients provided by our customers. We have adopted identity protection practices and have implemented procedures to satisfy data protection requirements and safeguards regarding the creation, receipt, maintenance and transmission of protected health information.

In addition, the FTC and many state attorneys general are interpreting existing federal and state consumer protection laws to impose evolving standards for the online collection, use, dissemination and security of information about individuals, including health-related information. Courts may also adopt the standards for fair information practices promulgated by the FTC, which concern consumer notice, choice, security and access. Consumer protection laws require us to publish statements that describe how we handle information about individuals and choices individuals may have about the way we handle their information. Certain states have also adopted robust data privacy and security laws and regulations. For example, the CCPA, which took effect in 2020, imposes obligations and restrictions on businesses regarding their collection, use, and sharing of personal information and provides new and enhanced data privacy rights to California residents, such as affording them the right to access and delete their personal information and to opt out of certain sharing of personal information. Protected health information that is subject to HIPAA is excluded from the CCPA, however, information we hold about individuals which is not subject to HIPAA would be subject to the CCPA. It is unclear how HIPAA and the other exceptions may be applied under the CCPA.

The collection, use, storage, disclosure, transfer, or other processing of any personal data regarding individuals in the European Union, including personal health data, is subject to the GDPR, which became effective on May 25, 2018. The GDPR is wide-ranging in scope and imposes numerous requirements on companies that process personal data, including requirements relating to processing health and other sensitive data, obtaining consent of the individuals to whom the personal data relates, providing information to individuals regarding data processing activities, implementing safeguards to protect the security and confidentiality of personal data, providing notification of data breaches, and taking certain measures when engaging third-party processors. The GDPR also imposes strict rules on the transfer of personal data to countries outside the European Union, including the United States, and permits data protection authorities to impose large penalties for violations of the GDPR, including potential fines of up to €20 million or 4% of annual global revenues, whichever is greater. The GDPR also confers a private right of action on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies, and obtain compensation for damages resulting from violations of the GDPR.

Recent legal developments in Europe have created complexity and uncertainty regarding transfers of personal data from the EEA to the United States, e.g. on July 16, 2020, the CJEU invalidated the Privacy Shield under which personal data could be transferred from the EEA to U.S. entities who had self-certified under the Privacy Shield scheme. While the CJEU upheld the adequacy of the standard contractual clauses (a standard form of contract approved by the European Commission as an adequate personal data transfer mechanism, and potential alternative to the Privacy Shield), it made clear that reliance on them alone may not necessarily be sufficient in all circumstances; this has created uncertainty. We have previously relied on our own Privacy Shield certification and our relevant customers'/ clients'/ partners'/ providers'/ third parties' Privacy Shield certification(s) for the purposes of transferring personal data from the EEA to the United States in compliance with the GDPR's data export conditions. We also currently rely on the standard contractual clauses to transfer personal data outside the EEA, including to the United States, among other data transfer mechanisms pursuant to the GDPR, but excluding Privacy Shield.

In response to the data privacy laws and regulations discussed above and those in other countries in which we do business, we have implemented several technological safeguards, processes, contractual third-parties provisions, and employee trainings to help ensure that we handle information about our employees, customers, and in a compliant manner. We maintain a global privacy policy and related procedures, and train our workforce to understand and comply with applicable privacy laws.

Bribery, Anti-Corruption and Other Laws

We are subject to compliance with the FCPA and similar anti-bribery laws, such as the Bribery Act, which generally prohibit companies and their intermediaries from making improper payments to foreign government

officials for the purpose of obtaining or retaining business. In addition, in the United States, we may also be subject to certain state and federal fraud and abuse laws, including the federal Anti-Kickback Statute and False Claims Act, that are intended to reduce waste, fraud and abuse in the health care industry. Our employees, distributors, and agents are required to comply with these laws, and we have implemented policies, procedures, and training, to minimize the risk of violating these laws.

Properties

As of September 30, 2020, we had 49 offices in 15 countries, with our headquarters located in Princeton, New Jersey. We lease or sublease all of our offices. None of our facilities are used for anything use other than general office use. We believe that our facilities are adequate for our operations and that suitable additional space will be available when needed. Because of the COVID-19 pandemic, in March 2020, we temporarily closed all of our offices. As of September 30, 2020, all of our offices remained closed, but we have instituted a protocol for assessing the need to re-open any facilities and determining what safety measures are required or recommended by local health authorities to re-open such facilities. We believe our employees have been able to maintain the same level of productivity in a remote working environment as they did prior to the pandemic. We expect that most of our offices will re-open in some capacity once the current pandemic has abated.

As of September 30, 2020, our material operating locations, which we define as the facilities we lease with more than 10,000 square feet, were as follows:

LOCATION	APPROXIMATE SQUARE FOOTAGE	LEASE EXPIRATION DATES
Wilmington, Delaware, USA	18,250	2/28/2027
Princeton, New Jersey, USA	17,560	6/30/2025
Makati, Philippines	16,710	10/31/2022
Sheffield, UK	13,910	1/28/2028
Raleigh, North Carolina, USA	11,560	2/28/2022

Legal Proceedings

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. Management believes that we do not have any pending or threatened litigation which, individually or in the aggregate, would have a material adverse effect on our business, results of operations, financial condition and/or cash flows.

Indemnification and Insurance

Our business exposes us to potential liability including, but not limited to, potential liability for (i) breach of contract or negligence claims by our customers, (ii) non-compliance with applicable laws and regulations, and (iii) employment-related claims. In certain circumstances, we may also be liable for the acts or omissions of others, such as suppliers of goods or services.

We attempt to manage our potential liability to third-parties through contractual protection (such as indemnification and limitation of liability provisions) in our contracts with customers and others, and through insurance. The contractual indemnification provisions vary in scope and generally do not protect us against all potential liabilities, such as liability arising out of our gross negligence or willful misconduct. In addition, in the event that we seek to enforce such an indemnification provision, the indemnifying party may not have sufficient resources to fully satisfy its indemnification obligations or may otherwise not comply with its contractual obligations.

We generally require our customers and other counterparties to maintain adequate insurance, and we currently maintain errors, omissions and professional liability insurance coverage with limits we believe to be appropriate. The coverage provided by such insurance may not be adequate for all claims made and such claims may be contested by applicable insurance carriers.

MANAGEMENT

Executive Officers and Board of Directors

The following table sets forth information about our directors and executive officers as of _____, 2020:

NAME	AGE	POSITION
William F. Feehery	50	Chief Executive Officer and Director
M. Andrew Schemick	46	Chief Financial Officer
Robert Aspbury	49	President, Simcyp
Justin Edge	52	President, Regulatory and Access
Leif E. Pedersen	56	President, Software
Craig R. Rayner	47	President, Integrated Drug Development
Richard M. Traynor	49	Senior Vice President and General Counsel
Jieun W. Choe	46	Chief Strategy and Marketing Officer
Judith Dickinson	47	Chief Human Resources Officer and Senior Vice President, Human Resources
Sherilyn S. McCoy	62	Chairman of the Board
James E. Cashman III	67	Director
Eric C. Liu	44	Director
Stephen M. McLean	63	Director
Mason P. Slaine	67	Director
Matthew Walsh	54	Director
Ethan Waxman	32	Director

Set forth below is a brief description of the business experience of our directors and executive officers. All of our executive officers serve at the discretion of our board of directors.

William F. Feehery, Ph.D. William F. Feehery, Ph.D., has served as Chief Executive Officer of the Company or Certara Holdco, our operating subsidiary, since June 2019. Prior to joining us, Dr. Feehery served as President of DuPont Industrial Biosciences since 2013. Dr. Feehery currently serves on the board of directors for West Pharmaceutical Services, a manufacturer of packing components and delivery systems for pharmaceutical, biotech and medical device companies. We believe Dr. Feehery brings to our board of directors extensive knowledge of the pharmaceutical industry, which together with his experience leading the Company as our Chief Executive Officer, makes him well qualified to serve as one of our directors.

M. Andrew Schemick. M. Andrew Schemick has served as Chief Financial Officer of the Company or Certara Holdco, since August 2014. Prior to joining us, Mr. Schemick served as Vice President of Financial Planning and Analysis for Hights Cross Communications, a holding company for education and media investments. Mr. Schemick also held the Chief Financial Officer role for a division of Kaplan Inc., a leading education company.

Robert Aspbury, Ph.D. Robert Aspbury, Ph.D., has served as President of our Simcyp division since January 2020. Prior to this appointment, he served as Simcyp's Chief Operating Officer from April 2019 to December 2019. Prior to joining the Company, Dr. Aspbury served as Vice President of Strategic Solutions, Biosimilars, for Covance Inc., a contract research organization and drug development services company (a subsidiary of Laboratory Corporation of America) from September 2016 to March 2019, and as Vice President and General Manager, Global Clinical Pharmacology from November 2011 to August 2016.

Justin Edge. Justin Edge has served as President of our regulatory science division since January 2019. Since January 2020, Mr. Edge has also had oversight for Certara's Evidence and Access unit. Prior to joining the Company, Mr. Edge worked at GfK, a leading global research and analytics firm, from 2012 to January 2019 where he most recently led the company's healthcare business unit.

Leif E. Pedersen. Leif E. Pedersen has served as President of Software since September 2020. Prior to joining the Company, Mr. Pedersen was a Senior Operating Partner at SymphonyAI, an operating group of artificial intelligence companies, from October 2019 to August 2020, Chief Executive Officer of BIOVA (a division of

Dassault Systèmes), a scientific product development software firm, from September 2017 to September 2019, and Executive Vice President at Innovative Interfaces, a library management software company, from December 2015 to August 2017.

Craig R. Rayner, PharmD. Craig Rayner, PharmD, has served as President of our Integrated Drug Development and Strategic Consulting Services division since January 1, 2020. Prior to that, Dr. Rayner was Senior Vice President of Integrated Drug Development at Certara. Prior to joining the Company, Dr. Rayner was the co-founder and chief executive officer of d3 Medicine from 2012 to 2016. Prior to that, Dr. Rayner's appointments included leadership roles in Clinical Pharmacology and Early Development (Roche), Clinical Development (CSL-Behring), in Business Development/Licensing as Global Due Diligence Director (Roche), and in clinical pharmacology and infectious disease research (Monash University). Dr. Rayner was appointed an Adjunct Associate Professor at Monash University in 2011.

Richard M. Traynor. Richard M. Traynor has served as Senior Vice President and General Counsel of the Company or Certara Holdco since March 2018. Prior to joining us, Mr. Traynor was Associate General Counsel for Edge Therapeutics, a clinical stage biotechnology company, from August 2017 to March 2018, and served in various positions at LifeCell Corporation, a medical device product manufacturer, most recently as Chief Legal & Compliance Officer from January 2012 to January 2017.

Jieun W. Choe. Jieun W. Choe has served as an officer since October 2020 and has served as our Chief Strategy & Marketing Officer since January 24, 2020 and was previously our Senior Vice President of Strategic Ventures from April 16, 2018 to January 23, 2020. Prior to joining the Company, Ms. Choe was Chief Marketing Officer at Triumph Learning, an educational content company.

Judith (Jodi) Dickinson. Jodi Dickinson has served as an officer since October 2020 and has served as our Chief Human Resources Officer and Senior Vice President, Human Resources since October 2019. Prior to joining the Company, Ms. Dickinson was employed by Novel Learning Communities, a private school operator, from October 2013 through August 2019, most recently serving as Senior Vice President, Human Resources.

Sherilyn S. McCoy. Sherilyn S. McCoy has served as our Chairman since February 2018 and as a director since January 2018. Ms. McCoy served as Chief Executive Officer of Avon Products, Inc., a personal care products company, from April 2012 until her retirement in February 2018. Prior to Avon, Ms. McCoy had a 30-year career at Johnson & Johnson, where she led a variety of large medical device, pharmaceutical and consumer businesses and rose to the position of Vice Chair. She currently serves as a director of AstraZeneca plc, a global, science-led biopharmaceutical company; Kimberly-Clark, a multinational manufacturer of personal care products; Stryker Corporation, a medical technologies firm; and Novocure, a novel oncology company. We believe Ms. McCoy contributes to our board of directors her deep global experience, as well as her background in the medical technology industry and extensive experience working with public companies.

James E. Cashman III. James E. Cashman III has served as a director since May 2018. Mr. Cashman served as Chairman of the board of directors of ANSYS Inc., an engineering simulation software company, from January 2017 until his retirement in April 2019. Prior to becoming Chairman of ANSYS, Mr. Cashman was the Chief Executive Officer and a director of ANSYS from February 2000 to December 2016. Mr. Cashman currently serves on the board of directors of National Instruments Corp, a producer of automated test equipment and virtual instrumentation software. We believe Mr. Cashman contributes to our board of directors his expertise in the areas of technical, financial, operations and sales management.

Eric C. Liu. Eric C. Liu has served as a director since 2017. Mr. Liu has served as Partner and Global Co-Head of Healthcare at EQT, an alternative asset management firm, since July 2014. Mr. Liu currently serves on the board of directors of Aldevron, LLC, a contract manufacturing and scientific services company, and Waystar, Inc., a healthcare revenue cycle management company. We believe Mr. Liu contributes to our board of directors his finance and capital markets experience as well as insight into the healthcare industry, gained from advising and serving as a director of multiple EQT portfolio companies.

Stephen M. McLean. Stephen M. McLean has served as a director of us or our predecessor since 2013. Mr. McLean has served as a Partner at Arsenal Capital, a private equity firm, since 2010. Mr. McLean currently serves on the board of directors of a number of private companies, including WIRB Copernicus Group, Inc., a clinical services organization to the pharmaceutical industry; BioIVT, LLP, a provider of biospecimens for drug discovery; Caprion HistoGeneX BioSciences, Inc., a provider of specialized research services in the development of immunology and oncology focused drugs; Accumen, Inc., a provider of technology-enabled solutions to optimize clinical laboratories and imaging departments; TractManager Inc., a provider of contract

and spend optimization solutions for hospitals and payers; Pharma Value Demonstration, Inc., a provider of services to generate and communicate the value and effectiveness of drugs. He is also a founder and Chairman of the International Biomedical Research Alliance, a non-profit organization dedicated to training biomedical researchers in collaboration with the National Institutes of Health, Oxford and Cambridge Universities. We believe Mr. McLean contributes to our board of directors his insight into the healthcare industry, gained from founding, investing in, and serving as a director of multiple healthcare companies as well as his knowledge of finance.

Mason P. Slaine. Mason P. Slaine has served as a director since August 2017. Mr. Slaine has led investments through the Slaine Family Office since January 2016. Prior to that, Mr. Slaine was the Executive Chairman of Interactive Data Corporation, the financial markets data and analytics company, from 2010 to December 2015, when it was acquired by The Intercontinental Exchange, the financial and commodity markets company. He currently serves as Chairman of the board of directors of Cast & Crew Entertainment Services, an entertainment payroll provider, and a board member of Reorg Research, Inc., a provider of news, commentary and analysis related to the debt markets. We believe Mr. Slaine contributes to our board of directors his finance and capital markets experience as well as corporate governance based on his experience as a corporate board member.

Matthew Walsh. Matthew Walsh has served as a director since August 2020. Mr. Walsh has served as Executive Vice President and Chief Financial Officer of Organon & Co., a global pharmaceutical business since June 2020. Prior to Organon, he served as Executive Vice President and Chief Financial Officer of Allergan, a publicly traded, global biopharmaceutical company, from 2018 until the sale of the company to Abbvie in 2020. From 2008 to 2018, Mr. Walsh served as Chief Financial Officer of Catalent, a global provider of delivery technologies, development, and manufacturing solutions to the life sciences industry. Before Catalent, from 2006 to 2008, he was President, Chief Financial Officer and Acting Chief Executive Officer at Escala Group, Inc. Mr. Walsh served on the board of directors of Multicolor Corporation from 2015 to 2017. We believe Mr. Walsh contributes deep experience in the pharmaceutical industry to our board of directors.

Ethan Waxman. Ethan Waxman has served as a director since August 2020. Mr. Waxman serves as a Director at EQT, where he has worked since August 2015. Mr. Waxman previously served as a board observer to our board of directors from August 2017 to August 2020. Mr. Waxman served as a non-employee executive officer for the Company and certain of our subsidiaries from June 2017 to October 2020. We believe Mr. Waxman contributes to our board of directors his finance and capital markets experience as well as insight into the healthcare industry, gained from advising multiple EQT portfolio companies.

Board of Directors

Our business and affairs are managed under the direction of our board of directors. Our board of directors currently consists of eight directors. Following the completion of this offering, we expect our board of directors to initially consist of eight directors.

Our amended and restated certificate of incorporation will provide that, subject to the right of holders of any series of preferred stock, our board of directors will be divided into three classes of directors, with the classes to be as nearly equal in number as possible, and with the directors serving staggered three-year terms, with only one class of directors being elected at each annual meeting of stockholders. As a result, approximately one-third of our board of directors will be elected each year. We expect that, following this offering, our initial Class I directors will be Messrs.

and (with their terms expiring at the annual meeting of stockholders to be held in 2024), our initial Class II directors will be Messrs. and (with their terms expiring at the annual meeting of stockholders to be held in 2025) and our initial Class III directors will be Messrs. and (with their terms expiring at the annual meeting of stockholders to be held in 2026).

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that, subject to any rights of holders of preferred stock to elect additional directors under specified circumstances, the number of directors will be fixed from time to time exclusively pursuant to a resolution adopted by the board of directors; however, if at any time EQT owns at least 40% in voting power of the stock of our Company entitled to vote generally in the election of directors, the stockholders may also fix the number of directors pursuant to a resolution adopted by the stockholders. Subject to certain exceptions described below with respect to the stockholders agreement we intend to enter into, newly created director positions resulting from an increase in size of the board of directors and vacancies may be filled by our board of directors or our stockholders; provided, however, that at any time when EQT beneficially owns less than 40% in voting power

of the stock of our company entitled to vote generally in the election of directors, such vacancies shall be filled by our board of directors (and not by the stockholders).

Our stockholders agreement will provide that following the completion of this offering, EQT and Arsenal will have the right to nominate the number of directors to our board of directors described below (such persons nominated by EQT, the "EQT nominees" and such person nominated by Arsenal, the "Arsenal nominee"). EQT and certain of its affiliates will have the right to nominate a number of nominees equal to (x) the total number of directors comprising our board of directors at such time, multiplied by (y) the percentage of our outstanding common stock held from time to time by EQT. For purposes of calculating the number of EQT nominees, any fractional amounts are rounded up to the nearest whole number. In addition, Arsenal and certain of its affiliates will have the right to nominate one nominee for so long as Arsenal and such affiliates collectively own at least 5% of our outstanding common stock; provided, that such individual is an investment professional employed by Arsenal or one of its affiliates or another individual with the prior written consent of EQT. For so long as we have a classified board, the EQT nominees will be divided by EQT as evenly as possible among the classes of directors. See "Certain Relationships and Related Party Transactions — Stockholders Agreement."

Pursuant to the stockholders agreement, for so long as EQT or Arsenal has the right to nominate any persons to our board of directors, (i) we will include the EQT nominees and the Arsenal nominees on the slate that is included in our proxy statements relating to the election of directors of the class to which such persons belong and provide the highest level of support for the election of each such persons as we provide to any other individual standing for election as a director, and (ii) we will include on the slate that is included in our proxy statement relating to the election of directors only (x) the EQT nominees, (y) the Arsenal nominees and (z) the other nominees (if any) nominated by the nominating and corporate governance committee of our board of directors. In addition, EQT, Arsenal, and certain other stockholders will agree with the Company to vote in favor of the Company slate that is included in our proxy.

In the event that an EQT or Arsenal nominee ceases to serve as a director for any reason (other than the failure of our stockholders to elect such individual as a director), the persons entitled to designate such nominee director under the stockholders agreement will be entitled to appoint another nominee to fill the resulting vacancy.

Background and Experience of Directors

When considering whether directors and nominees have the experience, qualifications, attributes or skills, taken as a whole, to enable our board of directors to satisfy its oversight responsibilities effectively in light of our business and structure, the board of directors focused primarily on each person's background and experience as reflected in the information discussed in each of the directors' individual biographies set forth above. We believe that our directors provide an appropriate mix of experience and skills relevant to the size and nature of our business. Once appointed, directors serve until their term expires, they resign or they are removed by the stockholders.

Role of Board of Directors in Risk Oversight

The board of directors has extensive involvement in the oversight of risk management related to us and our business and accomplishes this oversight through the regular reporting by the Audit Committee. The purpose of the Audit Committee is to assist the board of directors in fulfilling its fiduciary oversight responsibilities relating to (1) the quality and integrity of our financial statements, including oversight of our accounting and financial reporting processes, internal controls and financial statement audits, (2) our compliance with legal and regulatory requirements, (3) our independent registered public accounting firm's qualifications, performance and independence, (4) our corporate compliance program, including our code of conduct and anti-corruption compliance policy, and investigating possible violations thereunder, (5) our risk management policies and procedures and (6) the performance of our internal audit function. Through its regular meetings with management, including the finance, legal and internal audit functions, the Audit Committee reviews and discusses all significant areas of our business and summarizes for the board of directors all areas of risk and the appropriate mitigating factors. In addition, our board of directors receives periodic detailed operating performance reviews from management.

Controlled Company Exception

After the completion of this offering, EQT will continue to beneficially own more than 50% of our common stock and voting power. As a result, (a) under certain provisions of our amended and restated bylaws which will

be in effect upon the closing of this offering, EQT and those other parties to our stockholders agreement will be entitled to nominate at least a majority of the total number of directors comprising our board of directors and (b) we will be a “controlled company” as that term is set forth in Section 5615(c)(1) of the Nasdaq Marketplace Rules. Under the Nasdaq corporate governance standards, a company of which more than 50% of the voting power is held by an individual, group or another company is a “controlled company” and may elect not to comply with certain corporate governance standards, including (1) the requirement that a majority of the board of directors consist of independent directors, (2) the requirement that we have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee’s purpose and responsibilities and (3) the requirement that our director nominations be made, or recommended to our full board of directors, by our independent directors or by a nominations committee that consists entirely of independent directors and that we adopt a written charter or board resolution addressing the nominations process. Following this offering, we do not intend to utilize these exemptions. However, if we utilize any of these exemptions in the future, you will not have the same protections afforded to stockholders of companies that are subject to all of the Nasdaq corporate governance requirements. In the event that we cease to be a “controlled company,” we will be required to comply with these provisions within the transition periods specified in the Nasdaq corporate governance rules.

Committees of the Board of Directors

After the completion of this offering, the standing committees of our board of directors will consist of an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee.

Our chief executive officer and other executive officers will regularly report to the non-executive directors and the Audit, the Compensation and the Nominating and Corporate Governance Committees to ensure effective and efficient oversight of our activities and to assist in proper risk management and the ongoing evaluation of management controls. The internal audit function will report functionally and administratively to our chief financial officer and directly to the Audit Committee. We believe that the leadership structure of our board of directors provides appropriate risk oversight of our activities given the controlling interests held by EQT.

Audit Committee

The members of our current Audit Committee are Messrs. Walsh, Cashman, McLean, and Waxman. Upon the completion of this offering, we expect to have an Audit Committee consisting of _____ and _____ and _____ all qualify as independent directors under the Nasdaq corporate governance standards and independence requirements of Rule 10A-3 of the Exchange Act. Our board of directors has determined that each of _____ and _____ qualify as an “audit committee financial expert” as such term is defined in Item 407(d)(5) of Regulation S-K.

The purpose of the Audit Committee will be to prepare the audit committee report required by the SEC to be included in our proxy statement and to assist our board of directors in overseeing and monitoring (1) the quality and integrity of our financial statements, including oversight of our accounting and financial reporting processes, internal controls and financial statement audits, (2) our compliance with legal and regulatory requirements, (3) our independent registered public accounting firm’s qualifications, performance and independence, (4) our corporate compliance program, including our code of conduct and anti-corruption compliance policy, and investigating possible violations thereunder, (5) our risk management policies and procedures and (6) the performance of our internal audit function.

Our board of directors will adopt a written charter for the Audit Committee, which will be available on our website upon the completion of this offering.

Compensation Committee Interlocks and Insider Participation

Compensation decisions are made by our Compensation Committee. None of our current or former executive officers or employees currently serves, or has served during our last completed fiscal year, as a member of our Compensation Committee and, during that period, none of our executive officers served as a member of the compensation committee (or other committee serving an equivalent function) of any other entity whose executive officers served as a member of our board of directors.

We have entered into certain indemnification agreements with our directors and are party to certain transactions with EQT described in “Certain Relationships and Related Party Transactions — Indemnification of Directors and Officers,” “— Registration Rights Agreement” and “— Stockholders Agreement,” respectively.

Compensation Committee

The members of our current Compensation Committee are Mme. McCoy and Messrs. Liu, and Slaine. Upon the completion of this offering, we expect to have a Compensation Committee consisting of Messrs. _____ and _____.

The purpose of the Compensation Committee will be to assist our board of directors in discharging its responsibilities relating to, among other things, (1) setting our compensation program and compensation of our executive officers and directors, (2) administering our incentive and equity-based compensation plans and (3) preparing the compensation committee report required to be included in our proxy statement under the rules and regulations of the SEC.

Our board of directors will adopt a written charter for the Compensation Committee, which will be available on our website upon the completion of this offering.

Nominating and Corporate Governance Committee

Upon the completion of this offering, we expect to have a Nominating and Corporate Governance Committee consisting of Messrs. , and . The purpose of our Nominating and Corporate Governance Committee will be to assist our board of directors in discharging its responsibilities relating to (1) identifying individuals qualified to become new board members, consistent with criteria approved by the board of directors, (2) reviewing the qualifications of incumbent directors to determine whether to recommend them for reelection and selecting, or recommending that the board of directors select, the director nominees for the next annual meeting of stockholders, (3) identifying board members qualified to fill vacancies on any committee of the board of directors and recommending that the board of directors appoint the identified member or members to the applicable committee, (4) reviewing and recommending to the board of directors corporate governance principles applicable to us, (5) overseeing the evaluation of the board of directors and management and (6) handling such other matters that are specifically delegated to the committee by the board of directors from time to time.

Our board of directors will adopt a written charter for the Nominating and Corporate Governance Committee, which will be available on our website upon completion of this offering.

Director Independence

Pursuant to the corporate governance listing standards of the Nasdaq, a director employed by us cannot be deemed to be an “independent director.” Each other director will qualify as “independent” only if our board of directors affirmatively determines that he has no material relationship with us, either directly or as a partner, stockholder or officer of an organization that has a relationship with us. Ownership of a significant amount of our stock, by itself, does not constitute a material relationship.

Our board of directors is expected to affirmatively determine that each of our directors, other than , qualifies as “independent” in accordance with the Nasdaq rules. In making its independence determinations, our board of directors is expected to consider and review all information known to it (including information identified through directors' questionnaires).

Code of Conduct

Prior to the consummation of this offering, we will adopt a Code of Conduct (the “Code of Conduct”) applicable to all employees, executive officers and directors that addresses legal and ethical issues that may be encountered in carrying out their duties and responsibilities, including the requirement to report any conduct they believe to be a violation of the Code of Conduct. The Code of Conduct will be available on our website, www.certara.com. The information available on or through our website is not part of this prospectus. If we ever were to amend or waive any provision of our Code of Conduct that applies to our principal executive officer, principal financial officer, principal accounting officer or any person performing similar functions, we intend to satisfy our disclosure obligations with respect to any such waiver or amendment by posting such information on our internet website set forth above rather than by filing a Form 8-K.

EXECUTIVE COMPENSATION

The following table sets forth information concerning the compensation earned by or paid to our named executive officers (“NEOs”), during our fiscal year ended December 31, 2019 (“fiscal year 2019”). Our NEOs include our current Chief Executive Officer (“CEO”), our former CEO, our two most highly compensated executive officers, other than our CEO, and another former executive officer.

SUMMARY COMPENSATION TABLE

NAME AND PRINCIPAL POSITION	YEAR	SALARY (\$)	BONUS \$(⁽⁴⁾)	EQUITY AWARDS \$(⁽⁵⁾)	NON-EQUITY	ALL OTHER COMPENSATION \$(⁽⁷⁾)	TOTAL (\$)
					INCENTIVE PLAN COMPENSATION \$(⁽⁶⁾)		
William F. Feehery, <i>Chief Executive Officer</i> ⁽¹⁾	2019	437,500	—	2,792,621	274,838	3,022	3,507,981
Edmundo Muniz, <i>Former Chief Executive Officer</i> ⁽¹⁾	2019	118,750	—	446,821	—	519,982	1,085,553
Craig R. Rayner ⁽²⁾ , <i>President, Integrated Drug Development</i> ⁽³⁾	2019	246,252	350,400	139,633	—	20,767	757,052
Justin Edge, <i>President, Regulatory and Access</i>	2019	353,846	175,000	335,115	131,384	15,188	1,010,533
Thomas Kerbusch ⁽²⁾ , <i>Former President, Integrated Drug Development</i> ⁽³⁾	2019	391,350	122,186	111,706	280,616	40,868	946,726

⁽¹⁾ Dr. Muniz served as our CEO until March 31, 2019. Dr. Feehery became our CEO on June 3, 2019.

⁽²⁾ Dr. Kerbusch's 2019 compensation was paid in euros. The amounts listed above were converted into U.S. dollars for presentation in the Summary Compensation Table based on the monthly exchange rates during 2019. The monthly exchange rate used for the conversion was 1 U.S. dollar to the following number of euros for each of the months from January through December of 2019, respectively: 1.1405602, 1.1375798, 1.1245628, 1.1182109, 1.1175318, 1.1348925, 1.1163878, 1.104456, 1.0959954, 1.1112466, 1.103272, and 1.1130075.

⁽³⁾ Dr. Kerbusch served as our President, Integrated Drug Development through October 2019, at which time Dr. Rayner became acting head of Integrated Drug Development. Effective as of January 1, 2020, Dr. Rayner formally assumed the title of President, Integrated Drug Development.

⁽⁴⁾ The amounts in this column with respect to Mr. Edge represent a sign-on bonus and with respect to Dr. Kerbusch represent a special retention bonus. The amount for Dr. Rayner represents a discretionary bonus based on a percentage of the profitability of the Integrated Drug Development division for 2019 deemed to be attributable to Dr. Rayner's efforts.

⁽⁵⁾ Class B Units were granted to our NEOs under our 2017 Incentive Plan. Except for the 2019 award to Dr. Muniz, 50% of each award is subject to time-based vesting and 50% is subject to performance-based vesting. The Class B Unit award granted to Dr. Muniz in 2019 in connection with his transition from an employee member of our board of directors and the board of managers of the EQT Investor's general partner to a non-employee member of such boards is only subject to time-based vesting. Except for the Class B Units granted to Dr. Feehery, 20% of the Class B Units granted to our NEOs that are subject to time-based vesting are scheduled to vest on each of the first five anniversaries of the grant date, subject to continued employment on each such date. With respect to the Class B Units granted to Dr. Feehery that are subject to time-based vesting, 25% are scheduled to vest on the first anniversary of the grant date, and an additional 2.0833% are scheduled to vest monthly thereafter, subject to his continued employment. All Class B Units that are subject to time-based vesting will automatically vest upon a change of control. The Class B Units subject to performance-based vesting will vest as to (i) one-third of such units at the time EQT realizes a return on investment (the “ROI”) of at least 2.0, (ii) an additional one-third of such units at the time EQT realizes a ROI of at least 2.5, and (iii) an additional one-third of such units at the time EQT realizes a ROI of at least 3.0. In addition, Dr. Feehery's performance-based Class B Units will vest if the aggregate value attributable to this offering equals or exceeds an amount equivalent to the ROI performance targets set forth above (as if EQT were to receive the proceeds of the offering). As such, all of Dr. Feehery's performance-based Class B Units are expected to vest upon the completion of this offering. The performance-vesting Class B Units are subject to market conditions and an implied performance condition as defined under applicable accounting standards. The grant date fair value of performance-vesting Class B Units was computed based upon the probable outcome of the performance conditions as of the grant date in accordance with FASB ASC Topic 718. Achievement of the performance conditions for the performance-vesting Class B Units was not deemed probable on the grant date and, accordingly, no value is included in the table for these awards pursuant to the SEC's disclosure rules. Assuming achievement of the performance conditions, the aggregate grant date fair values of the performance-vesting Class B Units would have been: Dr. Feehery \$2,629,185; Dr. Rayner \$131,461; Mr. Edge \$315,503; and Dr. Kerbusch — \$105,169. See Note 2(r) (“Summary of Significant Accounting Policies — Equity-based compensation”) and Note 12 (“Equity-Based Compensation”) to our audited consolidated financial statements included elsewhere in this prospectus for a discussion of the valuation of our equity-based awards.

⁽⁶⁾ Amounts shown reflect annual bonus payments under our incentive bonus plan earned with respect to fiscal year 2019 based on the achievement

of financial and strategic performance objectives that were established by our board of directors at the beginning of the fiscal year. See “— Non-Equity Incentive Plan Compensation” below.

- (7) Amounts in this column for (i) Dr. Feehery, reflect Company paid life insurance premiums, (ii) Dr. Muniz, reflect \$356,250 in severance payments, \$13,769 in Company payments for COBRA premiums, \$3,563 in Company contributions under a 401(k) savings plan, \$105,000 in directors fees and \$41,400 in post-employment consulting fees, (iii) Dr. Rayner reflect our contributions to the Australian superannuation pension scheme, (iv) Mr. Edge, reflect our contributions under a 401(k) savings plan, and (v) Dr. Kerbusch, reflect \$28,683 in vacation allowance as well as a car allowance and our contributions to a Dutch pension scheme. For additional information about Dr. Muniz’s separation arrangements and consulting agreement, see “— Employment Arrangements — Edmundo Muniz” below. For additional information on our policy on Company contributions to 401(k) savings policies and the foreign pension schemes in which Dr. Rayner and Dr. Kerbusch participate, see “— Retirement Benefits” below.

Non-Equity Incentive Plan Compensation

We maintain an annual cash-based Corporate Incentive Plan (the “CIP”) to motivate our employees to achieve short-term performance goals. For fiscal year 2019, each of Dr. Feehery, Mr. Edge and Dr. Kerbusch participated in the CIP. For fiscal 2019, Dr. Rayner and Dr. Muniz, whose employment terminated in March 2019, did not participate in the CIP.

Incentive awards and bonus payouts under the CIP are based on the achievement of certain corporate and divisional goals established by our compensation committee at the beginning of each year. For 2019, 25% of the annual bonus payouts for the NEO participants was tied to the achievement of company-wide, combined EBITDA and 75% was tied to the achievement of EBITDA at the divisional level. Specifically, for Dr. Feehery, 25% of his bonus payout was tied to the achievement of company-wide, combined EBITDA and 25% for each of our three main divisions (Simcyp, Regulatory and Access, and IDD). For Mr. Edge and Dr. Kerbusch, 25% of their bonus payouts were tied to the achievement of company-wide, combined EBITDA and 75% for the divisions they were associated with (Edge – Regulatory and Access and Kerbusch – IDD).

The 2019 target incentive opportunities under the CIP for the NEO participants were based on a percentage of base salary. The amounts paid to the NEO participants under the CIP were calculated by multiplying each NEO participant’s target incentive opportunity by (i) the company-wide, combined EBITDA achievement factor and (ii) the applicable divisional EBITDA achievement factors. Each applicable EBITDA achievement factor was determined by multiplying the weight attributed to each performance measure by the applicable payout percentage for each measure. For each of the EBITDA performance measures, payout percentages were determined by calculating actual achievement against the target goal based on a pre-established scale. Bonus payouts were subject to threshold achievement of 90% of target, below which no bonuses would be earned. For achievement above the threshold level, the compensation committee retained discretion to determine the bonus based on the level of under or over-achievement of target, as well as individual performance metrics.

The following table illustrates the calculation of the non-equity incentive plan awards payable to each of the NEO participants under our CIP for fiscal 2019.

NAME	BASE SALARY (\$) (%) OF BASE SALARY	TARGET BONUS (%) OF BASE SALARY	BONUS PAYOUT AT TARGET (\$)	COMBINED PERFORMANCE FACTOR ⁽¹⁾	TOTAL BONUS PAYOUT FOR 2019 (\$)
				(% OF TARGET ACHIEVEMENT)	
Dr. Feehery	437,500 ⁽²⁾	60%	262,500	105%	274,838 ⁽²⁾
Mr. Edge	353,846 ⁽²⁾	35%	123,846	106%	131,384 ⁽²⁾
Dr. Kerbusch	391,350	70%	273,945	102%	280,616

⁽¹⁾The final percentage (rounded) after applying the company and divisional EBITDA achievement factors and individual performance factors.

⁽²⁾Amounts shown reflect the proration of Dr. Feehery’s and Mr. Edge’s base salary and total award amount based upon their respective June and mid-January 2019 employment dates with the Company.

Employment Arrangements

William F. Feehery

Effective as of May 14, 2019, we entered into an employment agreement with Dr. Feehery (the “Feehery Agreement”) to serve as our CEO commencing on June 3, 2019. The Feehery Agreement provides for an initial annual base salary and an annual target bonus of 60% of such base salary based upon achievement of

specific individual and company performance objectives to be established by our Board of Directors or Compensation Committee. Dr. Feehery's base salary is subject to possible increases, as approved by our Compensation Committee. Effective January 1, 2020, Dr. Feehery's annual base salary of \$750,000 was increased to \$772,500.

Pursuant to the Feehery Agreement, in the event Dr. Feehery's employment is terminated by us without "cause" or by Dr. Feehery for "good reason" (each as defined in the Feehery Agreement) and Dr. Feehery executes and does not revoke a general release of claims in favor of us and complies with the restrictive covenants to which he is subject following such termination, then Dr. Feehery will receive (i) any unpaid annual bonus in respect of any completed fiscal year that has ended prior to the date of such termination, payable in a lump sum at such time as annual bonuses are paid to our other senior executives, (ii) subject to satisfaction of the applicable performance objectives, a pro rata portion of the annual bonus otherwise payable to Dr. Feehery for the fiscal year in which such termination occurs, based on the number of days he was employed, (iii) the sum of his base salary plus his target bonus amount, payable in substantially equal payments over 12 months following such termination, (iv) monthly payments for 12 months following such termination equal to the difference between the monthly COBRA premium cost for the health care coverage elected by Dr. Feehery under the Company's group health plan and the monthly contribution paid by active employees for the same level of coverage (subject to mitigation, to the extent Dr. Feehery and his dependents become eligible to receive any health benefits as a result of Dr. Feehery's subsequent employment or service) and (v) all accrued but unpaid obligations.

In the event that any payment, benefit or distribution pursuant to the terms of the Feehery Agreement or otherwise becomes subject to the excise taxes under Section 4999 of the Code, such payments will be subject to reduction to an amount equal to 2.99 times Dr. Feehery's "base amount" (as defined in Section 280G(b)(3) of the Code) to the extent that such reduction will produce a more favorable after-tax result for Dr. Feehery.

Dr. Feehery is party to a restrictive covenants agreement that contains indefinite covenants of confidentiality of information and non-disparagement, covenants of non-competition and non-solicitation of our employees and customers during employment and for the one-year period thereafter.

Edmundo Muniz

Effective as of May 15, 2014, we entered into an employment agreement with Dr. Muniz, which was subsequently amended as of February 21, 2019 (the "Muniz Agreement"). The Muniz Agreement provided for an initial annual base salary and an annual target bonus of 50% of such base salary (or greater for overachievement), based on certain criteria determined by our board on an annual basis. Dr. Muniz's base salary was subject to annual review and possible increases, as we determined from time to time.

Effective March 31, 2019, Dr. Muniz's employment was terminated. In connection with Dr. Muniz's termination, he executed a general release of claims in favor of us, and we agreed to pay Dr. Muniz the severance owed to him pursuant to the Muniz Agreement, consisting of (i) the continuation of his base salary for 12 months following his termination, (ii) payment of 100% of the health insurance premiums for Dr. Muniz and his eligible dependents under COBRA until the earlier of (A) the date that is 18 months following his termination or (B) the date he is eligible for equal or better coverage under another group health plan, and (iii) all of his accrued but unpaid obligations.

Immediately following his termination of employment, we entered into a consulting agreement with Dr. Muniz (the "Muniz Consulting Agreement") pursuant to which he agreed to provide consulting services during the month of April 2019 as a senior executive consultant with responsibilities to lead, manage and work with our executive management team. In consideration of the consulting services, we agreed to pay Dr. Muniz \$4,600 per week. The original one-month term of the Muniz Consulting Agreement was extended to the end of May 2019.

Dr. Muniz continued to serve as a member of our board of directors and the board of managers of the EQT Investor's general partner following his termination of employment. However, his status as a member of such boards changed from that of an employee member to that of a non-employee member and, as such, he became entitled to receive fees for such board service. In addition, immediately following his termination of employment, Dr. Muniz was appointed as Chairperson of the Science Committee of our board.

Craig R. Rayner

Effective as of September 2, 2016, we entered into an employment agreement with Dr. Rayner (the "Rayner Agreement"). The Rayner Agreement provides for an initial annual base salary and contributions to a government

mandated pension fund. In addition, the Rayner Agreement provided for an initial discretionary bonus of up to 30% of such base salary. Dr. Rayner's base salary is subject to annual review and possible increases, as we may determine from time to time. Effective January 1, 2020, Dr. Rayner's 2019 base salary of \$257,500 was increased to \$309,000 and he was assigned an annual target bonus of \$250,000, with 20% based on company-wide performance and 80% based on participation in the Integrated Drug Development Profit-Sharing Plan.

Pursuant to the Rayner Agreement, we may terminate Dr. Rayner's employment without cause (i) upon delivery to Dr. Rayner of a written notice at least six months prior to his termination or (ii) payment of six months base salary to Dr. Rayner in lieu of notice.

In connection with our plans to relocate Dr. Rayner from Australia to the U.S., we entered into a new employment agreement with Dr. Rayner, on September 17, 2020, on substantially the same terms as described above, effective as of November 21, 2020.

The Rayner Agreement also imposes certain restrictive covenants on Dr. Rayner, including indefinite covenants of confidentiality of information and non-disparagement, covenants relating to intellectual property and covenants of non-competition during employment and for the one-year period thereafter and non-solicitation of our employees and customers during employment and for the one-year period thereafter.

Justin Edge

Effective as of January 23, 2019, we entered into an employment agreement with Mr. Edge (the "Edge Agreement"). The Edge Agreement provides for an initial annual base salary and an initial discretionary bonus of up to 35% of such base salary. Mr. Edge's base salary is subject to annual review and possible increases, as we may determine from time to time. Effective January 1, 2020, Mr. Edge's 2019 base salary of \$375,000 was increased to \$386,250.

Pursuant to the Edge Agreement, in the event Mr. Edge's employment is terminated by us without "cause" or by Mr. Edge for "good reason" (each as defined in the Edge Agreement) and Mr. Edge executes and does not revoke a general release of claims in favor of us and complies with the restrictive covenants to which he is subject following such termination, then Mr. Edge will receive (i) continuation of his base salary for 9 months following such termination and (ii) all accrued but unpaid obligations, including any unpaid annual bonus that has been authorized by us and approved by our CEO in respect of any completed fiscal year that has ended prior to the date of such termination.

The Edge Agreement also imposes certain restrictive covenants on Mr. Edge, including indefinite covenants of confidentiality of information and non-disparagement, covenants relating to intellectual property and covenants of non-competition during employment and for the one-year period thereafter and non-solicitation of our employees and customers during employment and for the two-year period thereafter.

Thomas Kerbusch

Effective as of June 20, 2014, we entered into an employment agreement with Dr. Kerbusch (the "Kerbusch Agreement"). The Kerbusch Agreement provides for an initial annual base salary and an initial annual bonus based in part on our worldwide gross profits and in part on the gross profits of our EU operations. Dr. Kerbusch's 2019 base salary remained unchanged at €350,000 as of January 1, 2020.

Pursuant to an addendum to the Kerbusch Agreement (the "Kerbusch Addendum"), in the event Dr. Kerbusch's employment is terminated by us without "cause" or by Dr. Kerbusch for "good reason" (each as defined in the Kerbusch Addendum), Dr. Kerbusch will be entitled to 12 months of base salary and holiday allowance.

The Kerbusch Addendum also imposes certain restrictive covenants on Dr. Kerbusch, including covenants of non-competition and non-solicitation of our employees during employment and for the one-year period thereafter.

Outstanding Equity Awards at 2019 Year End

The following table includes certain information with respect to Class B Units of the EQT Investor held by the Named Executive Officers as of December 31, 2019.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR END

NAME	GRANT DATE	NUMBER OF SHARES OR UNITS OF STOCK THAT HAVE NOT VESTED (#) ⁽¹⁾	MARKET VALUE OF SHARES OR UNITS OF STOCK THAT HAVE NOT VESTED (\$) ⁽²⁾	EQUITY INCENTIVE PLAN AWARDS: NUMBER OF UNEARNED SHARES, UNITS OR OTHER RIGHTS THAT HAVE NOT VESTED (#) ⁽³⁾	EQUITY INCENTIVE PLAN AWARDS: MARKET VALUE OF UNEARNED SHARES, UNITS OR OTHER RIGHTS THAT HAVE NOT VESTED (\$) ⁽⁴⁾
William F. Feehery					
Class B Unit Award	6/3/2019	710,591	4,405,664	710,591	0
Edmundo Muniz					
Class B Unit Award	4/1/2019	113,695	704,909	N/A	N/A
Craig R. Rayner					
Class B Unit Award	11/17/2017	12,791	115,119	21,318	0
Class B Unit Award	4/16/2019	7,106	44,057	7,106	0
Class B Unit Award	11/8/2019	28,424	146,384	28,424	0
Justin Edge					
Class B Unit Award	1/23/2019	85,271	528,680	85,271	0
Thomas Kerbusch					
Class B Unit Award	11/17/2017	42,636	383,724	71,060	0
Class B Unit Award	2/27/2018	11,369	90,952	14,212	0
Class B Unit Award	3/15/2019	28,424	176,229	28,424	0

⁽¹⁾ Consists of time-based vesting Class B Units issued under the 2017 Incentive Plan. See "—Equity Awards."

⁽²⁾ Amounts in this column are based on the appreciation in the value of our business from and after the date of grant through the date of our most recent valuation prior to December 31, 2019.

⁽³⁾ Consists of performance-based vesting Class B Units issued under the 2017 Incentive Plan. See "—Equity Awards."

Our equity value as of December 31, 2019 had not appreciated to a level that would have created value in the performance-vesting Class B Units. Therefore, the market value of the performance-vesting Class B Units was \$0 as of December 31, 2019.

Equity Awards

On November 17, 2017, the 2017 Incentive Plan was established under the terms of the Partnership Agreement of the EQT Investor to provide our employees, including our executives, as well as our directors and consultants, with incentives to align their interests with the interests of our sole shareholder, the EQT Investor. In fiscal 2019, Dr. Feehery was granted 1,421,181 Class B Units in connection with the commencement of his employment with the Company. In 2019, Dr. Muniz was awarded 113,695 units in connection with his transition from an employee-member of our board of directors and the board of managers of the EQT Investor's general partner to a non-employee member of such boards. In 2019, Dr. Rayner received two separate grants of Class B units (14,212 units on April 16, 2019 and 56,848 units on November 8, 2019), Mr. Edge received 170,542 Class B Units, and Dr. Kerbusch received a grant of 56,848 Class B Units. The Class B Units are "profits interests" under U.S. federal income tax law having economic characteristics similar to stock appreciation rights (i.e., representing the rights to share in any increase in the equity value of the EQT Investor that exceeds specified thresholds).

Grants of Class B Units to our NEOs under the 2017 Incentive Plan are typically subject to both time- and performance-based vesting conditions, with 50% time-based vesting and 50% performance-based vesting. The Class B Units granted to Dr. Muniz in 2019, in connection with his transition from an employee-member of

our board of directors and the board of managers of the EQT Investor's general partner to a non-employee member of such boards, are only subject to time-based vesting. Except for the Class B Units granted to Dr. Feehery, 20% of the Class B Units granted to our NEOs that are subject to time-based vesting are scheduled to vest on each of the first five anniversaries of the grant date, subject to continued employment on each such date. With respect to the Class B Units granted to Dr. Feehery that are subject to time-based vesting, 25% are scheduled to vest on the first anniversary of the grant date, and an additional 2.0833% are scheduled to vest monthly thereafter, subject to his continued employment. All Class B Units that are subject to time-based vesting will automatically vest upon a change of control. The Class B Units subject to performance-based vesting will vest as to (i) one-third of such units at the time EQT realizes a ROI of at least 2.0, (ii) an additional one-third of such units at the time EQT realizes a ROI of at least 2.5, and (iii) an additional one-third of such units at the time EQT realizes a ROI of at least 3.0. In addition, Dr. Feehery's performance-based Class B Units will vest if the aggregate value attributable to this offering equals or exceeds an amount equivalent to the ROI performance targets set forth above (as if EQT were to receive the proceeds of the offering). As such, all of Dr. Feehery's performance-based Class B Units are expected to vest upon the completion of this offering. As a condition to receiving the grant, each employee, including each NEO, entered into the Company's standard form of restrictive covenants agreement that contains an indefinite covenant of confidentiality of information and covenants of non-competition and non-solicitation of our employees and customers during employment and for the one-year period thereafter.

Except as provided below, all vesting of Class B Units will cease immediately upon an NEO's termination of employment for any reason, all unvested Class B Units will be immediately cancelled and forfeited without consideration upon such termination, and if such termination is by for cause, all vested Class B Units will be immediately cancelled and forfeited without consideration upon such termination. In the event of a termination without cause, or due to death or disability, the Class B Units subject to performance-based vesting will remain outstanding and eligible to vest during the six-month period following the date of such termination, and any such Class B Units that do not vest prior to the expiration of such six-month period will be immediately cancelled and forfeited without consideration at the end of such period. With respect to the Class B Units granted to Dr. Feehery, upon his termination of employment without cause, for good reason or due to death or disability, the Class B Units subject to time-based vesting that are scheduled to vest during the 12-month period following such termination will immediately vest on termination.

Actions in Connection with this Offering

In connection with this offering, all outstanding unvested Class B Units, including those held by our NEOs, will be converted into restricted shares of our common stock on the basis of an exchange ratio that takes into account the number of unvested Class B Units held, the applicable distribution threshold applicable to such Class B Units and the value of distributions that the holder would have been entitled to receive had the EQT Investor liquidated on the date of such conversion in accordance with the terms of the distribution "waterfall" set forth in its Partnership Agreement. Vested Class B Units will similarly be converted into shares of our common stock. Based upon an assumed initial public offering price of \$ _____ per share, which is the midpoint of the range set forth on the cover of this prospectus, we expect that holders of vested Class B Units will receive an aggregate of _____ shares of common stock in the EQT Equity Conversion and holders of unvested shares of Class B Units will receive an aggregate of _____ shares of restricted stock in the EQT Equity Conversion. The unvested restricted shares of our common stock that the NEOs receive in respect of their time-based vesting Class B Units will be subject to the same time-vesting schedule that applies to such time-vesting Class B Units, provided, that such restricted shares will not vest upon a change of control unless such NEO's employment is terminated without cause following such change of control. The unvested restricted shares of our common stock that the NEOs receive in respect of their performance-based vesting Class B Units will no longer be subject to any performance-based vesting conditions and such restricted shares will vest as to 20% of such restricted shares on each anniversary of the grant date of such performance-based vesting Class B Units, subject to the NEO's continued employment through each applicable vesting date, provided, that such restricted shares will vest upon the termination of such NEO's employment without cause following a change of control. The 2017 Incentive Plan will terminate upon the effectiveness of this offering. The following table sets forth the assumed number and value of vested shares of our common stock and unvested restricted shares of our common stock that each of our NEOs will receive

upon conversion of their vested and unvested Class B Units, in each case, based on an assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the front cover of this prospectus.

NAME	SHARES OF COMMON STOCK RECEIVED UPON CONVERSION OF VESTED CLASS B UNITS		UNVESTED SHARES OF RESTRICTED STOCK RECEIVED UPON CONVERSION OF UNVESTED CLASS B UNITS	
	#	\$	#	\$
William F. Feehery				
Edmundo Muniz				
Craig R. Rayner				
Justin Edge				
Thomas Kerbusch				

2020 Incentive Plan

Our board of directors expects to adopt, and we expect our stockholders to approve, the 2020 Incentive Plan prior to the completion of the offering.

Purpose. The purpose of the 2020 Incentive Plan is to provide a means through which to attract, retain and motivate key personnel and to provide a means whereby our directors, officers, employees, consultants and advisors can acquire and maintain an equity interest in the Company, or be paid incentive compensation, including incentive compensation measured by reference to the value of our common stock, thereby strengthening their commitment to the Company's welfare and aligning their interests with those of our stockholders.

Persons Eligible to Participate. Awards under the Omnibus Plan may be granted to any (i) individual employed by us or our subsidiaries (other than those U.S. employees covered by a collective bargaining agreement unless and to the extent that such eligibility is set forth in such collective bargaining agreement or similar agreement); (ii) director or officer of us or our subsidiaries; or (iii) consultant or advisor to us or our subsidiaries who may be offered securities registrable pursuant to a registration statement on Form S-8 under the Securities Act.

Administration. The 2020 Incentive Plan will be administered by the Compensation Committee or such other committee of our board of directors to which it has properly delegated power, or if no such committee or subcommittee exists, our board of directors. The Compensation Committee has the authority to make all decisions and determinations with respect to the administration of the Omnibus Plan, and is permitted, subject to applicable law or exchange rules and regulations, to delegate all or any part of its responsibilities and powers to any person or persons selected by it in accordance with the terms of the 2020 Incentive Plan.

Shares Subject to 2020 Incentive Plan. The 2020 Incentive Plan provides that the total number of shares of common stock that may be issued under the 2020 Incentive Plan is _____ shares (the "plan share reserve"), provided, however, that the plan share reserve shall be increased on the first day of each fiscal year beginning with the 2021 fiscal year in an amount equal to the lesser of (i) the positive difference, if any, between (x) _____ % of the outstanding common stock on the last day of the immediately preceding fiscal year and (y) the plan share reserve on the last day of the immediately preceding fiscal year and (ii) a lower number of shares of our common stock as determined by our board of directors. No more than the number of shares of common stock equal to the plan share reserve may be issued in the aggregate pursuant to the exercise of incentive stock options. The maximum number of shares of common stock granted during a single fiscal year to any non-employee director, taken together with any cash fees paid to such non-employee director during the fiscal year, may not exceed \$1,000,000 in total value, except for certain awards made to a non-executive chair of our board of directors. Except for substitute awards (as described below), in the event any award expires or is cancelled, forfeited or terminated without issuance to the participant of the full number of shares of common stock to which the award related, the unissued shares of common stock underlying such award will be returned to the plan share reserve and may be granted again under the 2020 Incentive Plan. Shares of common stock withheld in payment of an option exercise price or taxes relating to an award, and shares equal to the number of shares of common stock surrendered in payment of any option exercise price, a stock appreciation right's base price, or taxes relating to an award will constitute shares of common stock

issued to a participant and will thus reduce the plan share reserve and will not be returned to the plan share reserve. Awards may, in the sole discretion of the Compensation Committee, be granted in assumption of, or in substitution for, outstanding awards previously granted by an entity directly or indirectly acquired by the Company or with which we combine (referred to as “substitute awards”), and such substitute awards will not be counted against the plan share reserve, except that substitute awards intended to qualify as “incentive stock options” will count against the limit on incentive stock options described above. Awards granted in substitution of previous awards granted under the 2017 Incentive Plan will also constitute substitute awards under the 2020 Incentive Plan. No award may be granted under the 2020 Incentive Plan after the tenth anniversary of the effective date (as defined therein), but awards granted before then may extend beyond that date.

Vesting. All awards granted under the 2020 Incentive Plan will vest and/or become exercisable in such manner and on such date or dates or upon such event or events as determined by the Compensation Committee, including, without limitation, satisfaction of Performance Conditions, if any. For purposes of this prospectus, “Performance Conditions” means specific levels of performance of the Company (and/or one or more of its subsidiaries, divisions or operational and/or business units, product lines, brands, business segments, administrative departments, or any combination of the foregoing), which may be determined in accordance with GAAP or on a non-GAAP basis on, without limitation, the following measures: (i) net earnings, net income (before or after taxes), or consolidated net income; (ii) basic or diluted earnings per share (before or after taxes); (iii) net revenue or net revenue growth; (iv) gross revenue or gross revenue growth, gross profit or gross profit growth; (v) net operating profit (before or after taxes); (vi) return measures (including, but not limited to, return on investment, assets, capital, employed capital, invested capital, equity, or sales); (vii) cash flow measures (including, but not limited to, operating cash flow, free cash flow, or cash flow return on capital), which may be but are not required to be measured on a per share basis; (viii) actual or adjusted earnings before or after interest, taxes, depreciation, and/or amortization (including EBIT and EBITDA); (ix) gross or net operating margins; (x) productivity ratios; (xi) share price (including, but not limited to, growth measures and total stockholder return); (xii) expense targets or cost reduction goals, general and administrative expense savings; (xiii) operating efficiency; (xiv) objective measures of customer/client satisfaction; (xv) working capital targets; (xvi) measures of economic value added or other ‘value creation’ metrics; (xvii) enterprise value; (xviii) sales; (xix) stockholder return; (xx) customer/client retention; (xxi) competitive market metrics; (xxii) employee retention; (xxiii) objective measures of personal targets, goals, or completion of projects (including, but not limited to, succession and hiring projects, completion of specific acquisitions, dispositions, reorganizations, or other corporate transactions or capital-raising transactions, expansions of specific business operations, and meeting divisional or project budgets); (xxiv) comparisons of continuing operations to other operations; (xxv) market share; (xxvi) cost of capital, debt leverage, year-end cash position or book value; (xxvii) strategic objectives; (xxviii) gross or net authorizations; (xxix) backlog; or (xxx) any combination of the foregoing. Any one or more of the aforementioned Performance Conditions may be stated as a percentage of another Performance Condition, or used on an absolute or relative basis to measure the performance of one or more of the Company or its subsidiaries as a whole or any divisions or operational and/or business units, product lines, brands, business segments, or administrative departments of the Company and/or one or more of its subsidiaries or any combination thereof, as the Compensation Committee may deem appropriate, or any of the above performance criteria may be compared to the performance of a selected group of comparison companies, or a published or special index that the Compensation Committee, in its sole discretion, deems appropriate, or as compared to various stock market indices.

Types of Awards.

Options. The Compensation Committee may grant non-qualified stock options and incentive stock options, under the 2020 Incentive Plan, with terms and conditions determined by the Compensation Committee that are not inconsistent with the 2020 Incentive Plan. All stock options granted under the 2020 Incentive Plan are required to have a per share exercise price that is not less than 100% of the fair market value of our common stock underlying such stock options on the date such stock options are granted (other than in the case of options that are substitute awards). All stock options that are intended to qualify as incentive stock options must be granted pursuant to an award agreement expressly stating that the options are intended to qualify as incentive stock options and will be subject to the terms and conditions that comply with the rules as may be prescribed by Section 422 of the Code. The maximum term for stock options granted under the 2020 Incentive Plan will be ten years from the initial date of grant, or with respect to any stock options intended to qualify as incentive stock options, such shorter period as prescribed by Section 422 of the Code. However, if a non-qualified stock option would expire at a time when trading of shares of our common stock is prohibited

by our insider trading policy (or “blackout period” imposed by the Company), the term will automatically be extended to the 30th day following the end of such period. The purchase price for the shares of common stock as to which a stock option is exercised may be paid to the Company, to the extent permitted by law, (i) in cash or its equivalent at the time the stock option is exercised; (ii) in shares of common stock having a fair market value equal to the aggregate exercise price for the shares of common stock being purchased and satisfying any requirements that may be imposed by the Compensation Committee (so long as such shares have been held by the participant for at least six months or such other period established by the Compensation Committee to avoid adverse accounting treatment); or (iii) by such other method as the Compensation Committee may permit in its sole discretion, including, without limitation, (A) in other property having a fair market value on the date of exercise equal to the purchase price, (B) if there is a public market for the shares of our common stock at such time, through the delivery of irrevocable instructions to a broker to sell the shares of common stock being acquired upon the exercise of the stock option and to deliver to the Company the amount of the proceeds of such sale equal to the aggregate exercise price for the shares of common stock being purchased or (C) through a “net exercise” procedure effected by withholding the minimum number of shares of common stock needed to pay the exercise price or any applicable taxes that are statutorily required to be withheld, or both. Any fractional shares of common stock will be settled in cash. Options will become vested and exercisable in such manner and on such date(s) or event(s) as determined by the Compensation Committee, including, without limitation, satisfaction of Performance Conditions, provided that the Compensation Committee may, in its sole discretion, accelerate the vesting of any options at any time for any reason.

Unless otherwise provided by the Compensation Committee (whether in an award agreement or otherwise), in the event of (i) a participant’s termination of service for cause, all outstanding options will immediately terminate and expire, (ii) a participant’s termination of service due to death or disability, each outstanding unvested option will immediately terminate and expire, and vested options will remain exercisable for one year following termination of service (or, if earlier, through the last day of the tenth year from the initial date of grant), and (iii) a participant’s termination for any other reason, outstanding unvested options will terminate and expire and vested options remain exercisable for 90 days following termination (or, if earlier, through the last day of the tenth year from the initial date of grant).

Restricted Stock and Restricted Stock Units. The Compensation Committee may grant restricted shares of our common stock or restricted stock units, representing the right to receive, upon vesting and the expiration of any applicable restricted period, one share of common stock for each restricted stock unit, or, in the sole discretion of the Compensation Committee, the cash value thereof (or any combination thereof). As to restricted shares of our common stock, subject to the other provisions of the 2020 Incentive Plan, the holder will generally have the rights and privileges of a stockholder as to such restricted shares of common stock, including, without limitation, the right to vote such restricted shares of common stock. Participants generally have no rights or privileges as a stockholder with respect to restricted stock units. Restricted shares of our common stock and restricted stock units will become vested in such manner and on such date(s) or event(s) as determined by the Compensation Committee, including, without limitation, satisfaction of Performance Conditions, provided that the Compensation Committee may, in its sole discretion, accelerate the vesting of any restricted shares of our common stock or restricted stock units at any time for any reason. Unless otherwise provided by the Compensation Committee, whether in an award agreement or otherwise, in the event of a participant’s termination for any reason prior to vesting of any restricted shares or restricted stock units, as applicable (i) all vesting with respect to the participant’s restricted shares or restricted stock units, as applicable, will cease and (ii) unvested restricted shares and unvested restricted stock units will be forfeited for no consideration on the date of termination.

Other Equity-Based Awards and Cash-Based Awards. The Compensation Committee may grant other equity-based or cash-based awards under the 2020 Incentive Plan, with terms and conditions, including, without limitation, satisfaction of Performance Conditions, determined by the Compensation Committee that are not inconsistent with the 2020 Incentive Plan.

Effect of Certain Events on 2020 Incentive Plan and Awards. Other than with respect to cash-based awards, in the event of (i) any dividend (other than regular cash dividends) or other distribution (whether in the form of cash, shares of common stock, other securities or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, split-off, spin-off, combination, repurchase or exchange

of shares of common stock or other securities, issuance of warrants or other rights to acquire shares of common stock or other securities, or other similar corporate transaction or event that affects the shares of common stock (including a change in control, as defined in the 2020 Incentive Plan), or (ii) unusual or nonrecurring events affecting the Company, including changes in applicable rules, rulings, regulations or other requirements, that the Compensation Committee determines, in its sole discretion, could result in substantial dilution or enlargement of the rights intended to be granted to, or available for, participants (any event in (i) or (ii), an "Adjustment Event"), the Compensation Committee will, in respect of any such Adjustment Event, make such proportionate substitution or adjustment, if any, as it deems equitable, to any or all of: (A) the plan share reserve, or any other limit applicable under the 2020 Incentive Plan with respect to the number of awards which may be granted thereunder, (B) the number of shares of common stock or other securities of the Company (or number and kind of other securities or other property) which may be issued in respect of awards or with respect to which awards may be granted under the 2020 Incentive Plan or any sub-plan and (C) the terms of any outstanding award, including, without limitation, (x) the number of shares of common stock or other securities of the Company (or number and kind of other securities or other property) subject to outstanding awards or to which outstanding awards relate, (y) the exercise price or strike price with respect to any award, or (z) any applicable performance measures; it being understood that, in the case of any "equity restructuring," the Compensation Committee will make an equitable or proportionate adjustment to outstanding awards to reflect such equity restructuring.

In connection with any change in control, the Compensation Committee may, in its sole discretion, provide for any one or more of the following: (i) a substitution or assumption of, acceleration of the vesting of, the exercisability of, or lapse of restrictions on, any one or more outstanding awards and (ii) cancellation of any one or more outstanding awards and payment to the holders of such awards that are vested as of such cancellation (including any awards that would vest as a result of the occurrence of such event but for such cancellation) the value of such awards, if any, as determined by the Compensation Committee (which value, if applicable, may be based upon the price per share of common stock received or to be received by other holders of our common stock in such event), including, in the case of stock options and stock appreciation rights, a cash payment equal to the excess, if any, of the fair market value of the shares of common stock subject to the option or stock appreciation right over the aggregate exercise price or base price thereof.

Nontransferability of Awards. Each award under the 2020 Incentive Plan will not be transferable or assignable by a participant other than by will or by the laws of descent and distribution and any such purported assignment, alienation, pledge, attachment, sale, transfer or encumbrance will be void and unenforceable against the Company or any of our subsidiaries. However, the Compensation Committee may, in its sole discretion, permit awards (other than incentive stock options) to be transferred, including transfers to a participant's family members, any trust established solely for the benefit of a participant or such participant's family members, any partnership or limited liability company of which a participant, or such participant and such participant's family members, are the sole member(s), and a beneficiary to whom donations are eligible to be treated as "charitable contributions" for tax purposes.

Amendment and Termination. Our board of directors may amend, alter, suspend, discontinue, or terminate the 2020 Incentive Plan or any portion thereof at any time; but no such amendment, alteration, suspension, discontinuance or termination may be made without stockholder approval if (i) such approval is required under applicable law; (ii) it would materially increase the number of securities which may be issued under the 2020 Incentive Plan (except for adjustments in connection with certain corporate events); or (iii) it would materially modify the requirements for participation in the 2020 Incentive Plan; and any such amendment, alteration, suspension, discontinuance or termination that would materially and adversely affect the rights of any participant or any holder or beneficiary of any award will not to that extent be effective without such individual's consent.

The Compensation Committee may, to the extent consistent with the terms of any applicable award agreement, waive any conditions or rights under, amend any terms of, or alter, suspend, discontinue, cancel or terminate, any award granted or the associated award agreement, prospectively or retroactively (including after a participant's termination). However, except as otherwise permitted in the 2020 Incentive Plan, any such waiver, amendment, alteration, suspension, discontinuance, cancellation or termination that would materially and adversely affect the rights of any participant with respect to such award will not to that extent be effective without such individual's consent. In addition, without stockholder approval, except as otherwise

permitted in the 2020 Incentive Plan, (i) no amendment or modification may reduce the exercise price of any option or the strike price of any stock appreciation right; (ii) the Compensation Committee may not cancel any outstanding option or stock appreciation right and replace it with a new option or stock appreciation right (with a lower exercise price or strike price, as the case may be) or other award or cash payment that is greater than the value of the cancelled option or stock appreciation right; and (iii) the Compensation Committee may not take any other action which is considered a “repricing” for purposes of the stockholder approval rules of any securities exchange or inter-dealer quotation system on which our securities are listed or quoted.

Dividends and Dividend Equivalents. The Compensation Committee in its sole discretion may provide that any award under the 2020 Incentive Plan includes dividends or dividend equivalents, on such terms and conditions as may be determined by the Compensation Committee in its sole discretion. Unless otherwise provided in the award agreement, any dividend payable in respect of any share of restricted stock that remains subject to vesting conditions at the time of payment of such dividend will be retained by the Company and remain subject to the same vesting conditions as the share of restricted stock to which the dividend relates. To the extent provided in an award agreement, the holder of outstanding restricted stock units will be entitled to be credited with dividend equivalents either in cash, or in the sole discretion of the Compensation Committee, in shares of common stock having a fair market value equal to the amount of the dividends (and interest may be credited, at the discretion of the Compensation Committee, on the amount of cash dividend equivalents, at a rate and subject to terms determined by the Compensation Committee), which accumulated dividend equivalents (and any interest) will be payable at the same time as the underlying restricted stock units are settled following the lapse of restrictions (and with any accumulated dividend equivalents forfeited if the underlying restricted stock units are forfeited).

Clawback/Repayment. All awards are subject to reduction, cancellation, forfeiture or recoupment to the extent necessary to comply with (i) any clawback, forfeiture or other similar policy adopted by our board of directors or the Compensation Committee and as in effect from time to time and (ii) applicable law. Unless otherwise determined by the Compensation Committee, to the extent that a participant receives any amount in excess of the amount that the participant should otherwise have received under the terms of the award for any reason (including, without limitation, by reason of a financial restatement, mistake in calculations or other administrative error), the participant will be required to repay any such excess amount to the Company. If a participant engages in any detrimental activity (as described below), as determined by the Compensation Committee, the Compensation Committee may, in its sole discretion, provide for one or more of the following: (i) cancellation of any or all of a participant’s outstanding awards or (ii) forfeiture by the participant of any gain realized on the vesting or exercise of awards, and repayment of any such gain promptly to the Company. For purposes of the 2020 Incentive Plan and awards thereunder, “detrimental activity” means: any unauthorized disclosure or use of confidential or proprietary information of the Company or its subsidiaries; any activity that would be grounds to terminate the participant’s employment or service for cause; the participant’s breach of any restrictive covenant (including, but not limited, to any non-competition or non-solicitation covenants); or fraud or conduct contributing to any financial restatements or irregularities, as determined by the Compensation Committee in its discretion.

2020 Employee Stock Purchase Plan

Our board of directors expects to adopt, and we expect our stockholders to approve, the 2020 Employee Stock Purchase Plan, which we refer to as the Employee Stock Purchase Plan for purposes of this disclosure, prior to the completion of the offering. Under the Employee Stock Purchase Plan, our employees, and those of our subsidiaries, may purchase shares of our common stock, during pre-specified offering periods. Our NEOs will be eligible to participate in the Employee Stock Purchase Plan on the same terms and conditions as all other participating employees.

Administration. The Employee Stock Purchase Plan will be administered by a committee of our board of directors, which we refer to as the Committee for purposes of this disclosure. The Committee will have full authority to administer the Employee Stock Purchase Plan and make and interpret rules and regulations regarding administration of the Employee Stock Purchase Plan as it may deem necessary or appropriate.

Shares Available Under the Employee Stock Purchase Plan. The maximum number of shares of our common stock which we expect will be approved by our board of directors and stockholders and authorized for sale under the Employee Stock Purchase Plan will be _____ shares, subject to adjustment for certain

changes in our capitalization. The issuance of shares pursuant to the Employee Stock Purchase Plan will reduce the total number of shares available under the Employee Stock Purchase Plan.

Eligible Employees. All of our employees and those of our subsidiaries will be eligible to participate in the Employee Stock Purchase Plan, except for employees who own 5% or more of the combined voting power or value of all of our issued and outstanding stock.

Participation. Eligible employees may elect to participate in the Employee Stock Purchase Plan by filing a subscription agreement with us prior to any offering period indicating the amount of eligible compensation to be withheld from payroll during that offering period and applied to the Employee Stock Purchase Plan. Once enrolled in the Employee Stock Purchase Plan, a participant shall continue to participate in subsequent offering periods until such participant terminates employment or withdraws from any offering period.

Eligible Compensation. Eligible employees may authorize payroll deductions of 1% to 15% of such employees' base compensation on each payroll date that falls within an offering period. Payroll deductions shall commence on the first payroll date following the beginning of the offering period and shall continue until the participant withdraws from an offering period or terminates employment. Participants may not acquire rights to purchase more than \$25,000 of our common stock under the Employee Stock Purchase Plan for any calendar year.

Offering Periods. We plan to offer our common stock to participants for up to 27 months, with an expected period of 6 months, beginning in 2021.

Purchase of Shares. Shares of our common stock will be automatically purchased for the accounts of participants at the end of each offering period with their elected payroll deductions accumulated during the offering period. Shares will be purchased at a discounted per-share purchase price equal to 85% of the per-share closing price of our common stock on the last day of the applicable offering period.

Cancellation of Election to Purchase. A participant may cancel his or her participation in the Employee Stock Purchase Plan, but may not reduce or increase his or her contributions during an offering period. Termination of a participant's employment for any reason, will also terminate such participant's participation in the Employee Stock Purchase Plan. In any of these cases, the participant is entitled to receive a refund of the payroll deductions collected on his or her behalf.

Effect of a Change in Control. Upon a future change in control of the Company, the administrator may, in its sole discretion, (i) shorten an offering period to provide for a purchase date on or prior to the change in control date or (ii) provide for the assumption of the purchase rights under the Employee Stock Purchase Plan and substitution of rights to purchase shares of the successor company in accordance with Section 424 of the Code.

Termination and Amendment. Our board of directors or the Committee may amend or terminate the Employee Stock Purchase Plan at any time, although no amendment may be made (i) that adversely affects the rights of any participant participating in an offering period or (ii) without approval of our stockholders to the extent such approval would be required under Section 423 of the Code.

Retirement Benefits

U.S. 401(k) Plan

We maintain a tax-qualified defined contribution 401(k) savings plan (the "401(k) Plan"), in which all our U.S.-based employees, including our U.S.-based NEOs, are eligible to participate. The 401(k) Plan allows participants to contribute up to 100% of their compensation on a pre-tax basis (or on a post-tax basis, with respect to elective Roth deferrals) into individual retirement accounts, subject to the maximum annual limits set by the Internal Revenue Service. The 401(k) Plan also allows us to make employer matching contributions. We have historically made employer matching contributions of up to 50% of our employees' deferral, limited to the first 6% of each employee's compensation, except for one division for which we matched 100% of our employees' deferral up to 6% of compensation. In 2019, we contributed \$1,402,530 in total employer contributions on behalf of our U.S.-based employees. Participants are immediately fully vested in their own contributions to the 401(k) Plan. Participants vest in the matching contributions we make to their accounts after four years of service, at the rate of 25% per year, except for one division in which they fully vest after three years.

The Netherlands

We contribute to a government structured defined benefit pension scheme for our Dutch employees, including Dr. Kerbusch. Pursuant to this pension scheme, our Dutch employees contribute the maximum allowable pensionable gross salary plus Holiday pay gross through pre-tax payroll deductions and we contribute an amount equal to the pensionable amount multiplied by the age percentage as set forth on the applicable statutory contribution matrix. In 2019, we contributed \$161,803 to the Dutch pension scheme on behalf of our Dutch employees. The contributions we made for Dr. Kerbusch are set forth in the Summary Compensation Table above.

Australia

We contribute to a government mandated superannuation pension scheme for our Australian employees, including Dr. Rayner. Pursuant to this pension scheme, we contribute 9.5% of gross salary as a mandatory minimum company contribution, subject to a maximum of \$50,000 Australian dollars per employee, per year. In 2019, we contributed \$128,844 AUD to the Australian superannuation pension scheme on behalf of our Australian employees. The contributions we made for Dr. Rayner are set forth in the "Summary Compensation Table" above.

Director Compensation

For fiscal 2019, we did not provide compensation to members of our board who were employed by us or by Arsenal or the EQT Investor. However, all of our board members are reimbursed for their reasonable out-of-pocket expenses related to their services as a member of our board of directors or one of its committees.

For 2019, non-employee members of our board were entitled to an annual cash retainer of \$40,000. Ms. McCoy also received an annual cash retainer of \$125,000 as Chairperson of our board, and she received \$56,000 for her service as executive chairperson for part of 2019. Upon his appointment as Chairperson of the Science Committee of our board, Dr. Muniz became entitled to an annual cash retainer of \$140,000. Effective August 26, 2020, the annual cash retainer for each of Messrs. Slaine and Cashman was increased from \$40,000 to \$50,000. See the "Summary Compensation Table" above for information about Dr. Muniz's board compensation during 2019.

The following table summarizes the compensation paid to or earned by our Non-Employee Directors in 2019:

2019 DIRECTOR COMPENSATION

NAME	FEES EARNED OR PAID IN CASH (\$)	TOTAL (\$)
Sherilyn S. McCoy	181,000	181,000
James E. Cashman III	40,000	40,000
William F. Feehery	—	—
William E. Klitgaard	40,000	40,000
Eric C. Liu	—	—
Stephen M. McLean	—	—
Mason P. Slaine	40,000	40,000

Directors Deferral Plan

Our Board of Directors expects to adopt the Directors Deferral Plan prior to the completion of the offering. All directors who are not employees of the Company are eligible to participate in the Directors Deferral Plan.

Deferral Elections. Under the terms of the Directors Deferral Plan, our non-employee directors may elect to defer all or a portion of their annual cash compensation and/or all of the Company shares issued upon settlement of their annual restricted stock unit award, in each case in 25% increments, in the form of deferred stock units credited to an account maintained by the Company. The number of deferred stock units credited in respect

of annual cash compensation is determined by dividing the dollar amount of the deferred cash compensation by the fair market value of a share of the Company's common stock on the date the cash compensation would otherwise have been paid to the director. Deferred stock units will be awarded from, and subject to the terms of, the 2020 Incentive Plan.

Each deferred stock unit represents the right to receive a number of shares of our common stock equal to the number of deferred stock units initially credited to the director's account plus the number of deferred stock units credited as a result of any dividend equivalent rights (to which deferred stock units initially credited to a director's account are entitled).

Settlement of Deferred Stock Units. Directors may elect that settlement of deferred stock units be made or commence on (i) the first business day in a year following the year for which the deferral is made, (ii) following termination of service on our board of directors or (iii) the earlier of (i) or (ii). Directors may elect that deferred stock units be settled in a single one-time distribution or in a series of up to 15 annual installments. In addition, deferred stock unit accounts will be settled upon a Change in Control (as defined in the 2020 Incentive Plan) or upon a director's death.

Administration; Amendment and Termination. Our Compensation Committee will administer the Directors Deferral Plan. The Directors Deferral Plan or any deferral may be amended, suspended, discontinued by our Compensation Committee at any time in the Compensation Committee's discretion; provided that no amendment, suspension or discontinuance will reduce any director's accrued benefit, except as required to comply with applicable law. Our Compensation Committee may terminate the Plan at any time, as long as the termination complies with applicable tax and other requirements.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Registration Rights Agreement

We are parties to a registration rights agreement with EQT, Arsenal, the EQT Investor and certain other stockholders. We expect to amend and restate this registration rights agreement in connection with this offering.

The amended and restated registration rights agreement will contain provisions that entitle EQT, Arsenal, the EQT Investor and the other stockholder parties thereto to certain rights to have their securities registered by us under the Securities Act. EQT will be entitled to an unlimited number of "demand" registrations, subject to certain limitations. Every stockholder that holds registration rights will also be entitled to customary "piggyback" registration rights. In addition, the amended and restated registration rights agreement will provide that we will pay certain expenses of the stockholder parties relating to such registrations and indemnify them against certain liabilities which may arise under the Securities Act.

Stockholders Agreement

We intend to enter into a stockholders agreement with EQT, Arsenal and certain other stockholders in connection with this offering.

This stockholders agreement will provide that following the completion of this offering, our board of directors will consist of eight members. The EQT Investor and certain of its affiliates will have the right to nominate to our board of directors a number of nominees equal to (x) the total number of directors comprising our board of directors at such time, multiplied by (y) the percentage of our outstanding common stock held from time to time by the EQT Investor and such affiliates. For purposes of calculating the number of directors that the EQT Investor and such affiliates will be entitled to nominate, any fractional amounts are rounded up to the nearest whole number. In addition, Arsenal and certain of its affiliates will have the right to nominate to our board of directors one nominee for so long as Arsenal and such affiliates collectively own at least 5% of our outstanding common stock; provided, that such individual is an investment professional employed by Arsenal or one of its affiliates or another individual with the prior written consent of EQT. In addition, the board of directors will be divided into three classes and serve staggered, three year terms. For so long as we have a classified board, the EQT nominated board members will be divided by EQT as evenly as possible among the classes of directors.

Pursuant to the stockholders agreement, we will include the EQT and Arsenal nominees on the slate that is included in our proxy statement relating to the election of directors of the class to which such persons belong and provide the highest level of support for the election of each such person as we provide to any other individual standing for election as a director. In addition, pursuant to the stockholders agreement, EQT and Arsenal will agree with the Company to vote in favor of the Company slate that is included in our proxy statement.

In the event that an EQT or Arsenal nominee ceases to serve as a director for any reason (other than the failure of our stockholders to elect such individual as a director), EQT or Arsenal, as applicable, will be entitled to appoint another nominee to fill the resulting vacancy.

Other Transactions

In 2018, we paid Dr. Rayner and an affiliated family trust an aggregate of \$468,750 in respect of an earn-out payment due in connection with a business we acquired from Dr. Rayner and certain other parties in 2015. The agreement governing the acquisition and such earn-out payment was entered into prior to the commencement of Dr. Rayner's employment with us. This payment represented the final amount due to Dr. Rayner under the agreement governing such acquisition.

During the year ended December 31, 2017, the Company paid Arsenal approximately \$280,000 in management fees pursuant to an agreement that was terminated in August of that year.

Directed Share Program

At our request, the underwriters have reserved up to _____ shares of common stock, or up to _____ % of the shares offered by this prospectus, for sale at the initial public offering price through a directed share program to our directors, officers, employees, independent operators, business associates and related persons. The sales will be made at our direction by _____ and its affiliates through a directed share program. The number of shares of our common stock available for sale to the general public in this offering will be reduced to the extent that such persons purchase such reserved shares. Any reserved shares not so purchased will be offered by the underwriters to the general public on the same terms as the other shares of common stock offered by this prospectus. Participants in the directed share program will not be subject to lockup or market standoff restrictions with the underwriters or with us with respect to any shares purchased through the directed share program, except in the case of shares purchased by any director or executive officer. For additional information, see "Underwriting."

Indemnification of Directors and Officers

We have entered, or will enter, into an indemnification agreement with each of our directors and executive officers. The indemnification agreements, together with our amended and restated bylaws, will provide that we will jointly and severally indemnify each indemnitee to the fullest extent permitted by the DGCL from and against all loss and liability suffered and expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by or on behalf of the indemnitee in connection with any threatened, pending, or completed action, suit or proceeding. Additionally, we will agree to advance to the indemnitee all out-of-pocket costs of any type or nature whatsoever incurred in connection therewith. See "Description of Capital Stock—Limitations on Liability and Indemnification of Officers and Directors."

Related Persons Transaction Policy

Prior to the completion of this offering, our board of directors is expected to adopt a written policy on transactions with related persons, which we refer to as our "related person policy." Our related person policy will require that all "related persons" (as defined in paragraph (a) of Item 404 of Regulation S-K) must promptly disclose to our general counsel any "related person transaction" (defined as any transaction that is anticipated would be reportable by us under Item 404(a) of Regulation S-K in which we were or are to be a participant and the amount involved exceeds \$120,000 and in which any related person had or will have a direct or indirect material interest) and all material facts with respect thereto. Our general counsel will communicate that information to our board of directors or to a duly authorized committee thereof. Our related person policy will provide that no related person transaction entered into following the completion of this offering will be executed without the approval or ratification of our board of directors or a duly authorized committee thereof. It will be our policy that any directors interested in a related person transaction must recuse themselves from any vote on a related person transaction in which they have an interest.

PRINCIPAL AND SELLING STOCKHOLDERS

The following table and accompanying footnotes set forth information with respect to the beneficial ownership of the common stock of Certara, Inc. as of _____, 2020, assuming the EQT Equity Conversion is effected immediately prior to the consummation of the offering by:

- each person known by us to own beneficially 5% or more of our outstanding shares of common stock;
- the selling stockholders;
- each of our directors;
- each of our named executive officers; and
- our directors and executive officers as a group.

The number of shares and percentages of beneficial ownership prior to this offering set forth below are based on the number of shares of our common stock to be issued and outstanding immediately prior to the consummation of this offering following completion of the EQT Equity Conversion. Until the completion of the EQT Equity Conversion, all of our common stock will be beneficially owned by the EQT Investor. The number of shares and percentages of beneficial ownership after this offering set forth below are based on the number of shares of our common stock to be issued and outstanding immediately after the consummation of this offering, excluding any potential purchases pursuant to the directed share program relating to this offering.

Beneficial ownership for the purposes of the following table is determined in accordance with the rules and regulations of the SEC. A person is a “beneficial owner” of a security if that person has or shares “voting power,” which includes the power to vote or to direct the voting of the security, or “investment power,” which includes the power to dispose of or to direct the disposition of the security or has the right to acquire such powers within 60 days.

Unless otherwise noted in the footnotes to the following table, and subject to applicable community property laws, the persons named in the table have sole voting and investment power with respect to their beneficially owned common stock.

Except as otherwise indicated in the footnotes below, the address of each beneficial owner is c/o Certara, Inc., 100 Overlook Center, Suite 101, Princeton, New Jersey 08540.

NAME OF BENEFICIAL OWNER	SHARES BENEFICIALLY OWNED PRIOR TO THE OFFERING		SHARES BENEFICIALLY OWNED AFTER THE OFFERING	
	SHARES	PERCENTAGE	IF UNDERWRITERS' OPTION TO PURCHASE ADDITIONAL SHARES IS NOT EXERCISED	IF UNDERWRITERS' OPTION TO PURCHASE ADDITIONAL SHARES IS EXERCISED IN FULL
	SHARES	PERCENTAGE	SHARES	PERCENTAGE
5% Stockholders:				
EQT Investor ⁽¹⁾		%		%
Arsenal Investors ⁽²⁾				
Directors and Named Executive Officers:				
William F. Feehery		%		%
Justin Edge				
Thomas Kerbusch				
Craig R. Rayner				
Sherilyn S. McCoy				
James E. Cashman III				
Eric C. Liu ⁽³⁾				
Stephen M. McLean				
Edmundo Muniz				
Mason P. Slaine				
Matthew Walsh				
Ethan Waxman ⁽³⁾				
All directors and executive officers as a group (16 persons)		%		%
Other Selling Stockholders:				

* Indicates beneficial ownership of less than 1%.

- (1) Consists of shares of common stock held directly by the EQT Investor. EQT Avatar Parent GP LLC ("Avatar Parent GP") is the general partner of the EQT Investor. Several investment vehicles collectively make up the fund known as "EQT VII." EQT VII owns 100% of the membership interests in Avatar Parent GP. EQT Fund Management S.à r.l. ("EFMS") has exclusive responsibility for the management and control of the business and affairs of investment vehicles which constitute the majority of the total commitments to EQT VII. As such, EFMS has the power to control Avatar Parent GP's voting and investment decisions and may be deemed to have beneficial ownership of the securities held by the EQT Investor. EFMS is overseen by a board that acts by majority approval. The individual members of such board are Joshua Stone, Adam Larsson, Nicholas Curwen, Peter Veldman and James Arrol. The registered address of the EQT Investor, Avatar Parent GP, and EFMS is 26A, Boulevard Royal, L-2449 Luxembourg, Grand Duchy of Luxembourg.
- (2) Consists of shares of common stock held directly by Arsenal Capital Partners III LP ("Partners III") and shares of common stock held directly by Arsenal Capital Partners III-B LP (together with Partners III, the "Arsenal Funds"). Arsenal Capital Investment III LP ("Investment LP") is the general partner of each of the Arsenal Funds and is governed by an investment committee consisting of 17 individuals, including Mr. McLean, who serves as one of our directors. Arsenal Capital Group LLC ("Group LLC") is the general partner of Investment LP and appoints the members of its investment committee. As such, Group LLC has the power to control Investment LP's voting and investment decisions and may be deemed to have beneficial ownership of the securities held by the Arsenal Funds. Group LLC is managed by a board of managers consisting of two members that acts by majority approval. The individual members of such board are Terry M. Mullen and Jeffrey B. Kovach. The mailing address for each of the persons and entities referenced above is c/o Arsenal Capital Partners, 100 Park Avenue, 31st Floor, New York, New York, 10017.
- (3) The address of Messrs. Liu and Waxman is c/o EQT Partners, 1114 Avenue of the Americas, 45th Floor, New York, New York 10036.

DESCRIPTION OF CAPITAL STOCK

General

In connection with this offering, we will amend and restate our certificate of incorporation and our amended and restated bylaws. The following description summarizes the material terms of, and is qualified in its entirety by, the amended and restated certificate of incorporation and amended and restated bylaws that we intend to adopt, each of which will be in effect upon the consummation of this offering, the forms of which are filed as exhibits to the registration statement of which this prospectus is a part. For a complete description of our capital stock, you should refer to our amended and restated certificate of incorporation, amended and restated bylaws and the applicable provisions of Delaware laws. Under "Description of Capital Stock," "we," "us," "our," the "Company" and "our Company" refer to Certara, Inc. and not to any of its subsidiaries and "EQT" refers to the investment funds of EQT and its affiliates, so long as EQT owns shares of common stock of the Company.

Our purpose is to engage in any lawful act or activity for which corporations may now or hereafter be organized under the DGCL. Upon the consummation of this offering, our authorized capital stock will consist of _____ shares of common stock, par value \$0.01 per share, and _____ shares of preferred stock, par value \$0.01 per share. No shares of preferred stock will be issued or outstanding immediately after the public offering contemplated by this prospectus. Unless our board of directors determines otherwise, we will issue all shares of our capital stock in uncertificated form.

Common Stock

Holders of our common stock will be entitled to one vote for each share held of record on all matters on which stockholders are entitled to vote generally, including the election or removal of directors. The holders of our common stock do not have cumulative voting rights in the election of directors.

Upon our liquidation, dissolution or winding up and after payment in full of all amounts required to be paid to creditors and subject to the rights of the holders of one or more outstanding series of preferred stock having liquidation preferences, if any, or the right to participate with the common stock, the holders of our common stock will be entitled to receive pro rata our remaining assets available for distribution. Holders of our common stock do not have preemptive, subscription, redemption sinking fund or conversion rights. The common stock will not be subject to further calls or assessment by us. All shares of our common stock that will be outstanding at the time of the completion of the offering will be fully paid and non-assessable. The rights, powers, preferences and privileges of holders of our common stock will be subject to those of the holders of any shares of our preferred stock or any series or class of stock we may authorize and issue in the future.

Preferred Stock

Our amended and restated certificate of incorporation will authorize our board of directors to establish one or more series of preferred stock (including convertible preferred stock). Unless required by law or by the Nasdaq rules, the authorized shares of preferred stock will be available for issuance without further action by investors in our common stock, and holders of our common stock will not be entitled to vote on any amendment to our amended and restated certificate of incorporation that relates solely to the terms of any outstanding shares of preferred stock, if the holders of such shares of preferred stock are entitled to vote thereon. Our board of directors is authorized to determine, with respect to any series of preferred stock, the powers (including voting powers), preferences and relative, participating, optional and other special rights, and the qualifications, limitations or restrictions thereof, including, without limitation:

- the designation of the series;
- the number of shares of the series, which our board of directors may, except where otherwise provided in the preferred stock designation, increase (but not above the total number of authorized shares of the class of stock) or decrease (but not below the number of shares then outstanding);
- whether dividends, if any, will be cumulative or non-cumulative and the dividend rate of the series;

- the dates at which dividends, if any, will be payable;
- redemption rights and price or prices, if any, for shares of the series;
- the terms and amounts of any sinking fund provided for the purchase or redemption of shares of the series;
- the amounts payable on shares of the series in the event of any voluntary or involuntary liquidation, dissolution or winding-up of the affairs of our company;
- whether the shares of the series will be convertible into shares of any other class or series of the stock of our company, or any other security of our company or any other entity, and, if so, the specification of the other class or series or other security, the conversion price or prices or rate or rates, any rate adjustments, the date or dates as of which the shares will be convertible and all other terms and conditions upon which the conversion may be made;
- restrictions on the issuance of shares of the same series or of any other class or series of our capital stock; and
- the voting rights, if any, of the holders of the series.

We could issue a series of preferred stock that could, depending on the terms of the series, impede or discourage an acquisition attempt or other transaction that some, or a majority, of the holders of our common stock might believe to be in their best interests or in which the holders of our common stock might receive a premium for their common stock over the market price of the common stock. Additionally, the issuance of preferred stock may adversely affect the holders of our common stock, including, without limitation, by restricting dividends on the common stock, diluting the voting power of the common stock or subordinating the liquidation rights of the common stock. As a result of these or other factors, the issuance of preferred stock could have an adverse impact on the market price of our common stock.

Dividends

Holders of our common stock will be entitled to receive dividends when, as and if declared by our board of directors out of funds legally available therefor, subject to any statutory or contractual restrictions on the payment of dividends and to the rights of the holders or one or more outstanding series of our preferred stock.

The DGCL permits a corporation to declare and pay dividends out of “surplus” or, if there is no “surplus,” out of its net profits for the fiscal year in which the dividend is declared and/or the preceding fiscal year. “Surplus” is defined as the excess of the net assets of the corporation over the amount determined to be the capital of the corporation by the board of directors. The capital of the corporation is typically calculated to be (and cannot be less than) the aggregate par value of all issued shares of capital stock. Net assets equals the fair value of the total assets minus total liabilities. The DGCL also provides that dividends may not be paid out of net profits if, after the payment of the dividend, remaining capital would be less than the capital represented by the outstanding stock of all classes having a preference upon the distribution of assets.

Declaration and payment of any dividend will be subject to the discretion of our board of directors. The time and amount of such dividends, if any, will be dependent upon our financial condition, operations, compliance with applicable law, cash requirements and availability, debt repayment obligations, capital expenditure needs and restrictions in our debt instruments, contractual restrictions, business prospects, industry trends, the provisions of Delaware law affecting the payment of distributions to stockholders and any other factors our board of directors may consider relevant.

We do not expect to declare or pay any dividends on our common stock in the foreseeable future. In addition, our ability to pay dividends on our common stock is limited by the covenants of our Loan Agreement and Credit Agreement and may be further restricted by the terms of any future debt or preferred securities. See “Dividend Policy” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Credit Facilities.”

Annual Stockholder Meetings

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide that annual stockholder meetings will be held at a date, time and place, if any, as exclusively selected by our

board of directors or a duly authorized committee thereof. To the extent permitted under applicable law, we may conduct meetings by remote communications, including by webcast.

Effects of Our Certificate of Incorporation and Bylaws and Certain Provisions of Delaware Law

Our amended and restated certificate of incorporation and our amended and restated bylaws will contain, and the DGCL does contain, provisions (which are summarized in the following paragraphs) that are intended to enhance the likelihood of continuity and stability in the composition of our board of directors. These provisions are intended to avoid costly takeover battles, reduce our vulnerability to a hostile change of control and enhance the ability of our board of directors to maximize stockholder value in connection with any unsolicited offer to acquire us. However, these provisions may have the effect of delaying, deterring or preventing a merger or acquisition of our company by means of a tender offer, a proxy contest or other takeover attempt that a stockholder might consider in its best interest, including attempts that might result in a premium over the prevailing market price for the shares of common stock held by stockholders.

Authorized but Unissued Capital Stock

Delaware law does not require stockholder approval for any issuance of authorized shares. However, the listing requirements of the Nasdaq, which would apply if and so long as our common stock remains listed on the Nasdaq, require stockholder approval of certain issuances equal to or exceeding 20% of the then outstanding voting power or then outstanding number of shares of common stock. Additional shares that may be used in the future may be used for a variety of corporate purposes, including future public offerings, to raise additional capital or to facilitate acquisitions.

Our board of directors may generally issue one or more series of preferred shares on terms calculated to discourage, delay or prevent a change of control of our company or the removal of our management. Moreover, our authorized but unissued shares of preferred stock will be available for future issuances in one or more series without stockholder approval and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, to facilitate acquisitions and employee benefit plans.

One of the effects of the existence of authorized and unissued and unreserved common stock or preferred stock may be to enable our board of directors to issue shares to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of our Company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of our management and possibly deprive our stockholders of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

Classified Board of Directors

Our amended and restated certificate of incorporation will provide that, subject to the right of holders of any series of preferred stock, our board of directors will be divided into three classes of directors, with the classes to be as nearly equal in number as possible, and with the directors serving staggered three-year terms, with only one class of directors being elected at each annual meeting of stockholders. As a result, approximately one-third of our board of directors will be elected each year. The classification of directors will have the effect of making it more difficult for stockholders to change the composition of our board of directors. Our amended and restated certificate of incorporation and amended and restated bylaws will provide that, subject to any rights of holders of preferred stock to elect additional directors under specified circumstances, the number of directors will be fixed from time to time exclusively pursuant to a resolution adopted by the board of directors; however, if at any time EQT owns at least 40% in voting power of the then-outstanding shares of stock of our Company entitled to vote generally in the election of directors, the stockholders may also fix the number of directors.

Business Combinations

We will opt out of Section 203 of the DGCL; however, our amended and restated certificate of incorporation will contain similar provisions providing that we may not engage in certain “business combinations” with any “interested stockholder” for a three-year period following the time that the stockholder became an interested stockholder, unless:

- prior to such time, our board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, excluding certain shares;
- at or subsequent to that time, the business combination is approved by our board of directors and by the affirmative vote of holders of at least 66 2/3% of our outstanding voting stock that is not owned by the interested stockholder; or
- the stockholder became an interested stockholder inadvertently and (i) as soon as practicable divested itself of sufficient ownership to cease to be an interested stockholder and (ii) had not been an interested stockholder but for the inadvertent acquisition of ownership within three years of the business combination.

Generally, a “business combination” includes a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. Subject to certain exceptions, an “interested stockholder” is a person who, together with that person’s affiliates and associates, owns, or within the previous three years owned, 15% or more of our outstanding voting stock. For purposes of this section only, “voting stock” has the meaning given to it in Section 203 of the DGCL.

Under certain circumstances, this provision will make it more difficult for a person who would be an “interested stockholder” to effect various business combinations with our company for a three-year period. This provision may encourage companies interested in acquiring our Company to negotiate in advance with our board of directors because the stockholder approval requirement would be avoided if our board of directors approves either the business combination or the transaction which results in the stockholder becoming an interested stockholder. These provisions also may have the effect of preventing changes in our board of directors and may make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Our amended and restated certificate of incorporation will provide that EQT, and any of its direct or indirect transferees and any group as to which such persons or entities are a party, does not constitute an “interested stockholder” for purposes of this provision.

Removal of Directors; Vacancies

Under the DGCL, unless otherwise provided in our amended and restated certificate of incorporation, directors serving on a classified board may be removed by the stockholders only for cause. Our amended and restated certificate of incorporation will provide that, other than directors elected by holders of our preferred stock, if any, directors may be removed with or without cause upon the affirmative vote of a majority in voting power of all outstanding shares of stock entitled to vote thereon, voting together as a single class; provided, however, at any time when EQT beneficially owns less than 40% in voting power of the then-outstanding shares of stock of our company entitled to vote generally in the election of directors, directors may only be removed for cause, and only by the affirmative vote of holders of at least 66 2/3% in voting power of all the then-outstanding shares of stock of our company entitled to vote thereon, voting together as a single class. In addition, our amended and restated certificate of incorporation will also provide that, subject to the rights granted to one or more series of preferred stock then outstanding or the rights granted pursuant to the stockholders agreement, any newly created directorship on the board of directors that results from an increase in the number of directors and any vacancies on our board of directors will be filled only by the affirmative vote of a majority of the remaining directors, even if less than a quorum, or by a sole remaining director or by the stockholders; provided, however, at any time when EQT beneficially owns less than 40% in voting power of the then-outstanding

shares of stock of our company entitled to vote generally in the election of directors, any newly created directorship on the board of directors that results from an increase in the number of directors and any vacancy occurring in the board of directors may only be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director (and not by the stockholders). Our amended and restated certificate of incorporation will provide that the board of directors may increase the number of directors by the affirmative vote of a majority of the directors or, at any time when EQT beneficially owns at least 40% of the voting power of the then-outstanding shares of stock of our Company entitled to vote generally in the election of directors, of the stockholders.

No Cumulative Voting

Under Delaware law, the right to vote cumulatively does not exist unless the certificate of incorporation specifically authorizes cumulative voting. Our amended and restated certificate of incorporation will not authorize cumulative voting. Therefore, stockholders holding a majority in voting power of the then-outstanding shares of our stock entitled to vote generally in the election of directors will be able to elect all of our directors.

Special Stockholder Meetings

Our amended and restated certificate of incorporation will provide that special meetings of our stockholders may be called at any time only by or at the direction of the board of directors or the chairman of the board of directors; provided, however, at any time when EQT beneficially owns, in the aggregate, at least 40% in voting power of the then-outstanding shares of stock of our company entitled to vote generally in the election of directors, special meetings of our stockholders shall also be called by the board of directors or the chairman of the board of directors at the request of EQT. Our amended and restated bylaws will prohibit the conduct of any business at a special meeting other than as specified in the notice for such meeting. These provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of our Company.

Requirements for Advance Notification of Director Nominations and Stockholder Proposals

Our amended and restated bylaws will establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors. In order for any matter to be properly brought before a meeting of our stockholders, a stockholder will have to comply with advance notice requirements and provide us with certain information. Generally, to be timely, a stockholder's notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the immediately preceding annual meeting of stockholders. Our amended and restated bylaws will also specify requirements as to the form and content of a stockholder's notice. Our amended and restated bylaws will allow the chairman of the meeting at a meeting of the stockholders to adopt rules and regulations for the conduct of meetings, which may have the effect of precluding the conduct of certain business at a meeting if the rules and regulations are not followed. These provisions may also deter, delay or discourage a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to influence or obtain control of our company.

Stockholder Action by Written Consent

Pursuant to Section 228 of the DGCL, any action required to be taken at any annual or special meeting of the stockholders may be taken without a meeting, without prior notice and without a vote if a consent or consents, setting forth the action so taken, is signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares of our stock entitled to vote thereon were present and voted, unless our amended and restated certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation will preclude stockholder action by written consent at any time when EQT beneficially owns less than 40% in voting power

of the then-outstanding shares of stock of our Company entitled to vote generally in the election of directors, other than certain rights that holders of our preferred stock may have to act by consent.

Supermajority Provisions

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide that the board of directors is expressly authorized to make, alter, amend, change, add to, rescind or repeal, in whole or in part, our amended and restated bylaws without a stockholder vote in any matter not inconsistent with Delaware law or our amended and restated certificate of incorporation. In addition, for as long as EQT beneficially owns at least 40% in voting power of the then-outstanding shares of stock of our company entitled to vote generally in the election of directors, any amendment, alteration, rescission or repeal of our amended and restated bylaws by our stockholders will require the affirmative vote of a majority in voting power of the outstanding shares of our stock present in person or represented by proxy at the meeting of stockholders and entitled to vote on such amendment, alteration, change, addition, rescission, change, addition or repeal. At any time when EQT beneficially owns less than 40% in voting power of the then-outstanding shares of the stock of our company entitled to vote generally in the election of directors, any amendment, alteration, rescission, change, addition or repeal of our amended and restated bylaws by our stockholders will require the affirmative vote of the holders of at least 66 2/3% in voting power of all the then-outstanding shares of stock of our Company entitled to vote thereon, voting together as a single class.

The DGCL provides generally that the affirmative vote of a majority of the outstanding shares entitled to vote thereon, voting together as a single class, is required to amend a corporation's certificate of incorporation, unless the certificate of incorporation requires a greater percentage.

Our amended and restated certificate of incorporation will provide that at any time when EQT beneficially owns less than 40% in voting power of the then-outstanding shares of stock of our Company entitled to vote generally in the election of directors, the following provisions in our amended and restated certificate of incorporation may be amended, altered, repealed or rescinded only by the affirmative vote of the holders of at least 66 2/3% in voting power of all the then-outstanding shares of stock of our company entitled to vote thereon, voting together as a single class:

- the provision requiring a 66 2/3% supermajority vote for stockholders to amend our bylaws;
- the provisions providing for a classified board of directors (the election and term of our directors);
- the provisions regarding resignation and removal of directors;
- the provisions regarding competition and corporate opportunities;
- the provisions regarding Section 203 of the DGCL and entering into business combinations with interested stockholders;
- the provisions regarding stockholder action by written consent;
- the provisions regarding calling annual or special meetings of stockholders;
- the provisions regarding filling vacancies on our board of directors and newly created directorships;
- the provisions eliminating monetary damages for breaches of fiduciary duty by a director; and
- the amendment provision requiring that the above provisions be amended only with a 66 2/3% supermajority vote.

The combination of the classification of our board of directors, the lack of cumulative voting and the supermajority voting requirements will make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Because our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management.

These provisions may have the effect of deterring hostile takeovers or delaying or preventing changes in control of our management or our company, such as a merger, reorganization or tender offer. These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage certain types of transactions that may involve an actual or threatened

acquisition of our company. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. These provisions are also intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, they also may inhibit fluctuations in the market price of our shares that could result from actual or rumored takeover attempts. Such provisions may also have the effect of preventing changes in management of our company.

Dissenters' Rights of Appraisal and Payment

Under the DGCL, with certain exceptions, our stockholders will have appraisal rights in connection with a merger or consolidation of us. Pursuant to the DGCL, stockholders who properly request and perfect appraisal rights in connection with such merger or consolidation will have the right to receive payment of the fair value of their shares as determined by the Delaware Court of Chancery.

Stockholders' Derivative Actions

Under the DGCL, any of our stockholders may bring an action in our name to procure a judgment in our favor, also known as a derivative action, provided that the stockholder bringing the action is a holder of our shares at the time of the incident to which the action relates or such stockholder's stock thereafter devolved by operation of law.

Exclusive Forum

Our amended and restated certificate of incorporation will provide that unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall, to the fullest extent permitted by law, be the sole and exclusive forum for any (i) derivative action or proceeding brought on behalf of our company, (ii) action asserting a claim of breach of a fiduciary duty owed by any current or former director, officer, employee or stockholder of our company to our company or our company's stockholders, (iii) action asserting a claim against our company or any current or former director, officer, employee or stockholder of our company arising pursuant to any provision of the DGCL or our amended and restated certificate of incorporation or our amended and restated bylaws (as either may be amended from time to time) or (iv) action asserting a claim governed by the internal affairs doctrine of the State of Delaware. Unless the Company consents in writing to the selections of an alternative forum, to the fullest extent permitted by law, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the federal securities laws of the United States of America. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of our company shall be deemed to have notice of and consented to the forum provisions in our amended and restated certificate of incorporation.

Conflicts of Interest

Delaware law permits corporations to adopt provisions renouncing any interest or expectancy in certain opportunities that are presented to the corporation or its officers, directors or stockholders. Our amended and restated certificate of incorporation will, to the maximum extent permitted from time to time by Delaware law, renounce any interest or expectancy that we have in, or right to be offered an opportunity to participate in, any business opportunities that are from time to time presented to our officers, directors or stockholders or their respective affiliates, other than those officers, directors, stockholders or affiliates who are our or our subsidiaries' employees. Our amended and restated certificate of incorporation will provide that, to the fullest extent permitted by law, none of EQT or any director who is not employed by us (including any non-employee director who serves as one of our officers in both his director and officer capacities) or his or her affiliates will have any duty to refrain from (i) engaging in a corporate opportunity in the same or similar business activities or lines of business in which we or our affiliates now engage or propose to engage or (ii) otherwise competing with us or our affiliates. In addition, to the fullest extent permitted by law, in the event that EQT or any non-employee director acquires knowledge of a potential transaction or other business opportunity which

may be a corporate opportunity for itself or himself, or herself, or its or his, or her, affiliates or for us or our affiliates, such person will have no duty to communicate or offer such transaction or business opportunity to us or any of our affiliates and they may take any such opportunity for themselves or offer it to another person or entity. Our amended and restated certificate of incorporation will not renounce our interest in any business opportunity that is expressly offered to a non-employee director solely in his or her capacity as a director or officer of our company. To the fullest extent permitted by law, no business opportunity will be deemed to be a potential corporate opportunity for us unless we would be permitted to undertake the opportunity under our amended and restated certificate of incorporation, we have sufficient financial resources to undertake the opportunity and the opportunity would be in line with our business.

Limitations on Liability and Indemnification of Officers and Directors

The DGCL authorizes corporations to limit or eliminate the personal liability of directors to corporations and their stockholders for monetary damages for breaches of directors' fiduciary duties, subject to certain exceptions. Our amended and restated certificate of incorporation will include a provision that eliminates the personal liability of directors for monetary damages for any breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the DGCL. The effect of these provisions is to eliminate the rights of us and our stockholders, through stockholders' derivative suits on our behalf, to recover monetary damages from a director for breach of certain fiduciary duties as a director, including breaches resulting from grossly negligent behavior. However, exculpation does not apply to any director if the director has acted in bad faith, knowingly or intentionally violated a law during the performance of his or her duties, fiduciary or otherwise, owed to us, authorized illegal dividends, repurchases or redemptions or derived an improper benefit from his or her actions as a director.

Our amended and restated bylaws will provide that we must indemnify and advance expenses to our directors and officers to the fullest extent authorized by the DGCL. We also will be expressly authorized to carry directors' and officers' liability insurance providing indemnification for our directors, officers and certain employees for some liabilities. We believe that these indemnification and advancement provisions and insurance will be useful to attract and retain qualified directors and executive officers.

The limitation of liability, indemnification and advancement provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duty. These provisions also may have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. In addition, any investment in our common stock may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

We have entered, or will enter, into an indemnification agreement with each of our directors and officers. These agreements will require us to indemnify these individuals to the fullest extent permitted under the DGCL against liabilities that may arise by reason of their service to us, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified.

There is currently no pending material litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is

Listing

Our common stock is expected to be approved for listing on the Nasdaq under the symbol "CERT."

SHARES ELIGIBLE FOR FUTURE SALE

General

Prior to this offering, there has not been a public market for our common stock, and we cannot predict what effect, if any, market sales of shares of common stock or the availability of shares of common stock for sale will have on the market price of our common stock prevailing from time to time. Nevertheless, sales of substantial amounts of common stock, including shares issued upon the exercise of outstanding options, in the public market, or the perception that such sales could occur, could materially and adversely affect the market price of our common stock and could impair our future ability to raise capital through the sale of our equity or equity-related securities at a time and price that we deem appropriate. See “Risk Factors—Risks Related to this Offering and Ownership of Our Common Stock—Future sales, or the perception of future sales, by us or our existing stockholders in the public market following this offering could cause the market price for our common stock to decline.”

Upon the consummation of this offering, we will have _____ shares of common stock outstanding. All shares sold in this offering will be freely tradable without registration under the Securities Act and without restriction, except for (1) shares held by our “affiliates” (as defined under Rule 144) and (2) any shares purchased in our directed share program that are subject to the lock-up agreements described below. The shares of common stock held by EQT and certain of our directors, officers and employees after this offering will be “restricted” securities under the meaning of Rule 144 and may not be sold in the absence of registration under the Securities Act, unless an exemption from registration is available, including the exemptions pursuant to Rule 144 under the Securities Act.

Pursuant to Rule 144, the restricted shares held by our affiliates will be available for sale in the public market at various times after the date of this prospectus following the expiration of the applicable lock-up period.

In addition, a total of _____ shares of our common stock has been reserved for issuance under the 2020 Incentive Plan, a total of _____ shares of our common stock has been reserved for issuance under the Existing Plan and a total of _____ shares of our common stock has been reserved for issuance under our 2020 Employee Stock Purchase Plan (each subject to adjustments for stock splits, stock dividends and similar events), which will equal approximately _____ % of the shares of our common stock outstanding immediately following this offering. We intend to file one or more registration statements on Form S-8 under the Securities Act to register common stock issued or reserved for issuance under the 2020 Incentive Plan and our 2020 Employee Stock Purchase Plan. Any such Form S-8 registration statement will automatically become effective upon filing. Accordingly, shares registered under such registration statement will be available for sale in the open market, unless such shares are subject to vesting restrictions or the lock-up restrictions described below.

Rule 144

In general, under Rule 144, as currently in effect, a person (or persons whose shares are deemed aggregated) who is not deemed to be or have been one of our affiliates for purposes of the Securities Act at any time during 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than an affiliate, is entitled to sell such shares without registration, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of a prior owner other than an affiliate, then such person is entitled to sell such shares without complying with any of the requirements of Rule 144.

Under Rule 144, our affiliates or persons selling shares on behalf of our affiliates, who have met the six-month holding period for beneficial ownership of “restricted shares” of our common stock, are entitled to sell within any three-month period, a number of shares that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately _____ shares immediately after this offering; or

- the average reported weekly trading volume of our common stock on the Nasdaq during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us. The sale of these shares, or the perception that sales will be made, could adversely affect the price of our common stock after this offering because a great supply of shares would be, or would be perceived to be, available for sale in the public market.

Rule 701

In general, under Rule 701 of the Securities Act as currently in effect, any of our employees, consultants or advisors who purchase shares from us in connection with a compensatory stock or option plan or other written agreement in a transaction that was completed in reliance on Rule 701, and complied with the requirements of Rule 701, will be eligible to resell such shares 90 days after the effective date of this offering in reliance on Rule 144, but without compliance with certain restrictions, including the holding period, contained in Rule 144.

Registration Rights

EQT, Arsenal and certain other stockholders will have certain registration rights with respect to our common stock pursuant to the amended and restated registration rights agreement. See “Certain Relationships and Related Person Transactions — Registration Rights Agreement.”

Lock-Up Agreements

In connection with this offering, we, our officers, directors and all significant equity holders, as well as the selling stockholders, have agreed with the underwriters, subject to certain exceptions, not to sell, dispose of or hedge any shares of our common stock or securities convertible into or exchangeable for shares of common stock during the period ending 180 days after the date of this prospectus, except with the prior written consent of the representatives of the underwriters.

Immediately following the consummation of this offering, equity holders subject to lock-up agreements will hold _____ shares of our common stock, representing approximately _____ % of our then outstanding shares of common stock, or approximately _____ % if the underwriters exercise in full their option to purchase additional shares.

We have agreed not to issue, sell or otherwise dispose of any shares of our common stock during the 180-day period following the date of this prospectus. We may, however, grant options to purchase shares of common stock, issue shares of common stock upon the exercise of outstanding options, issue shares of common stock in connection with certain acquisitions or business combinations or an employee stock purchase plan and in certain other circumstances.

CERTAIN UNITED STATES FEDERAL INCOME AND ESTATE TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following is a summary of certain United States federal income and estate tax consequences of the purchase, ownership and disposition of our common stock as of the date hereof. Except where noted, this summary deals only with common stock that is held as a capital asset by a non-U.S. holder (as defined below).

A “non-U.S. holder” means a beneficial owner of our common stock (other than an entity or arrangement treated as a partnership for United States federal income tax purposes) that is not, for United States federal income tax purposes, any of the following:

- an individual citizen or resident of the United States;
- a corporation (or any other entity treated as a corporation for United States federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate the income of which is subject to United States federal income taxation regardless of its source; or
- a trust if it (1) is subject to the primary supervision of a court within the United States and one or more United States persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable United States Treasury regulations to be treated as a United States person.

This summary is based upon provisions of the Code, and regulations, rulings and judicial decisions as of the date hereof. Those authorities may be changed, perhaps retroactively, so as to result in United States federal income and estate tax consequences different from those summarized below. This summary does not address all aspects of United States federal income and estate taxes and does not deal with foreign, state, local or other tax considerations that may be relevant to non-U.S. holders in light of their particular circumstances. In addition, it does not represent a detailed description of the United States federal income and estate tax consequences applicable to you if you are subject to special treatment under the United States federal income tax laws (including if you are a United States expatriate, foreign pension fund, “controlled foreign corporation,” “passive foreign investment company” or a partnership or other pass-through entity for United States federal income tax purposes). We cannot assure you that a change in law will not alter significantly the tax considerations that we describe in this summary.

If a partnership (or other entity or arrangement treated as a partnership for United States federal income tax purposes) holds our common stock, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. If you are a partner of a partnership holding our common stock, you should consult your tax advisors.

If you are considering the purchase of our common stock, you should consult your own tax advisors concerning the particular United States federal income and estate tax consequences to you of the purchase, ownership and disposition of our common stock, as well as the consequences to you arising under other United States federal tax laws and the laws of any other taxing jurisdiction.

Dividends

In the event that we make a distribution of cash or other property (other than certain pro rata distributions of our stock) in respect of our common stock, the distribution generally will be treated as a dividend for United States federal income tax purposes to the extent it is paid from our current or accumulated earnings and profits, as determined under United States federal income tax principles. Any portion of a distribution that exceeds our current and accumulated earnings and profits generally will be treated first as a tax-free return of capital, causing a reduction in the adjusted tax basis of a non-U.S. holder’s common stock, and to the extent the amount of the distribution exceeds a non-U.S. holder’s adjusted tax basis in our common stock, the excess will be treated as gain from the disposition of our common stock (the tax treatment of which is discussed below under “— Gain on Disposition of Common Stock”).

Dividends paid to a non-U.S. holder generally will be subject to withholding of United States federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. However, dividends that are effectively connected with the conduct of a trade or business by the non-U.S. holder within the United States (and, if required by an applicable income tax treaty, are attributable to a United States permanent establishment) are not subject to the withholding tax, provided certain certification and disclosure requirements are satisfied. Instead, such dividends are subject to United States federal income tax on a net income basis in the same manner as if the non-U.S. holder were a United States person as defined under the Code. Any such effectively connected dividends received by a foreign corporation may be subject to an additional “branch profits tax” at a 30% rate or such lower rate as may be specified by an applicable income tax treaty.

A non-U.S. holder who wishes to claim the benefit of an applicable treaty rate and avoid backup withholding, as discussed below, for dividends will be required (a) to provide the applicable withholding agent with a properly executed Internal Revenue Service (“IRS”) Form W-BEN or Form W-8BEN-E (or other applicable form) certifying under penalty of perjury that such holder is not a United States person as defined under the Code and is eligible for treaty benefits or (b) if our common stock is held through certain foreign intermediaries, to satisfy the relevant certification requirements of applicable United States Treasury regulations. Special certification and other requirements apply to certain non-U.S. holders that are pass-through entities rather than corporations or individuals.

A non-U.S. holder eligible for a reduced rate of United States federal withholding tax pursuant to an income tax treaty may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

Gain on Disposition of Common Stock

Subject to the discussion of backup withholding and FATCA below, any gain realized by a non-U.S. holder on the sale or other disposition of our common stock generally will not be subject to United States federal income or withholding tax unless:

- the gain is effectively connected with a trade or business of the non-U.S. holder in the United States (and, if required by an applicable income tax treaty, is attributable to a United States permanent establishment of the non-U.S. holder);
- the non-U.S. holder is an individual who is present in the United States for 183 days or more in the taxable year of that disposition, and certain other conditions are met; or
- we are or have been a “United States real property holding corporation” for United States federal income tax purposes at any time within the five-year period preceding the disposition or the non-U.S. holder’s holding period, whichever period is shorter, the non-U.S. holder is not eligible for a treaty exemption, and either (i) our common stock is not regularly traded on an established securities market during the calendar year in which the sale or disposition occurs or (ii) the non-U.S. holder owned or is deemed to have owned at any time within the five-year period preceding the disposition or the non-U.S. holder’s holding period, whichever period is shorter, more than 5 percent of our common stock.

A non-U.S. holder described in the first bullet point immediately above will be subject to tax on the gain derived from the sale or other disposition in the same manner as if the non-U.S. holder were a United States person as defined under the Code. In addition, if any non-U.S. holder described in the first bullet point immediately above is a foreign corporation, the gain realized by such non-U.S. holder may be subject to an additional “branch profits tax” at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. An individual non-U.S. holder described in the second bullet point immediately above will be subject to a 30% (or such lower rate as may be specified by an applicable income tax treaty) tax on the gain derived from the sale or other disposition, which gain may be offset by United States source capital losses even though the individual is not considered a resident of the United States.

Generally, a corporation is a “United States real property holding corporation” if the fair market value of its United States real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests and its other assets used or held for use in a trade or business (all as determined for

United States federal income tax purposes). We believe we are not and do not anticipate becoming a “United States real property holding corporation” for United States federal income tax purposes.

Federal Estate Tax

Common stock held by an individual non-U.S. holder at the time of death will be included in such holder’s gross estate for United States federal estate tax purposes, unless an applicable estate tax treaty provides otherwise.

Information Reporting and Backup Withholding

Distributions paid to a non-U.S. holder and the amount of any tax withheld with respect to such distributions generally will be reported to the IRS. Copies of the information returns reporting such distributions and any withholding may also be made available to the tax authorities in the country in which the non-U.S. holder resides under the provisions of an applicable income tax treaty.

A non-U.S. holder will not be subject to backup withholding on dividends received if such holder certifies under penalty of perjury that it is a non-U.S. holder (and the payor does not have actual knowledge or reason to know that such holder is a United States person as defined under the Code), or such holder otherwise establishes an exemption.

Information reporting and, depending on the circumstances, backup withholding will apply to the proceeds of a sale or other disposition of our common stock made within the United States or conducted through certain United States-related financial intermediaries, unless the beneficial owner certifies under penalty of perjury that it is a non-U.S. holder (and the payor does not have actual knowledge or reason to know that the beneficial owner is a United States person as defined under the Code), or such owner otherwise establishes an exemption.

Backup withholding is not an additional tax and any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against a non-U.S. holder’s United States federal income tax liability provided the required information is timely furnished to the IRS.

Additional Withholding Requirements

Under Sections 1471 through 1474 of the Code (such Sections commonly referred to as “FATCA”), a 30% United States federal withholding tax may apply to any dividends paid on our common stock to (i) a “foreign financial institution” (as specifically defined in the Code) which does not provide sufficient documentation, typically on IRS Form W-8BEN-E, evidencing either (x) an exemption from FATCA, or (y) its compliance (or deemed compliance) with FATCA (which may alternatively be in the form of compliance with an intergovernmental agreement with the United States) in a manner which avoids withholding, or (ii) a “non-financial foreign entity” (as specifically defined in the Code) which does not provide sufficient documentation, typically on IRS Form W-8BEN-E, evidencing either (x) an exemption from FATCA, or (y) adequate information regarding certain substantial United States beneficial owners of such entity (if any). If a dividend payment is both subject to withholding under FATCA and subject to the withholding tax discussed above under “— Dividends,” the withholding under FATCA may be credited against, and therefore reduce, such other withholding tax. FATCA withholding may also apply to payments of gross proceeds of dispositions of our common stock, although under proposed regulations (the preamble to which specifies that taxpayers are permitted to rely on them pending finalization), no withholding will apply on payments of gross proceeds. You should consult your own tax advisors regarding these requirements and whether they may be relevant to your ownership and disposition of our common stock.

UNDERWRITING

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Jefferies LLC and Morgan Stanley & Co. LLC are acting as representatives, have severally agreed to purchase, and we and the selling stockholders have agreed to sell to them, severally and not jointly, the number of shares indicated below:

NAME	NUMBER OF SHARES
Jefferies LLC	
Morgan Stanley & Co. LLC	
BofA Securities, Inc.	
Credit Suisse Securities (USA) LLC	
Barclays Capital Inc.	
William Blair & Company, L.L.C.	
Total:	<u> </u>

The underwriters and the representatives are collectively referred to as the “underwriters” and the “representatives,” respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions, including receipt by the underwriters of officers’ certificates and legal opinions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters’ option to purchase additional shares described below. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of \$ per share under the public offering price. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representatives. Sales of shares of common stock made outside of the United States may be made by affiliates of the underwriters.

The selling stockholders have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of common stock at the public offering price listed on the cover page of this prospectus, less the underwriting discount. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the underwriter’s name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discount, and proceeds before expenses to us and the selling stockholders. These amounts are shown assuming both no exercise and full exercise of the underwriters’ option to purchase up to an additional shares of common stock.

	PER SHARE	TOTAL	
		NO EXERCISE	FULL EXERCISE
Public offering price	\$	\$	\$
Underwriting discount to be paid by:			
Us	\$	\$	\$
The selling stockholders	\$	\$	\$
Proceeds, before expenses, to us	\$	\$	\$
Proceeds, before expenses, to selling stockholders	\$	\$	\$

The estimated offering expenses payable by us, exclusive of the underwriting discount, are approximately \$. We have agreed to reimburse the underwriters for expenses relating to clearance of this offering with the Financial Industry Regulatory Authority, Inc. up to \$. The underwriters have agreed to reimburse us for certain expenses incurred in connection with this offering.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of shares of common stock offered by them.

We expect the shares of our common stock to be approved for listing on the Nasdaq under the trading symbol "CERT."

We, the selling stockholders and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that may be required to be made in respect of those liabilities.

No Sales of Similar Securities

We and all directors and officers and the holders of all of our outstanding stock and stock options have agreed that, without the prior written consent of on behalf of the underwriters, we and they will not, and will not publicly disclose an intention to, during the period ending 180 days after the date of this prospectus (the "restricted period"):

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock;
- file publicly (which for the avoidance of doubt shall not include confidential submissions with the SEC) any registration statement with the SEC relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock;

in each case, whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, we and each such person has agreed that, without the prior written consent of on behalf of the underwriters, we or such other person will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock (other than any demand or exercise that does not result in the public filing of a registration statement by us).

The lock-up restrictions described in the immediately preceding paragraph are subject to specified exceptions, including the following:

- the sale of shares to the underwriters;
- the issuance by the Company of shares of common stock upon the exercise of an option or a warrant or the conversion of a security outstanding on the date of this prospectus of which the underwriters have been advised in writing;

- transactions by any person other than us relating to shares of common stock or other securities acquired in open-market transactions after the completion of the offering of the shares; provided that no filing under Section 16(a) of the Exchange Act is required or voluntarily made in connection with subsequent sales of the common stock or other securities acquired in such open-market transactions; or
- facilitating the establishment of a trading plan on behalf of a shareholder, officer or director of the Company pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock, provided that (i) such plan does not provide for the transfer of common stock during the restricted period and (ii) to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by the Company regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of common stock may be made under such plan during the restricted period.

Furthermore, after the offering, our employees, including our executive officers and/or directors, may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Exchange Act. Sales under these trading plans would not be permitted until the expiration of the lock-up agreements relating to the offering described above.

, in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time. There are no existing agreements between the underwriters and any of the holder of our common stock who will execute a lock-up agreement providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the option to purchase additional shares. The underwriters can close out a covered short sale by exercising the option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open-market price of shares compared to the price available under the option to purchase additional shares. The underwriters may also sell shares in excess of the option to purchase additional shares, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of common stock in the open market to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

Electronic Distribution

In connection with the offering, certain of the underwriters or securities dealers may distribute prospectuses by electronic means, such as e-mail. A prospectus in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of shares of common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' websites and any information contained in any other website maintained by any of the underwriters is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Directed Share Program

At our request, the underwriters have reserved for sale at the initial public offering price up to shares of common stock for employees, directors and other persons associated with us who have expressed an interest in purchasing shares in the offering. The number of shares of common stock available for sale to the general public in the offering will be reduced to the extent these persons purchase the directed shares in the program. Any directed shares not so purchased will be offered by the underwriters to the general public on the same terms as the other shares. Except for certain participants who have entered into lock-up agreements as contemplated above, each person buying shares through the directed share program shall have no restriction regarding transferring shares purchased in the directed share program. For those participants who have entered into lock-up agreements as contemplated above, the lock-up agreements contemplated therein shall govern with respect to their purchases of shares of common stock in the program. in [its][their] sole discretion may release any of the securities subject to these lock-up agreements at any time. We have agreed to indemnify the underwriters against certain liabilities and expenses, including liabilities under the Securities Act, in connection with sales of the directed shares.

Other Activities and Relationships

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses. Certain of the underwriters or their respective affiliates are lenders under our Credit Agreement. Furthermore, to the extent we use the net proceeds of this offering to reduce indebtedness under our Credit Agreement, certain of the underwriters and their respective affiliates will receive a pro rata portion of such payments.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Pricing of the Offering

Prior to this offering, there has been no public market for our common stock. The initial public offering price was determined by negotiations between us and the representative. Among the factors considered in determining the initial public offering price were our future prospects and those of our industry in general, our sales, earnings and certain other financial and operating information in recent periods, and the price-earnings ratios, price-sales ratios, market prices of securities and certain financial and operating information of companies engaged in activities similar to ours. We offer no assurances that the initial public offering price will correspond to the price at which the common stock will trade in the public market subsequent to the offering or that an active trading market for the common stock will develop and continue after the offering.

The underwriters have advised us that, following the completion of this offering, they currently intend to make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time.

without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

Selling Restrictions

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the shares of common stock offered by this prospectus in any jurisdiction where action for that purpose is required. The shares of common stock offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such shares be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any shares of stock offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Canada

The shares of our common stock may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act (Ontario)*, and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the shares of our common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation; provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

European Economic Area

In relation to each Member State of the European Economic Area and the United Kingdom (each, a "Relevant State"), no shares of common stock have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares of common stock which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of shares of common stock may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

- (a) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;
- (b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the representatives; or
- (c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation;

provided that no such offer of shares of common stock shall require us or any of our representatives to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

Each person located in a Relevant State to whom any offer of shares of common stock is made or who receives any communication in respect of an offer of shares of common stock, or who initially acquires any

shares of common stock, will be deemed to have represented, warranted, acknowledged and agreed to and with us and each underwriter that (1) it is a “qualified investor” within the meaning of the law in that Relevant State implementing Article 2(1)(e) of the Prospectus Regulation; and (2) in the case of any shares of common stock acquired by it as a financial intermediary as that term is used in Article 3(2) of the Prospectus Regulation, the shares of common stock acquired by it in the offer have not been acquired on behalf of, nor have they been acquired with a view to their offer or resale to, persons in any Relevant State other than qualified investors, as that term is defined in the Prospectus Regulation, or in circumstances in which the prior consent of the representatives has been given to the offer or resale, or where shares of common stock have been acquired by it on behalf of persons in any Relevant State other than qualified investors, the offer of those shares of common stock to it is not treated under the Prospectus Regulation as having been made to such persons.

We, the underwriters and our and their respective affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgments and agreements.

This prospectus has been prepared on the basis that any offer of shares of common stock in any Relevant State will be made pursuant to an exemption under the Prospectus Regulation from the requirement to publish a prospectus for offers of shares of common stock. Accordingly, any person making or intending to make an offer in that Relevant State of shares of common stock which are the subject of the offering contemplated in this prospectus may only do so in circumstances in which no obligation arises for us or any of underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Regulation in relation to such offer. Neither we nor the underwriters have authorized, nor do they authorize, the making of any offer of shares of common stock in circumstances in which an obligation arises for us or the underwriters to publish a prospectus for such offer.

For the purposes of this provision, the expression an “offer to the public” in relation to any shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of common stock to be offered so as to enable an investor to decide to purchase any shares of common stock; and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129 (as amended).

United Kingdom

Each underwriter has represented and agreed that:

- (a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (the “FSMA”) received by it in connection with the issue or sale of the shares of our common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and
- (b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom.

Switzerland

This prospectus is not intended to constitute an offer or solicitation to purchase or invest in our shares of common stock. The shares of common stock may not be publicly offered, directly or indirectly, in Switzerland within the meaning of the Swiss Financial Services Act (“FinSA”) and no application has or will be made to admit the shares of common stock to trading on any trading venue (exchange or multilateral trading facility) in Switzerland. Neither this prospectus nor any other offering or marketing material relating to the shares of common stock constitutes a prospectus pursuant to the FinSA, and neither this prospectus nor any other offering or marketing material relating to the shares of common stock may be publicly distributed or otherwise made publicly available in Switzerland.

Dubai International Financial Centre

This prospectus relates to an “Exempt Offer” in accordance with the Offered Securities Rules of the Dubai Financial Services Authority (the “DFSA”). This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other

person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for the prospectus. The common stock to which this prospectus relates may be illiquid or subject to restrictions on its resale. Prospective purchasers of the common stock offered should conduct their own due diligence on the common stock. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

Hong Kong

Shares of our common stock may not be offered or sold by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), (ii) to “professional investors” within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) and any rules made thereunder or (iii) in other circumstances that do not result in the document being a “prospectus” within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), and no advertisement, invitation, or document relating to shares of our common stock may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares of our common stock that are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares of our common stock may not be circulated or distributed, nor may the shares of our common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the “SFA”), (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares of our common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) the sole purpose of which is to hold investments and each beneficiary of the trust is an individual who is an accredited investor;

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries’ rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of our common stock pursuant to an offer made under Section 275 of the SFA except:

- (1) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- (2) where no consideration is or will be given for the transfer;
- (3) where the transfer is by operation of law;
- (4) as specified in Section 276(7) of the SFA; or
- (5) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Singapore SFA Product Classification— In connection with Section 309B of the SFA and the CMP Regulations 2018, unless otherwise specified before an offer of shares of our common stock, we have determined, and hereby notify, all relevant persons (as defined in Section 309A(1) of the SFA), that shares of our common stock are “prescribed capital markets products” (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Japan

No registration pursuant to Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) (the “FIEL”) has been made or will be made with respect to the solicitation of the application for the acquisition of the shares of common stock.

Accordingly, the shares of common stock have not been, directly or indirectly, offered or sold and will not be, directly or indirectly, offered or sold in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan) or to others for re-offering or re-sale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements, and otherwise in compliance with, the FIEL and the other applicable laws and regulations of Japan.

For Qualified Institutional Investors (“QII”)

Please note that the solicitation for newly issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a “QII only private placement” or a “QII only secondary distribution” (each as described in Paragraph 1, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred to QIIs.

For Non-QII Investors

Please note that the solicitation for newly issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a “small number private placement” or a “small number private secondary distribution” (each as is described in Paragraph 4, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred en bloc without subdivision to a single investor.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the “Corporations Act”), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares of common stock may only be made to persons (“Exempt Investors”) who are “sophisticated investors” (within the meaning of section 708(8) of the Corporations Act), “professional investors” (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares of common stock without disclosure to investors under Chapter 6D of the Corporations Act.

The shares of common stock applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document that complies with Chapter 6D of the Corporations Act. Any person acquiring shares of common stock must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take into account the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities

recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate for their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus will be passed upon for us by Simpson Thacher & Bartlett LLP, Palo Alto, California. Certain legal matters relating to this offering will be passed upon for the underwriters by Latham & Watkins LLP, Washington, District of Columbia.

EXPERTS

The consolidated financial statements as of December 31, 2019 and 2018, and for the years then ended included in this prospectus have been audited by CohnReznick LLP, an independent registered public accounting firm, as stated in their report appearing herein. Such financial statements have been so included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the common stock offered by this prospectus. This prospectus is a part of the registration statement and does not contain all of the information set forth in the registration statement and its exhibits and schedules, portions of which have been omitted as permitted by the rules and regulations of the SEC. For further information about us and our common stock, you should refer to the registration statement and its exhibits and schedules.

We will file annual, quarterly and special reports and other information with the SEC. Our filings with the SEC will be available to the public on the SEC's website at <http://www.sec.gov>. Those filings will also be available to the public on, or accessible through, our website under the heading "Investor Relations" at www.certara.com. The information we file with the SEC or contained on or accessible through our corporate website or any other website that we may maintain is not part of this prospectus or the registration statement of which this prospectus is a part.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

	PAGE
Audited Consolidated Financial Statements	
Report of Independent Registered Public Accounting Firm	F-2
Consolidated Balance Sheets as of December 31, 2019 and 2018	F-3
Consolidated Statements of Operations and Comprehensive Loss for the years ended December 31, 2019 and 2018	F-4
Consolidated Statements of Stockholder's Equity for the years ended December 31, 2019 and 2018	F-5
Consolidated Statements of Cash Flows for the years ended December 31, 2019 and 2018	F-6
Notes to the Consolidated Financial Statements	F-7
Unaudited Condensed Consolidated Financial Statements	
Consolidated Balance Sheets as of September 30, 2020 and 2019	F-33
Condensed Consolidated Statements of Operations and Comprehensive Income (Loss) for the nine months ended September 30, 2020 and 2019	F-34
Condensed Consolidated Statements of Stockholder's Equity for the nine months ended September 30, 2020 and 2019	F-35
Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 2020 and 2019	F-37
Notes to the Condensed Consolidated Financial Statements	F-38

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholder of
Certara, Inc. and Subsidiaries

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Certara, Inc. (formerly EQT Avatar Topco, Inc.) and Subsidiaries (the "Company") as of December 31, 2019 and 2018, and the related consolidated statements of operations and comprehensive loss, stockholder's equity, and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Certara, Inc. and Subsidiaries as of December 31, 2019 and 2018, and the results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Adoption of New Accounting Standard

As discussed in Note 2 to the consolidated financial statements, Certara, Inc. and Subsidiaries adopted Accounting Standards Codification ASU 2014-09, Revenue from Contracts with Customers ("Topic 606"), beginning January 1, 2019, using the modified retrospective method.

/s/ CohnReznick LLP

Roseland, New Jersey
October 7, 2020

We have served as Certara, Inc. and Subsidiaries' auditor since October 2019.

CERTARA, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(IN THOUSANDS, EXCEPT PER COMMON SHARE AND SHARE DATA)	DECEMBER 31,	
	2019	2018
Assets		
Current assets:		
Cash and cash equivalents	\$ 29,256	\$ 11,684
Accounts receivable, net of allowance for doubtful accounts of \$185 and \$175, respectively	49,642	46,493
Restricted cash	506	503
Prepaid expenses and other current assets	8,119	8,763
Current portion of interest rate swap asset	—	1,487
Total current assets	87,523	68,930
Other assets:		
Property and equipment, net	4,623	5,401
Long-term deposits	1,096	1,264
Goodwill	514,996	514,274
Intangible assets, net of accumulated amortization of \$85,925 and \$46,649, respectively	427,998	459,623
Long-term portion of interest rate swap asset	—	1,164
Deferred income taxes	833	837
Total assets	\$ 1,037,069	\$ 1,051,493
Liabilities and stockholder's equity		
Current liabilities:		
Accounts payable	\$ 4,917	\$ 4,908
Accrued expenses	27,036	19,585
Current portion of deferred revenue	26,240	37,521
Current portion of interest rate swap liability	551	—
Current portion of long-term debt	4,210	3,153
Current portion of capital lease obligations	48	284
Total current liabilities	63,002	65,451
Long-term liabilities:		
Capital lease obligations, net of current portion	—	48
Deferred revenue, net of current portion	1,137	2,763
Deferred income taxes	82,160	85,667
Long-term portion of interest rate swap liability	1,601	—
Long-term debt, net of current portion and debt discount	397,121	404,795
Total liabilities	545,021	558,724
Commitments and contingencies		
Stockholder's equity		
Common shares, 0.01 par value, 1,000 shares authorized, 100 shares issued and outstanding	—	—
Additional paid-in capital	510,486	508,848
Accumulated deficit	(12,941)	(14,432)
Accumulated other comprehensive loss	(5,497)	(1,647)
Total stockholder's equity	492,048	492,769
Total liabilities and stockholder's equity	\$ 1,037,069	\$ 1,051,493

The accompanying notes are an integral part of the consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

(IN THOUSANDS, EXCEPT COMMON SHARE AND SHARE DATA)	YEAR ENDED DECEMBER 31	
	2019	2018
Revenues	\$ 208,511	\$ 163,719
Cost of revenues	79,770	71,043
Operating expenses:		
Sales and marketing	10,732	9,416
Research and development	11,633	10,478
General and administrative	47,926	43,393
Intangible asset amortization	36,241	31,625
Depreciation and amortization expense	2,596	2,416
Total operating expenses	109,128	97,328
Income (loss) from operations	19,613	(4,652)
Other expenses:		
Interest expense	(28,004)	(27,802)
Miscellaneous, net	(760)	(107)
Total other expenses	(28,764)	(27,909)
Loss before income taxes	(9,151)	(32,561)
(Benefit from) provision for income taxes	(225)	697
Net loss	(8,926)	(33,258)
Other comprehensive income (loss)		
Foreign currency translation adjustment	433	(16,721)
Change in fair value of interest rate swap, net of tax	(4,283)	1,079
Total other comprehensive loss	(3,850)	(15,642)
Comprehensive loss	\$ (12,776)	\$ (48,900)
Net loss per common share—basic and diluted	\$ (89,260)	\$ (332,580)
Basic and diluted weighted average common shares outstanding	100	100

The accompanying notes are an integral part of the consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDER'S EQUITY

(IN THOUSANDS, EXCEPT SHARE DATA)	COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	RETAINED EARNINGS (ACCUMULATED DEFICIT)	ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)	TOTAL STOCKHOLDER'S EQUITY
	SHARES	AMOUNT				
Balance as of December 31, 2017	100	\$ —	\$ 507,127	\$ 18,826	\$ 13,995	\$ 539,948
Equity compensation	—	—	1,711	—	—	1,711
Capital contribution	—	—	1,110	—	—	1,110
Repurchase of Parent Class B units	—	—	(1,100)	—	—	(1,100)
Change in fair value of interest rate swap, net of tax	—	—	—	—	1,079	1,079
Net loss	—	—	—	(33,258)	—	(33,258)
Foreign currency translation adjustment	—	—	—	—	(16,721)	(16,721)
Balance as of December 31, 2018	100	—	508,848	(14,432)	(1,647)	492,769
Cumulative effect adjustment upon adoption of Topic 606	—	—	—	10,417	—	10,417
Equity compensation	—	—	1,691	—	—	1,691
Repurchase of Parent Class B units	—	—	(703)	—	—	(703)
Capital contribution	—	—	650	—	—	650
Change in fair value of interest rate swap, net of tax	—	—	—	—	(4,283)	(4,283)
Net loss	—	—	—	(8,926)	—	(8,926)
Foreign currency translation adjustment	—	—	—	—	433	433
Balance as of December 31, 2019	100	\$ —	\$ 510,486	\$ (12,941)	\$ (5,497)	\$ 492,048

The accompanying notes are an integral part of the consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(IN THOUSANDS)	YEAR ENDED DECEMBER 31	
	2019	2018
Cash flows from operating activities:		
Net loss	\$ (8,926)	\$ (33,258)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation and amortization of property and equipment	2,596	2,416
Amortization of intangible assets	38,964	34,595
Amortization of debt issuance costs	1,536	1,517
Provision for doubtful accounts	10	(250)
Loss on retirement of assets	113	91
Equity compensation expense	1,691	1,711
Deferred income taxes	(6,703)	(3,548)
Changes in assets and liabilities, net of acquisitions:		
Accounts receivable	(1,521)	(2,031)
Prepaid expenses and other assets	(1,831)	(2,614)
Accounts payable and accrued expenses	10,031	(6,357)
Deferred revenue	2,065	19,320
Net cash provided by operating activities	38,025	11,592
Cash flows from investing activities:		
Capital expenditures	(2,107)	(4,758)
Capitalized development costs	(7,410)	(6,727)
Business acquisitions, net of cash acquired	—	(62,420)
Net cash used in investing activities	(9,517)	(73,905)
Cash flows from financing activities:		
Capital contributions	650	1,110
Unit repurchase	(703)	(1,100)
Proceeds from borrowings on long-term debt	—	65,000
Payments on long-term debt and capital lease obligations	(3,436)	(3,981)
Proceeds on line of credit	—	10,000
Payment of contingent consideration obligations	—	(7,670)
Payments on line of credit	(5,000)	(5,000)
Debt issuance costs payments	—	(1,063)
Net cash (used in) provided by financing activities	(8,489)	57,296
Effect of foreign exchange rate changes on cash, cash equivalents, and restricted cash	(2,444)	(1,337)
Net increase (decrease) in cash, cash equivalents, and restricted cash	17,575	(6,354)
Cash, cash equivalents, and restricted cash, at beginning of year	12,187	18,541
Cash, cash equivalents, and restricted cash, at end of year	\$ 29,762	\$ 12,187
Supplemental disclosures of cash flow information		
Cash paid for interest	\$ 26,428	\$ 25,713
Cash paid for taxes	\$ 4,109	\$ 3,165
Supplemental schedules of noncash investing and financing activities		
Liabilities assumed in connection with business acquisition	\$ —	\$ 12,805

The accompanying notes are an integral part of the consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

1. Description of Business

Certara, Inc. and its wholly-owned subsidiaries (together, the “Company”) deliver software products and technology-enabled services to customers to efficiently carry out and realize the full benefits of biosimulation in drug discovery, preclinical and clinical research, regulatory submissions and market access. The Company is a global leader in biosimulation, and the Company’s biosimulation software and technology-enabled services help optimize, streamline, or even waive certain clinical trials to accelerate programs, reduce costs, and increase the probability of success. The Company’s regulatory science and market access software and services are underpinned by technologies such as regulatory submissions software, natural language processing, and Bayesian analytics. When combined, these solutions allow the Company to offer customers end-to-end support across the entire product life cycle. On October 1, 2020, the Company amended the certificate of incorporation of EQT Avatar Topco, Inc. to change the name of the Company to Certara, Inc.

The Company has operations in the United States, Canada, Spain, Luxembourg, Portugal, United Kingdom, Germany, France, Netherlands, Denmark, Switzerland, Italy, Poland, Japan, Philippines, India, and Australia.

2. Summary of Significant Accounting Policies

(a) Basis of Presentation and Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles (“U.S. GAAP”) requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates include, among other estimates, the determination of fair values and useful lives of long-lived assets as well as intangible assets, goodwill, allowance for doubtful accounts receivable, recoverability of deferred tax assets, recognition of deferred revenue (including at the date of business combinations), value of interest rate swaps, determination of fair value of equity-based awards and assumptions used in testing for impairment of long-lived assets. Actual results could differ from those estimates, and such differences may be material to the consolidated financial statements.

The Company is an Emerging Growth Company, as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”). Under the JOBS Act, Emerging Growth Companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. The Company has elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that it (i) is no longer an Emerging Growth Company or (ii) it affirmatively and irrevocably opts out of the extended transition period provided in the JOBS Act. As a result, these financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates. The adoption dates discussed below reflect this election.

(b) Recently Adopted Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2014-09, “Revenue from Contracts with Customers” (“Topic 606”). Subsequent to the issuance of Topic 606, the FASB clarified the guidance through several ASUs, referred to as ASC 606. This guidance represents a comprehensive new revenue recognition model that requires a company to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which that company expects to be entitled to receive in exchange for those goods or services. This update sets forth a new five-step revenue recognition model which replaces the prior revenue recognition guidance in its entirety.

On January 1, 2019, the Company adopted ASC 606, using the modified retrospective method, applied to all contracts not completed as of the date of adoption. This method requires the cumulative effect of the

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

adoption to be recognized as an adjustment to opening retained earnings or accumulated deficit in the period of adoption. The effects of adopting ASC 606 were a decrease of \$10,417, net of taxes of \$3,325, to accumulated deficit as of January 1, 2019, for the cumulative effect on prior years of having adopted the new standard, a decrease in deferred revenues of \$13,587, an increase in deferred taxes of \$3,325, and a decrease in cumulative translation adjustment of \$155. These adjustments are a result of the upfront recognition of license revenues from term licenses.

Financial results for reporting periods beginning January 1, 2019 are presented under ASC 606, while prior period amounts were not adjusted and continue to be reported in accordance with the historical accounting guidance under ASC Topic 605.

In November 2016, the FASB issued ASU 2016-18 “Statement of Cash Flows (Topic 230): Restricted Cash”. ASU 2016-18 requires entities to show the changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents in the statement of cash flows. As a result, entities will no longer present transfers between cash and cash equivalents and restricted cash and restricted cash equivalents in the statement of cash flows. The ASU requires changes in the Company’s restricted cash to be classified as either operating activities, investing activities or financing activities in the Consolidated Statements of Cash Flows, depending on the nature of the activities that gave rise to the restriction. The new standard is effective for annual reporting periods beginning after December 15, 2018. Retrospective transition method is to be applied to each period presented. The Company adopted ASU 2016-18 on January 1, 2019. The adoption of ASU 2016-18 did not have a material impact to the Company’s consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-02, “Income Statement—Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income”. The amendments in this update allow a reclassification from accumulated other comprehensive income (“AOCI”) to retained earnings for adjustments to the tax effect of items in AOCI, that were originally recognized in other comprehensive income, related to the new statutory rate prescribed in the Tax Cuts and Jobs Act (“TCJA”) enacted on December 22, 2017, which reduced the US federal corporate tax rate from 35% to 21%. The amendments in this update should be applied either in the period of adoption or retrospectively to each period (or periods) in which the effect of the change in the US federal corporate income tax rate in the TCJA is recognized. The adoption of this standard on January 1, 2019 had no impact to the Company’s consolidated financial statements.

(c) Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued ASU 2016-02, “Leases.” ASU 2016-02 establishes a right-of-use (“ROU”) model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. A modified retrospective transition approach is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available. In its April 2020 meeting, FASB deferred the effective date for ASC 842 for private companies to fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022. The Company will adopt ASU 2016-02 during the year beginning January 1, 2022 and is currently evaluating the impact of adopting this guidance on its consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13 “Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments” (ASU 2016-13). ASU 2016-13 changes the impairment model for most financial assets and certain other instruments. For trade and other receivables, held-to-maturity debt securities, loans, and other instruments, entities will be required to use a new forward-looking “expected loss” model that generally will result in the earlier recognition of allowances for losses. The guidance also requires increased disclosures. Per ASU 2019-10 issued in November 2019, ASU 2016-13 is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years for private companies. Early adoption is permitted. The Company will adopt ASU 2016-13 during

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

the year beginning January 1, 2023 and is currently evaluating the impact of adopting this guidance on its consolidated financial statements.

In January 2017, the FASB issued ASU 2017-04, "Intangibles—Goodwill and Other (Topic 350): Simplifying the Accounting for Goodwill Impairment". ASU 2017-04 removes Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. A goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. This standard will be effective for a private company (and thus, for those adopting exemption for Emerging Growth Companies) beginning in the first quarter of fiscal year 2022 and is required to be applied prospectively. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company will adopt ASU 2017-04 during the year beginning January 1, 2022 and is currently evaluating the impact of adopting this guidance on its consolidated financial statements.

In August 2018, the FASB issued ASU 2018-15, "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract," which included updated guidance on ASC 350-40 "Intangibles—Goodwill and Other—Internal-Use Software". The new guidance requires a customer in a cloud computing arrangement that is a service contract to follow the internal-use software guidance in ASC 350-40 to determine which implementation costs to capitalize as assets or expense as incurred. ASU 2018-15 is effective for calendar-year public business entities in 2020. For all other calendar-year entities, it is effective for annual periods beginning in 2021 and interim periods in 2022. Early adoption is permitted. The Company will adopt ASU 2018-15 during the year beginning January 1, 2020. The impact of adopting ASU 2018-15 did not have a material impact to the Company's consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, "Changes to Disclosure Requirements for Fair Value Measurements (Topic 820)", which improved the effectiveness of disclosure requirements for recurring and nonrecurring fair value measurements. The standard removes, modifies, and adds certain disclosure requirements. The amendments in this Update are effective for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted. The Company will adopt ASU 2018-13 during the year beginning January 1, 2020. The impact of adopting ASU 2018-13 did not have a material impact to the Company's consolidated financial statements.

In December 2019, the FASB issued ASU No. 2019-12, "Simplifying the Accounting for Income Taxes" which removes certain exceptions related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period, the recognition of deferred tax liabilities for outside basis differences and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. The guidance is effective as of January 1, 2021, with early adoption permitted. The Company is currently evaluating the impact of adopting this new guidance on the consolidated financial statements.

(d) Principles of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation. The results of certain of our foreign operations are recorded on a three-month lag in our consolidated financial statements. In the event that significant events occur during the lag period, the impact is included in the current period results.

(e) Fair Value Measurements

The Company follows FASB ASC 820-10, "Fair Value Measurements," which defines fair value, establishes a framework for measuring fair value in U.S. GAAP, and requires certain disclosures about fair value measurements.

ASC 820-10 defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the most advantageous market for the asset or liability in an orderly transaction. Fair value measurement is based on a hierarchy of observable or unobservable inputs. The standard describes three levels of inputs that may be used to measure fair value.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

Level 1 — Inputs to the valuation methodology are quoted prices available in active markets for identical securities as of the reporting date;

Level 2 — Inputs to the valuation methodology are other significant observable inputs, including quoted prices for similar securities, interest rates, credit risk etc. as of the reporting date, and the fair value can be determined through the use of models or other valuation methodologies; and

Level 3 — Inputs to the valuation methodology are unobservable inputs in situations where there is little, or no market activity of the securities and the reporting entity makes estimates and assumptions relating to the pricing of the securities including assumptions regarding risk.

If the inputs used to measure fair value fall in different levels of the fair value hierarchy, the hierarchy is based upon the lowest level of input that is significant to the fair value measurement. For the acquisitions noted in Note 5, the fair value measurement methods used to estimate the fair value of the assets acquired and liabilities assumed at the acquisition dates utilized a number of significant unobservable inputs of Level 3 assumptions. These assumptions included, among other things, projections of future operating results, implied fair value of assets using an income approach by preparing a discounted cash flow analysis, and other subjective assumptions.

Interest rate swaps are valued in the market using discounted cash flows techniques. These techniques incorporate Level 1 and Level 2 inputs. The market inputs are utilized in the discounted cash flows' calculation considering the instrument's term, notional amount, discount rate and credit risk. Significant inputs to the derivative instrument valuation model for interest rate swaps are observable in active markets and are classified as Level 2 in the hierarchy.

(f) Cash, Cash Equivalents and Restricted Cash

Cash equivalents include highly-liquid investments with maturities of three months or less from the date purchased. At times, cash balances held at financial institutions were in excess of the Federal Deposit Insurance Corporation's insured limits; however, the Company primarily places its temporary cash with high-credit quality financial institutions. The Company has never experienced losses related to these balances and believes it is not exposed to any significant credit risk on cash.

Restricted cash represents cash that is used as collateral to support an unsecured Company credit card program through a major bank. The restricted cash balance was \$506 and \$503 at December 31, 2019 and 2018, respectively.

As of December 31, 2019 and 2018, the carrying values reflected in the Consolidated Balance Sheets reasonably approximate the fair values for cash, cash equivalents and restricted cash due to the short-term maturity of these items. The following table provides a reconciliation of cash and cash equivalents and restricted cash reported within the consolidated balance sheets to the amounts presented in the consolidated statements of cash flows:

	DECEMBER 31,	
	2019	2018
Cash and cash equivalents	\$ 29,256	\$ 11,684
Restricted cash, current	506	503
Total cash and cash equivalents, and restricted cash	\$ 29,762	\$ 12,187

(g) Accounts Receivable

Accounts receivable includes current outstanding invoices billed to customers. Invoices are typically issued with net 30-days to net 90-days terms upon delivery of product or upon achievement of billable events for service-based contracts. The carrying amount of accounts receivable is reduced by a valuation allowance, if necessary.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

which reflects management's best estimate of the amounts that are doubtful. This allowance is estimated based on management's knowledge of its customers' financial condition, credit history, and existing economic conditions. Account balances are considered delinquent if payment is not received by the due date. Accounts receivable are written off when deemed uncollectible. Recovery of accounts receivable previously written off is recorded when received. Interest is not charged on accounts receivable. An allowance for doubtful accounts of \$185 and \$175 was provided in the accompanying consolidated financial statements as of December 31, 2019 and 2018, respectively.

	DECEMBER 31,	
	2019	2018
Trade receivables	\$ 43,649	\$ 41,933
Unbilled receivables	5,635	4,403
Other receivables	358	157
Accounts receivable, net	<u>\$ 49,642</u>	<u>\$ 46,493</u>

As of December 31, 2019 and 2018, the carrying values reflected in the Consolidated Balance Sheets reasonably approximate the fair values for accounts receivable due to the short-term maturity of these items.

(h) Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation and amortization.

Depreciation and amortization is provided using the straight-line method over the estimated useful lives of the assets, which range from three to ten years for equipment and furniture, the shorter of the useful lives of the improvement or the life of the related lease term for leasehold improvements, and one to three years for purchased software. The Company seeks to match the book useful life of assets to the expected productive lives. Assets deemed to be impaired or no longer productive are written down to their net realizable value. The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying value of the asset may not be recoverable. If such events or changes in circumstances are present, an impairment loss would be recognized if the sum of the expected future net cash flows is less than the carrying amount of the asset. An impairment loss would be recorded for the excess of the carrying value of the asset over the estimated fair value. There was no impairment of property and equipment for the years ended December 31, 2019 and 2018.

(i) Software Development Costs

Software development costs are accounted for in accordance with FASB ASC Subtopic 985-20 if the software is to be sold, leased or otherwise marketed, or by FASB ASC Subtopic 350-40 if the software is for internal use. After the technological feasibility of the software has been established (for software to be marketed), or at the beginning of application development (for internal-use software), software development costs, which include primarily salaries and related payroll costs and costs of independent contractors incurred during development, are capitalized. Research and development ("R&D") costs incurred prior to the establishment of technological feasibility (for software to be marketed), or prior to application development (for internal-use software), are expensed as incurred. Software development costs are amortized on a product-by-product basis commencing on the date of general release of the products (for software to be marketed) or the date placed in service (for internal-use software). During the years ended December 31, 2019 and 2018, costs of \$7,410 and \$6,727, respectively, were capitalized related to software development activities. Software development costs for software to be marketed are amortized using the straight-line method over its estimated useful life, which is typically three years. The Company reviews capitalized software for impairment whenever events or changes in circumstances indicate that the carrying value of the asset may not be recoverable. If such events or changes in circumstances are present, an impairment loss would be recognized if the sum of the expected future net cash flows is less than the carrying amount of the asset. An impairment loss would be recorded for the

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

excess of the carrying value of the asset over the estimated fair value. There was no impairment of software development costs for the years ended December 31, 2019 and 2018.

(j) Debt Issuance Costs

Debt issuance costs are capitalized and amortized over the term of the related debt using the effective interest rate method. Amortization of debt issuance costs is included in interest expense within the Consolidated Statements of Operations and Comprehensive Loss. The unamortized amount is included as an offset against long-term debt on the Consolidated Balance Sheets.

(k) Goodwill and Other Intangible Assets

Goodwill is tested for impairment at the reporting unit level, which is one level below or the same as an operating segment. When testing goodwill for impairment, the Company first performs a qualitative assessment to determine whether it is necessary to perform step one of a two-step annual goodwill impairment test for each reporting unit. The Company is required to perform step one only if it concludes that it is more likely than not that a reporting unit's fair value is less than its carrying value. Should this be the case, the first step of the two-step process is to identify whether a potential impairment exists by comparing the estimated fair values of the Company's reporting units with their respective book values, including goodwill. If the estimated fair value of the reporting unit exceeds book value, goodwill is considered not to be impaired, and no additional steps are necessary. If, however, the fair value of the reporting unit is less than book value, then the second step is performed to determine if goodwill is impaired and to measure the amount of impairment loss, if any. The amount of the impairment loss is the excess of the carrying amount of the goodwill over its implied fair value. The estimate of implied fair value of goodwill is primarily based on an estimate of the discounted cash flows expected to result from that reporting unit but may require valuations of certain internally generated and unrecognized intangible assets such as the Company's software, technology, patents and trademarks. If the carrying amount of goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized in an amount equal to the excess.

For the years ended December 31, 2019 and 2018, the Company performed a quantitative assessment of goodwill and determined that it is not more-likely-than-not that the fair value of its reporting units is less than the carrying amount. Accordingly, no impairment loss was recorded for the years ended December 31, 2019 and 2018.

Other identifiable intangible assets with finite lives, such as software products acquired in acquisitions, non-compete agreements, trade names and customer relationship assets, are amortized over their estimated lives using either a straight-line method or a method based on pattern of expected economic benefit of the asset as follows: acquired software — 3 to 10 years; non-compete agreements — 2 to 5 years; trade names — 20 years; customer relationships — 11 to 16 years; and tradename — 10 to 17 years. The Company evaluates finite intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset might not be recoverable. An impairment loss is recognized when estimated undiscounted future cash flows expected to result from the use of the asset are less than its carrying amount.

There were no impairment charges related to intangible assets for the years ended December 31, 2019 and 2018.

(l) Foreign Currency Translation

Generally, the functional currency of the Company's international subsidiaries is the local currency of the country in which they operate. The Company translates the assets and liabilities of its non-U.S. dollar functional currency subsidiaries into U.S. dollars using exchange rates in effect at the end of each reporting period. Revenue and expenses for these subsidiaries are translated using average exchange rates prevailing during the period. Gains and losses from these translations are recognized as a cumulative translation adjustment and included as a separate component in accumulated other comprehensive loss within stockholder's equity.

For transactions that are not denominated in the local functional currency, the Company remeasures monetary assets and liabilities at exchange rates in effect at the end of each reporting period. Foreign currency

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

transaction gains and losses are included net within comprehensive loss in the Consolidated Statements of Operations and Comprehensive Loss and resulted in foreign currency losses of \$431 and \$23 for the years ended December 31, 2019 and 2018, respectively.

(m) Derivative Instruments

In the normal course of business, the Company is subject to risk from adverse fluctuations in interest rates. The Company has chosen to manage this risk through the use of derivative financial instruments that consist of interest rate swap contracts. Counterparties to these contracts are major financial institutions. The Company is exposed to credit loss in the event of nonperformance by these counterparties. The Company does not use derivative instruments for trading or speculative purposes. The objective in managing exposure to market risk is to limit the impact on cash flows. To qualify for hedge accounting, the interest rate cap and swaps must effectively reduce the risk exposure that they are designed to hedge. In addition, at inception of a qualifying cash flow hedging relationship, the underlying transaction or transactions must be, and be expected to remain, probable of occurring in accordance with the related assertions.

FASB ASC 815, "Derivatives and Hedging," requires the Company to recognize all derivatives on the balance sheet at fair value. The Company may enter into derivative contracts such as interest rate swap contracts that effectively convert portions of the Company's floating rate debt to a fixed rate, which serves to mitigate interest rate risk. The Company's objectives in using interest rate swaps are to add stability to interest expense and to manage its exposure to interest rate movements. Interest rate swaps designated as cash flow hedges involve the receipt of variable-rate amounts from a counterparty in exchange for the Company making fixed-rate payments over the life of the agreements without exchange of the underlying notional amount.

As of December 31, 2018, the Company had one outstanding interest rate swap that was designated as a cash flow hedge of interest rate risk for a notional amount of \$217,500 that fixed the interest rate at 1.8523%, noninclusive of the fixed credit spread. This interest rate swap has a maturity date of November 30, 2020. On May 22, 2019, the Company entered into a second interest rate swap agreement, which is effective upon the maturity of the interest rate swap agreement, of November 30, 2020. This second interest rate swap was also designated as a cash flow hedge of interest rate risk for a notional amount of \$230,000 that fixed the interest rate at 2.1284%, noninclusive of the fixed credit spread through May 31, 2022. The Company recorded the fair value of its interest rate swap in the amount of \$2,152 and \$2,651, as a derivative liability and asset as of December 31, 2019 and 2018, respectively, in its Consolidated Balance Sheets. The Company's interest rate swap qualifies for hedge accounting. The fair value of the interest rate swap is recognized in the Consolidated Balance Sheets and the changes in the fair value of the derivatives are recognized in other comprehensive loss.

The following table set forth the assets and liabilities that were measured at fair value on a recurring and non-recurring basis by their levels in the fair value hierarchy at December 31, 2019:

	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
Liability				
Interest rate swap liability	\$ —	\$ 2,152	\$ —	\$2,152
Total	<u>\$ —</u>	<u>\$ 2,152</u>	<u>\$ —</u>	<u>\$2,152</u>

The following table set forth the assets and liabilities that were measured at fair value on a recurring and non-recurring basis by their levels in the fair value hierarchy at December 31, 2018:

	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
Liability				
Interest rate swap asset	\$ —	\$ 2,651	\$ —	\$2,651
Total	<u>\$ —</u>	<u>\$ 2,651</u>	<u>\$ —</u>	<u>\$2,651</u>

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

The net amount of deferred gains (losses) related to derivative instruments designated as cash flow hedges that is expected to be reclassified from accumulated other comprehensive loss into earnings over the next 12 months is insignificant.

(n) Warranty

The Company includes an assurance commitment warranting the application software products will perform in accordance with written user documentation and the agreements negotiated with customers. Since the Company does not customize its applications software, warranty costs are insignificant and expensed as incurred.

(o) Net Loss per Share

Basic net loss per common share is computed by dividing the net loss by the weighted-average number of shares outstanding during the reporting period, without consideration for potentially dilutive securities. Diluted net loss per share is computed by dividing the net loss attributable to stockholders by the weighted-average number of shares and potentially dilutive securities outstanding during the period. The Company had no potentially dilutive securities outstanding during the years ended December 31, 2019 and 2018.

(p) Income Taxes

The Company accounts for income taxes under the asset and liability method. Under this method, the amount of taxes currently payable or refundable is accrued, and deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial reporting and tax basis of existing assets and liabilities. Deferred tax assets also include realizable tax losses and tax credit carryforwards.

The deferred tax assets may be reduced by a valuation allowance, which is established when it is more likely than not that some portion or all of the deferred tax assets will not be realized. In addition, management is required to evaluate all available evidence, both positive and negative, when making its judgment to determine whether to record a valuation allowance for a portion, or all, of its deferred tax assets. Deferred tax assets and liabilities are measured using enacted income tax rates in effect for the year in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in income tax rate is recognized in the period that includes the enactment date.

Uncertainty in Income Taxes

The Company accounts for uncertainty in income taxes using a two-step approach. The first step requires the Company to conclude that a tax position, based solely on its technical merits, is more likely than not to be sustained upon examination by a tax authority. The second step requires the Company to measure the largest amount of benefit, determined on a cumulative probability basis, that is more likely than not to be realized upon ultimate settlement with the respective tax authority. The Company recognizes the effect of income tax positions only if those positions are more likely than not of being sustained. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. Further, the benefit to be recorded in the consolidated financial statements is the amount most likely to be realized assuming a review by the tax authorities having all relevant information and applying current conventions. The Company's policy is to recognize interest and penalties related to income tax positions taken as a component of the provision for income taxes.

The Company recorded unrecognized tax benefits of \$690 and \$592 as of December 31, 2019 and 2018, respectively. For December 31, 2019 and 2018, there were no interest or penalties recorded. The Company does not anticipate any significant changes to its uncertain tax positions during the next 12 months. Audits for federal income tax returns are ongoing for the tax years ended December 31, 2017 and 2016. Additionally, the Internal Revenue Service can audit the NOLs generated in respective years in the years that the NOLs are utilized. State income tax returns are generally subject to examination for a period of three to six years after the filing of the respective tax return. The state impact of any federal changes remains subject to examination

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

by various states for a period of up to one year after formal notification to the states. Foreign income tax returns are generally subject to examination based on the tax laws of the respective jurisdictions.

(q) Revenue Recognition ASC 606

Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for promised goods or services. The Company's revenue consists of fees for perpetual and term licenses for the Company's software products, post-contract customer support (referred to as maintenance), software as a service ("SaaS") and professional services including training and other revenue. For contracts with multiple performance obligations, the Company allocates the transaction price of the contract to each performance obligation on a relative standalone selling price basis. The delivery of a particular type of software and each of the user licenses would be one performance obligation. However, any training, implementation, or support and maintenance promises as part of the software license agreement would be considered separate performance obligations, as those promises are distinct and separately identifiable from the software licenses. The payment terms in these arrangements are sufficiently short such that there is no significant financing component to the transaction.

The Company typically recognizes license revenue at a point in time upon delivering the applicable license. The revenue related to the support and maintenance performance obligation will be recognized on an over-time basis using time elapsed methodology. The revenue related to software training and software implementation performance will be recognized at the completion of the service.

The following describes the nature of the Company's primary types of revenues and the revenue recognition policies as they pertain to the types of transactions the Company enters into with its customers.

Software Licenses and Support

License revenue includes perpetual license fees and term license fees, which provide customers with the same functionality and differ mainly in the duration over which the customer benefits from the use of software. Both revenues from perpetual license and term license performance obligations are generally recognized upfront at the point in time when the software license has been delivered.

A source of software license revenue is from term and bundled licenses that are time-based arrangements for one or multiple software products sold together with maintenance and support for the term of the license arrangement. The Company has determined that post customer support and the right to unspecified enhancements and upgrades on a "when-and-if-available" basis included with term licenses is an immaterial component of the transaction price and, therefore, recognized these performance obligation components up front with the license when delivered. Software License contracts do not provide for any non-cash consideration nor is there consideration payable to a customer.

Software Services

For contracts that include multiple performance obligations, such as a software license plus software training, implementation, and/or maintenance/support, or in contracts where there are multiple software licenses, the transaction price is allocated to each of the performance obligations on a pro-rata basis based on the relative standalone selling price ("SSP") of each performance obligation. Maintenance services agreements consist of fees for providing software updates and for providing technical support for software products for a specified term. Revenue allocated to maintenance services is recognized ratably over the contract term beginning on the delivery date of each offering. Maintenance contracts generally have a term of one year. Expenses related to maintenance and subscription are recognized as incurred. While transfer of control of the software training and implementation performance obligations are over time, the services are typically started and completed within a few days. Due to the quick nature of the performance obligation from start to finish and the immaterial amounts, the Company recognizes any software training or implementation revenue at the completion of the service. Any unrecognized portion of amounts paid in advance for licenses and services is recorded as deferred revenue. Certara's software contracts do not typically include discounts, variable consideration, or options for future purchases that would not be similar to the original goods.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

Consortium revenues consist of contractual agreements with customers where the customer receives multiple benefits as part of their contract with the Company, as follows: access to the latest version simulator software, which has at least one new release per year, free access to a preset number of training workshops, a block of consulting hours to be used at the customer's discretion, as well as voting rights at the annual consortium meeting where development priorities for the upcoming year are set. The Company's consortium contracts are generally for three years with annual termination clauses and with annual upfront billings. Consortium revenues are recognized over time as the benefits of the consortium arrangement are realized over the course of the contract. Both the training and consulting services performance obligations will utilize an output method to measure the progress at the end of each reporting period. Revenue from the Company's performance obligation under the simulation license, which provides customers with access to the latest version of the simulation software, is recognized evenly over the contract period.

License revenue and post contract services are combined and reported as software revenue on the Consolidated Statements of Operations and Comprehensive Loss.

Subscription Revenues

Subscription revenues consists of subscription fees for access to, and related support for, our cloud-based solutions. The Company typically invoices subscription fees in advance in annual installments and recognizes subscription revenue ratably over the term of the applicable agreement, usually one to three years which is initially deferred and recognized ratably over the life of the contract. The output method that accurately depicts the transfer of control was determined to be the delivery of accessibility to the customer. Unearned maintenance and subscription revenue are recorded as deferred revenue. The Company's subscription services arrangements are generally non-cancelable and do not contain refund-type provisions. In rare instances that subscription services arrangements are deemed cancelable, the Company will adjust the transaction price and period for revenue recognition accordingly to be reflective of the contract term. The contract transaction price is based on the fixed fee for each subscription.

Services and Other Revenues

Services primarily represent consulting services, which may be either strategic consulting services, reporting and analysis services, regulatory writing services, or any combination of the three. Strategic consulting services consists of consulting, training, and process redesign that enables customers to identify which uncertainties are greatest and matter most and then to design development programs, trial sequences, and individual trials in such a way that those trials systematically reduce the identified uncertainties, in the most rapid and cost-effective manner possible. The Company's professional services contracts are either time-and-materials, fixed fee or prepaid. Services revenues are generally recognized over time as the services are performed. Revenues for fixed price services and prepaid are generally recognized over time applying input methods to estimate progress to completion. Accordingly, the number of resources being paid for and varying lengths of time they are being paid for, determine the measure of progress. Training revenues are recognized as the services are performed over time. However, due to short period over which the transfer of control occurs for a classroom or on-site training course, the revenue related to these performance obligations is recognized at the completion of the course for administrative feasibility purposes. The training services generally do not provide for any non-cash consideration nor is there consideration payable to a customer.

At contract inception, the Company assesses the products and services promised in its contracts with customers and identifies a performance obligation for each promise to transfer to the customer a product or service (or bundle of products or services) that is distinct — i.e., if a product or service is separately identifiable from other items in the bundled package and if a customer can benefit from it on its own or with other resources that are readily available to the customer. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. The Company has contracts with customers that may have multiple performance obligations, including some or all of the following: software licenses, maintenance, subscriptions, professional services and/or training. For these contracts, the Company accounts for individual performance obligations separately if they are distinct within the context of the contract by allocating the contract's total transaction price to each performance obligation in an amount based on the relative SSP, of each distinct good or service in the contract.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

In order to determine the SSP of its promised goods or services, the Company conducts an annual analysis to determine whether its goods or services have an observable SSP. In determining SSP, the Company requires that a substantial majority of the standalone selling prices for goods or services fall within a reasonably narrow pricing range. If the Company does not have a directly observable SSP for a particular good or service, then the Company estimates a SSP by the Company's overall pricing objectives, taking into consideration market factors, pricing practices including historical discounting, historical standalone sales of similar products, customer demographics, geographic locations, and the number and types of users within the Company's contracts. The determination of SSP is made by the Company's management. Selling prices are analyzed at least on an annual basis to identify if the Company has experienced significant changes in its selling prices.

The Company allocates the transaction price to each performance obligation identified in the contract on a relative SSP basis and recognizes revenue when or as it satisfies a performance obligation by transferring control of a product or service to a customer.

Taxes collected from customers and remitted to governmental authorities are not included in revenue. The Company does not incur shipping and handling for its goods as they are generally delivered to a customer electronically.

The Company does not believe that it currently has any rights to return that would result in a material impact to revenues.

Contract Balances

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (deferred revenue, contract liabilities) on the Consolidated Balance Sheets. Amounts are billed as work progresses in accordance with agreed-upon contractual terms, either at periodic intervals (e.g., quarterly or monthly) or upon achievement of contractual milestones.

Contract assets relate to the Company's rights to consideration for performance obligations satisfied but not billed at the reporting date on contracts (i.e., unbilled revenue, a component of accounts receivable in the Consolidated Balance Sheets). Contract assets are billed and transferred to customer accounts receivable when the rights become unconditional. The Company typically invoices customers for term licenses, subscriptions, maintenance and support fees in advance with payment due before the start of the subscription term, ranging from one to three years. The Company records the amounts collected in advance of the satisfaction of performance obligations, usually over time, as a contract liability or deferred revenue. Invoiced amounts for non-cancelable services starting in future periods are included in contract assets and deferred revenue. The portion of deferred revenue that will be recognized within twelve months is recorded as current deferred revenue, and the remaining portion is recorded as non-current deferred revenue in the Consolidated Balance Sheets.

The unsatisfied performance obligation as of December 31, 2019 was approximately \$53,167.

Deferred Contract Acquisition Costs

Under ASC 606, sales commissions paid to the sales force and the related employer payroll taxes, collectively "deferred contract acquisition costs", are considered incremental and recoverable costs of obtaining a contract with a customer. The Company has determined that sales commissions paid are an immaterial component of obtaining a customer's contract and has elected to expense sales commissions when paid.

Revenue Recognition Pre ASC 606

The adoption of ASC 606 changed the way the Company recognizes revenue related to term and bundled license agreements. Prior to ASC 606, the Company recognized software licenses and support revenue in accordance with FASB ASC 985, "Software." Revenues from software license agreements are recognized when all of the following criteria are met as set forth in FASB ASC 985: (1) persuasive evidence of an arrangement exists, (2) delivery has occurred, (3) the fee is fixed or determinable, and (4) collectability is probable.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

A source of software license revenue is from term and bundled licenses that are time-based arrangements for one or multiple software products that are sold together with maintenance and support for the term of the license arrangement. The Company does not have vendor specific objective evidence ("VSOE") to determine fair value of the maintenance and support in term arrangements and, therefore, recognizes revenues from these bundled time-based licenses ratably over the license term, which typically ranges from one to three years.

The Company allocates revenues from perpetual software arrangements involving multiple elements to each element based on the relative fair values as determined by the VSOE for each element. The Company limits its assessment of VSOE for each element to the price charged when the same element is sold separately. The Company has analyzed all of the elements included in multiple-element arrangements and determined that the Company has sufficient VSOE to allocate revenues to maintenance and support, deployment, and training. The Company sells training separately and has established VSOE on this basis. VSOE for maintenance and support is determined based upon the renewal rates in contracts themselves, which is based on a fixed percentage of the current perpetual license list price. Deployment services are charged based on standard hourly rates. Accordingly, assuming all other revenue recognition criteria are met, revenues from perpetual licenses are recognized upon delivery of the software using the residual method in accordance with ASC 985.

Software maintenance agreements provide for technical support and the right to unspecified enhancements and upgrades on a "when-and-if-available" basis. Post-contract support ("PCS") revenues on perpetual agreements are recognized ratably over the term of the support period (generally one year). Deployment, training, and other service revenues are recognized as the related services are provided. Any unrecognized portion of amounts paid in advance for licenses and services is recorded as deferred revenue.

For presentation in the Consolidated Statements of Operations and Comprehensive Loss, license revenues and PCS are combined as allowed under U.S. GAAP due to the immaterial amount of revenues obtained from PCS when charged separately in comparison to the total of these two sources.

Sources and Timing of Revenue

The Company's performance obligations are satisfied either over time or at a point in time. The following table presents the Company's revenue by timing of revenue recognition to understand the risks of timing of transfer of control and cash flows:

	DECEMBER 31, 2019
Software licenses transferred at a point in time	\$ 35,261
Software licenses transferred over time	33,080
Service revenues earned over time	140,170
Total	<u>\$ 208,511</u>

(r) Equity -based compensation

The Company measures Equity-Based Compensation at fair value and recognizes the expense over the vesting period. Compensation costs for units that vest based on continued service requirements are recognized on a straight-line basis. Forfeitures are recognized as they occur.

(s) Comprehensive (Loss) Income

FASB ASC 220, "Comprehensive Income," establishes standards for reporting of comprehensive income and its components (revenue, gains, and losses) in a full set of general purpose financial statements. FASB ASC 220 requires that all components of comprehensive income, including net income, be reported in a financial statement that is displayed with the same prominence as other financial statements. Comprehensive loss is defined as the change in equity during a period from transactions and other events and circumstances from non-owner sources. Net loss and other comprehensive loss, including foreign currency translation adjustments,

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

and changes in fair value of derivative instruments (interest rate swap agreements) designated as cash flow hedges, shall be reported to arrive at comprehensive loss. Comprehensive loss is displayed in the Consolidated Statements of Operations and Comprehensive Loss.

The components of other comprehensive income (loss) consisted of foreign currency translation adjustments totaling \$433 and \$(16,721), respectively, and change in fair value of interest rate swap, net of tax, totaling \$(4,283) and \$1,079 for the years ended December 31, 2019 and 2018, respectively.

(t) Reclassification

Certain amounts in the 2018 consolidated financial statements have been reclassified to conform with the current year presentation.

(u) Correction of Prior Period Error

In connection with the preparation of its consolidated financial statements for the year ended December 31, 2019, the Company identified a \$2,779 understatement of goodwill and corresponding overstatement of accumulated other comprehensive loss, related to the initial application of purchase accounting for the 2018 Analytica Laser acquisition. The Company corrected this immaterial error through revision of their previously reported historical financial statements, which was deemed immaterial to the previously reported periods.

3. Employee Benefit Plan

The Company established a defined contribution 401(k) plan covering all U.S. employees who are at least 21 years of age. Employees may contribute to the plan up to 50% of their compensation, which may be further limited by law. In addition, employees who reached the age of 50 during the calendar years 2019 and 2018 are eligible to make an additional catch up contribution of 6.0%, subject to income limitations. The Company matches employee contributions for an amount up to 50% of the employee's deferral limited to the first 6% of each employee's compensation, with the exception of employees in one division who are matched 100% up to 6%. Contributions made by the Company were \$1,400 and \$1,366 for the years ended December 31, 2019 and 2018, respectively.

4. Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk have consisted principally of cash and cash equivalent investments and trade receivables. The Company invests available cash in bank deposits, investment-grade securities, and short-term interest-producing investments, including government obligations and other money market instruments. At December 31, 2019 and 2018, the investments were bank deposits and overnight sweep accounts. The Company has adopted credit policies and standards to evaluate the risk associated with sales that require collateral, such as letters of credit or bank guarantees, whenever deemed necessary. Management believes that any risk of loss is significantly reduced due to the nature of the customers and distributors with which the Company does business.

As of December 31, 2019 and December 31, 2018, no customer accounted for more than 10% of the Company's accounts receivable or revenues during the periods presented.

5. Business Combinations

Acquisitions have been accounted for using the acquisition method of accounting pursuant to FASB ASC 805, "Business Combinations." Amounts allocated to the purchased assets and liabilities are based upon the total purchase price and the estimated fair values of such assets and liabilities on the effective date of the purchase as determined by an independent third party. The results of operations have been included in the Company's results of operations prospectively from the date of acquisition.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

BaseCase

BaseCase provides Software-as-a-Service (SaaS) in the Life Sciences industry. This acquisition was made to combine its background in health economics with the Company's background in Computer Science and exploit the gap in the market for health economics by accessing the software market in the life sciences industry. The BaseCase acquisition was funded through proceeds of \$25,000 received from an additional tranche of term debt and cash on hand. The following table summarizes the estimates of the fair values of the assets acquired and liabilities assumed in the BaseCase acquisition as of the date of acquisition.

	JANUARY 25, 2018
Cash	\$ 1,151
Accounts receivable	2,622
Prepaid expenses and other assets	171
Property and equipment	87
Separately identifiable intangible assets	7,580
Total identifiable assets acquired	<u>11,611</u>
Accounts payable	174
Accrued expenses	3,617
Deferred revenue	830
Deferred tax liability	2,927
Total liabilities assumed	<u>7,548</u>
Net identifiable assets acquired	4,063
Goodwill arising in the acquisition	21,260
Purchase price	<u><u>\$ 25,323</u></u>

The adjustments recorded to reflect the acquired assets at their estimated fair value and liabilities at their estimated fair value or the present value of amounts to be paid included:

- a. \$7,580 to record the estimated fair market value of the acquired intangible assets consisting of: non-compete agreements \$10; non-contractual customer relationships \$5,480; acquired software \$1,120 and trade name \$970
- b. Reduction in deferred revenues of \$2,121
- c. Other miscellaneous adjustments

The fair value of the intangible assets is based on significant inputs that are not observable in the market and, therefore, represent Level 3 measurements under FASB ASC 820-10. The fair value of the non-contractual customer relationships was determined under the income approach, specifically the multi-period excess earnings method. The fair value of the non-compete was determined using the income approach, specifically the comparative business valuation method. The fair value of the trade name and acquired software was determined using the income approach, specifically the relief from royalty method. In addition, goodwill of \$21,260 was recorded to reflect the excess of the purchase price over the estimated fair value of the net identifiable assets acquired, which is not deductible for tax purposes.

The Company incurred \$2,122 of acquisition costs related to this acquisition, which are included in operating expenses in the Consolidated Statement of Operations and Comprehensive Loss for the year ended December 31, 2018. The Company also incurred costs for the issuance of debt, which was capitalized as a debt issuance costs as of the acquisition date in the amount of \$313.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

Analytica Laser

Analytica Laser employs cutting-edge quantitative methodologies and proprietary software to study and predict real-world outcomes for drug value assessment. This acquisition was made so that the Company's complementary approaches allow integration of Health Economics and Outcomes Research ("HEOR") and real-world value assessments with Pharmacometrics data — delivering safety, efficacy and effectiveness insights and providing a unique market advantage for our customers. The Analytica Laser acquisition was funded through proceeds of \$40,000 received from an additional tranche of term debt and cash on hand. The following table summarizes the estimates of the fair values of the assets acquired and liabilities assumed in the Analytica Laser acquisition as of the date of acquisition.

	APRIL 3, 2018
Cash	\$ 427
Accounts receivable	3,629
Prepaid expenses and other assets	721
Property and equipment	111
Separately identifiable intangible assets	17,630
Total identifiable assets acquired	22,518
Accounts payable	118
Accrued expenses	1,727
Deferred revenue	62
Deferred tax liability	3,350
Total liabilities assumed	5,257
Net identifiable assets acquired	17,261
Goodwill arising in the acquisition	22,739
Purchase price	\$ 40,000

The adjustments recorded to reflect the acquired assets at their estimated fair value and liabilities at their estimated fair value or the present value of amounts to be paid included:

- a. \$17,630 to record the estimated fair market value of the acquired intangible assets consisting of: non-compete agreements \$390 and non-contractual customer relationships \$17,240
- b. Reduction in deferred revenues of \$135
- c. Other miscellaneous adjustments

The fair value of the intangible assets is based on significant inputs that are not observable in the market and, therefore, represent Level 3 measurements under FASB ASC 820-10. The fair value of the non-contractual customer relationships was determined under the income approach, specifically the multi-period excess earnings method. The fair value of the non-compete was determined using the income approach, specifically the comparative business valuation method.

In addition, goodwill of \$22,739 was recorded to reflect the excess of the purchase price over the estimated fair value of the net identifiable assets acquired, which is not deductible for tax purposes.

The Company incurred \$1,728 of acquisition costs related to this acquisition, which are included in operating expenses in the Consolidated Statement of Operations and Comprehensive Loss for the year ended December 31, 2018. The Company also incurred costs for the issuance of debt, which was capitalized as a debt issuance cost as of the acquisition date in the amount of \$750.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

6. Prepaid Expenses and Other Current Assets

Prepaid and other current assets consisted of the following:

	DECEMBER 31,	
	2019	2018
Prepaid expenses	\$3,774	\$ 3,543
Income tax receivable	302	3,039
R&D tax credit receivable	2,412	349
Other current assets	1,631	1,832
Prepaid expenses and other current assets	<u>\$ 8,119</u>	<u>\$ 8,763</u>

7. Property and Equipment

Property and equipment consisted of the following:

	DECEMBER 31,	
	2019	2018
Computer equipment	\$ 3,736	\$ 3,768
Furniture	2,776	2,127
Purchased software for internal use	212	79
Leasehold improvements	2,254	2,137
Property and equipment	8,978	8,111
Less: Accumulated depreciation and amortization	(4,355)	(2,710)
Property and equipment, net	<u>\$ 4,623</u>	<u>\$ 5,401</u>

Depreciation and amortization expense were \$2,596 and \$2,416 for the years ended December 31, 2019 and 2018, respectively.

8. Goodwill and Other Intangible Assets

The following table presents the Company's intangible assets (other than goodwill) and the related amortization:

	WEIGHTED AVERAGE AMORTIZATION PERIOD (IN YEARS)	DECEMBER 31, 2019			DECEMBER 31, 2018		
		GROSS CARRYING AMOUNT	ACCUMULATED AMORTIZATION	NET	GROSS CARRYING AMOUNT	ACCUMULATED AMORTIZATION	NET
Acquired software	10.65	\$ 23,571	\$ 5,307	\$ 18,264	\$ 23,139	\$ 2,584	\$ 20,555
Capitalized software development costs	1.75	16,566	6,896	9,670	9,023	1,518	7,505
Non-compete agreements	1.74	1,318	977	341	1,324	773	551
Trade names	16.64	40,683	4,810	35,873	40,684	2,776	37,908
Customer relationships	11.63	431,785	67,935	363,850	432,102	38,998	393,104
Total		<u>\$ 513,923</u>	<u>\$ 85,925</u>	<u>\$427,998</u>	<u>\$ 506,272</u>	<u>\$ 46,649</u>	<u>\$459,623</u>

Amortization expense for intangible assets was \$38,964 and \$34,595 for the years ended December 31, 2019 and 2018, respectively. Amortization expense of \$2,723 and \$2,970 was recorded in cost of sales for

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

the years ended December 31, 2019 and 2018, respectively. The remaining amortization of \$36,241 and \$31,625 was recorded in operating expenses for the years ended December 31, 2019 and 2018, respectively.

Based on the current amount of intangibles subject to amortization, the estimated annual amortization expense for each of the succeeding five years and thereafter is as follows:

	ACQUIRED SOFTWARE	CAPITALIZED SOFTWARE DEVELOPMENT COSTS	NON-COMPETE AGREEMENTS	TRADE NAMES	CUSTOMER RELATIONSHIPS	TOTAL
2020	\$ 2,448	\$ 6,055	\$ 148	\$ 2,034	\$ 28,862	\$ 39,547
2021	2,381	2,410	102	2,034	28,862	35,789
2022	2,178	1,205	77	2,034	28,862	34,356
2023	1,997	—	14	2,034	28,862	32,907
2024	1,825	—	—	2,034	28,862	32,721
Thereafter	7,436	—	—	25,703	219,539	252,678
Total	<u>\$ 18,265</u>	<u>\$ 9,670</u>	<u>\$ 341</u>	<u>\$ 35,873</u>	<u>\$ 363,849</u>	<u>\$427,998</u>

Goodwill

The Company has not recognized any impairment charges for the years ended December 31, 2019 and 2018. A reconciliation of the change in the carrying value of goodwill is as follows:

Balance, December 31, 2017	\$481,401
Goodwill addition — BaseCase acquisition	21,260
Goodwill addition — Analytica Laser acquisition	22,739
Goodwill addition — Other acquisitions	1,234
Foreign currency translation	(12,360)
Balance, December 31, 2018	514,274
Foreign currency translation	722
Balance, December 31, 2019	\$514,996

9. Accrued Expenses

Accrued expenses consist of the following:

	DECEMBER 31,	
	2019	2018
Accrued compensation	\$ 18,476	\$ 11,423
Accrued severance	762	—
Product royalties and distributor fees	102	50
Legal and professional accruals	2,461	2,917
Local sales and VAT taxes	51	39
Interest payable	3,871	3,831
Income taxes payable	—	168
Deferred rent	1,066	561
Other	247	596
Total accrued expenses	<u>\$ 27,036</u>	<u>\$ 19,585</u>

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

10. Long-Term Debt and Revolving Line of Credit

Effective August 14, 2017, the Company entered into a credit agreement with lenders for a \$250,000 term loan ("variable interest term loan"). The credit agreement is a syndicated arrangement with various lenders providing the financing. The term loan is due to mature on August 14, 2024. The Company also entered into a \$20,000 revolving line of credit with lenders. As of December 31, 2019 and 2018, available borrowings under the \$20,000 revolving line of credit are reduced by a \$120 standby letter of credit issued to a landlord in lieu of a security deposit. Both loan agreements are collateralized by substantially all U.S. assets and stock pledges for the non-U.S. subsidiaries and contain various financial and nonfinancial covenants. The Company was in compliance with all of these covenants as of December 31, 2019 and 2018. Borrowings under the term loan are subject to a variable interest rate at LIBOR plus a margin. The applicable margins are based on achieving certain levels of compliance with financial covenants. The effective interest rate was 5.89% and 6.30% for the years ended December 31, 2019 and 2018, respectively, for the term loan. As discussed previously, the Company entered into interest rate swap agreements that fixed the interest rate.

The Company and lenders entered into a restated and amended loan agreement on January 25, 2018 where an additional tranche of \$25,000 was added to the term loan. The amortization schedule of the new tranche was made coterminous with the rest of the term loan. There were no other changes to the terms of the agreement.

The Company and lenders entered into a second restated and amended loan agreement on April 3, 2018 where an additional tranche of \$40,000 was added to the term loan. The amortization schedule of the new tranche was made coterminous with the rest of the term loan. There were no other changes to the terms of the agreement.

Effective August 14, 2017, the Company entered into an unsecured credit agreement with another lender for a \$100,000 term loan ("fixed rate term loan"). The loan bears interest at 8.25% which is payable in semi-annual installments on January and July 15 through August 14, 2025, at which time all outstanding principal and interest are due. Interest paid on the loan amounted to \$8,365 and \$7,654 for the years ended December 31, 2019 and 2018, respectively. Accrued interest payable on the loan amounting to \$3,896 and \$3,743 at December 31, 2019 and 2018, respectively, is included in accrued expenses.

Long-term debt consists of the following:

	DECEMBER 31,	
	2019	2018
Term loans	\$ 408,170	\$ 411,323
Revolving line of credit	—	5,000
Less: debt issuance costs	(6,839)	(8,375)
Total	401,331	407,948
Current portion of long-term debt	(4,210)	(3,153)
Long-term debt, net of current portion and debt issuance costs	<u>\$ 397,121</u>	<u>\$ 404,795</u>

The principal amount of long-term debt outstanding as of December 31, 2019, matures in the following years:

	2020	2021	2022	2023	2024	THEREAFTER	TOTAL
Maturities	\$4,210	\$3,153	\$3,153	\$3,153	\$294,501	\$ 100,000	\$408,170

The variable interest term loan agreement dated August 14, 2017 requires the Company to make an annual mandatory prepayment as it relates to the Company's Excess Cash Flow calculation. For the year ended December 31, 2019, the Company was required to make a mandatory prepayment on the term loan of

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

approximately \$1,057 on or before April 29, 2020. The prepayment is included in the current portion of long-term debt on the Consolidated Balance Sheet at December 31, 2019.

The fair values of the Company's variable interest term loan and revolving line of credit are not significantly different than their carrying value because the interest rates on these instruments are subject to change with market interest rates. The fair value of the Company's fixed rate term loan is approximately \$113,286 and \$110,286 as of December 31, 2019 and 2018, respectively.

11. Commitments and Contingencies

Leases

The Company leases certain office facilities and equipment under non-cancelable operating and capital leases with remaining terms from one to eight years. The gross amounts of assets under capital leases were \$663 and \$656 at December 31, 2019 and 2018, respectively. The total accumulated amortization associated with equipment under capital leases was approximately \$659 and \$379 at December 31, 2019 and 2018, respectively. The related amortization expense is included in depreciation expense. Rent expense under the operating leases was \$6,038 and \$5,587 for the years ended December 31, 2019 and 2018, respectively.

Non-cancelable future minimum lease commitments as of December 31, 2019 are:

	OPERATING LEASES	CAPITAL LEASES
Year ending December 31,		
2020	\$ 6,286	\$ 56
2021	5,377	—
2022	4,128	—
2023	3,092	—
2024	2,497	—
Thereafter	4,390	—
Non-cancelable future minimum lease payments	25,770	56
Less amount representing interest	—	(8)
Net non-cancelable future minimum lease payments	<u>\$ 25,770</u>	<u>\$ 48</u>

12. Equity-Based Compensation

Class B Incentive Units

The Company, through its affiliation with its parent, entered into a 2017 Class B Profits Interest Unit Incentive Plan (the "Class B Plan") whereby it was authorized to issue a total of 6,253,196 Profit Interest Units ("Class B Units"), representing the right to share a portion of the value appreciation in the Company's parent. As of December 31, 2019, 5,436,299 of the Class B Units were issued and outstanding to the Company employees.

The majority of the grant agreements for the Class B Units are comprised of a 50% time-based vesting component which vests over a five-year period ("time-based"); upon vesting, the holder receives a right to a fractional portion of the profits and distributions of the parent in excess of a "participation threshold" determined in accordance with the parent's operating agreement. The remaining 50% is subject to performance-based vesting whereby the units will vest upon a change in control, initial public offering or a sponsor distribution if the investors have achieved specified levels of return on investment ("performance-based"). There are also certain grant agreements for the Class B Units that are entirely comprised of a time-based vesting component. The Class B Units are in a secondary position to the Class A units in the parent, in that in any event in

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

which the equity is valued and paid out, holders of the Class B Units are only paid if an amount at least equal to the applicable participation threshold is first allocated to all of the outstanding classes of units under the parent's operating agreement. In addition, the parent has the right, but not the obligation to repurchase units at fair market value. During the years ended December 31, 2019 and 2018, the Company's parent repurchased 176,511 and 100,000 units at a value of \$703 and \$1,100 respectively. This repurchase was funded through dividends paid by the Company to its parent. These units do not have a maximum contractual life, as such these units do not expire.

The fair value of the Class B "time-based" units that vest solely upon continued employment is measured at the grant date and is recognized as expense over the employee's requisite service period. The expense related to the vesting of the units is recorded on the Company's books because the Company directly benefits from the services provided by unit holders. The grant date fair values were determined based on the following pricing models and inputs:

	DECEMBER 31,	
	2019	2018
Pricing model	Monte Carlo	Black-Scholes
Risk-free interest rate ⁽¹⁾	1.6%	2.2%
Expected stock price volatility ⁽²⁾	55%	50%
Expected exercise term (in years) ⁽³⁾	2.0	6.7

⁽¹⁾ Based on the U.S. Treasury constant maturity interest rate whose term is consistent with the expected exercise term of our incentive units

⁽²⁾ In projecting expected stock price volatility, we consider the historical volatility of the stock prices of comparable public companies.

⁽³⁾ The Company estimates the expected life of incentive units based upon historical experience and the timing of a potential liquidity event.

Equity-based compensation expense related to the Class B "time-based" units was \$1,691 and \$1,711 for the years ended December 31, 2019 and 2018, respectively. Equity-based compensation expense has been recorded within costs of revenues, sales and marketing, research and development and general and administrative expenses within the Consolidated Statements of Operations and Comprehensive Loss.

	DECEMBER 31,	
	2019	2018
Cost of revenues	\$ 156	\$ 138
Sales and marketing	110	95
Research and development	121	121
General and administrative expenses	1,304	1,357
Total	<u>\$ 1,691</u>	<u>\$ 1,711</u>

The "performance-based" units were not probable of vesting at this time; as such, no expense was recorded for these units.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

A summary of the Class B Units activity for the period is presented below (dollar amounts are not in thousands):

	UNITS	WEIGHTED AVERAGE GRANT-DATE FAIR VALUE PER UNIT
Outstanding, January 1, 2018	4,424,413	\$ 3.27
Granted	682,169	3.27
Forfeited	(565,632)	3.27
Outstanding, December 31, 2018	4,540,950	3.30
Granted	2,501,290	3.82
Exercised	(176,511)	3.55
Forfeited	(1,429,430)	3.19
Outstanding, December 31, 2019	5,436,299	3.53
Vested, December 31, 2019	952,166	3.60
Unvested, December 31, 2019	<u>4,484,133</u>	<u>\$ 3.51</u>

A summary of the weighted-average exercise price is shown below:

Outstanding, January 1, 2019	\$ 9.76
Granted	12.86
Exercised	10.00
Forfeited	10.03
Outstanding, December 31, 2019	<u>\$ 11.43</u>

Outstanding units represents the total of vested units and those expected to vest, including "time-based" awards for which the requisite service period has not yet been rendered. Of those units that were vested and exercisable at December 31, 2019, the weighted-average exercise price was \$10.16.

The aggregate intrinsic value of incentive units (the amount by which the market price of the stock on the date of exercise exceeded the exercise price of the unit) exercised during 2019 and 2018 was \$1,500 and \$0, respectively. The aggregate intrinsic value of shares outstanding, vested and exercisable at December 31, 2019 and 2018 was \$38,440 and \$5,499, respectively. The Company did not realize a tax benefit from share-based compensation expense in 2019 or 2018.

The total fair value of shares vested and exercisable during 2019 and 2018 was \$1,872 and \$1,509, respectively. As of December 31, 2019, there was total unrecognized compensation costs related to the units of \$7,845 that will be recognized over a weighted-average period of 2.38 years.

13. Segment data

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker ("CODM"), in deciding how to allocate resources and in assessing performance.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

The Company has determined that its chief executive officer (“CEO”) is its CODM. The Company manages its operations as a single segment for the purpose of assessing and making operating decisions. The Company’s CODM allocates resources and assesses performance based upon financial information at the consolidated level. Since the Company operates in one operating segment, all required financial segment information can be found in the consolidated financial statements.

The following table summarizes revenue by geographic area for the years ended December 31, 2019 and 2018:

	DECEMBER 31,	
	2019	2018
Revenue ⁽¹⁾ :		
United States	\$ 152,368	\$ 116,765
EMEA	40,299	34,259
Others	15,844	12,695
Total	\$ 208,511	\$ 163,719

⁽¹⁾ Revenue is attributable to the countries based on the location of the customer

The following table summarizes property, plant and equipment, net by geographic area as of December 31, 2019 and 2018:

	DECEMBER 31,	
	2019	2018
Property, plant and equipment, net:		
United States	\$ 2,825	\$ 2,721
EMEA	1,243	1,507
Others	555	1,173
Total	\$ 4,623	\$ 5,401

14. Income Taxes

The components of loss before income taxes were as follows:

	DECEMBER 31,	
	2019	2018
Domestic	\$ (12,995)	\$ (35,318)
Foreign	3,844	2,757
Total	\$ (9,151)	\$ (32,561)

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

The components of income tax expense (benefit) were as follows:

	DECEMBER 31,	
	2019	2018
Current tax expense (benefit)		
Federal	\$ 483	\$ (300)
State and local	1,692	312
Foreign	4,303	4,233
Total current	<u>6,478</u>	<u>4,245</u>
Deferred tax expense (benefit)		
Federal	3,137	(3,207)
State and local	(5,431)	(603)
Foreign	(4,409)	262
Total deferred	<u>(6,703)</u>	<u>(3,548)</u>
Total (benefit) provision	<u>\$ (225)</u>	<u>\$ 697</u>

The effective income tax rate was 2.46% and (2.14)% for the years ended December 31, 2019 and 2018, respectively. The primary reconciling items between the statutory income tax rate of 21% and the effective income tax rate were as a result of the following:

	DECEMBER 31, 2019		DECEMBER 31, 2018	
Tax at U.S. federal statutory rate	\$ (1,919)	21.00%	\$ (6,833)	21.00%
State taxes, net of federal benefit	(3,852)	42.14%	(357)	1.10%
Foreign rate differential	1,654	(18.09)%	5,170	(15.89)%
Permanent items	806	(8.82)%	1,296	(3.99)%
Tax credits	(4,264)	46.65%	(2,625)	8.07%
Other adjustments	813	(8.90)%	548	(1.68)%
Return to provision adjustments	(139)	1.52%	—	0.00%
Valuation allowance	6,676	(73.04)%	3,498	(10.75)%
Effective tax rate	<u>\$ (225)</u>	<u>2.46%</u>	<u>\$ 697</u>	<u>(2.14)%</u>

A portion of the Company's income was attributable to Madeira, Portugal, which qualified for special tax programs authorized by the European Union. The Company was subject to Madeira's income tax rate of 0%, 4% and 5% for the period of 2008-2011, 2012, and 2013-2020, respectively.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

The tax effects of temporary differences that gave rise to deferred tax assets and liabilities are summarized as follows:

	DECEMBER 31,	
	2019	2018
Deferred tax assets		
Accounts receivable	\$ 23	\$ 42
Accrued compensation	2,868	1,061
Accrued expenses	810	251
Net operating loss carryforwards	5,807	8,778
R&D credit carryforward	4,005	3,859
Foreign tax credits	8,513	5,154
Interest rate hedge	520	—
Other assets	242	479
Interest expense	5,406	3,158
Deferred revenue	—	305
Total gross deferred tax asset	28,194	23,087
Less: Valuation allowance	(20,546)	(13,107)
Net deferred tax asset	7,648	9,980
Deferred tax liabilities		
Property, equipment, and other long-lived assets	(307)	(108)
Goodwill and intangible assets	(85,664)	(94,065)
Prepaid expenses	(786)	(637)
Deferred revenue	(2,218)	—
Total gross deferred tax liability	(88,975)	(94,810)
Net deferred tax liability	\$ (81,327)	\$ (84,830)

The net change in the total valuation allowance resulted in an increase of \$7,439 and \$3,325 in 2019 and 2018, respectively. The valuation allowance was determined separately for each jurisdiction. A U.S. valuation allowance was required against the Section 163(j) interest expense limitation carryforward, foreign tax credit carryforward, and certain R&D credits. A valuation allowance was also required for a portion of federal net operating losses due to limitations pursuant to Internal Revenue Code Section 382. At the foreign subsidiaries, the valuation allowance at December 31, 2019 and 2018 was primarily related to foreign net operating losses and investment tax credits that, in the judgment of management, are not more likely than not to be realized.

In assessing the realizability of deferred tax assets, management considered whether it was more likely than not that some portion or all of the deferred tax assets would not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible and carryforward attributes can be utilized. Management considered the reversal of deferred tax liabilities in making their assessment. Management believed it was more likely than not that the Company would realize the benefits of the deferred tax assets, net of the existing valuation allowance, at December 31, 2019 and 2018.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

At December 31, 2019, the Company had net operating loss carryforwards for federal income tax purposes of approximately \$5,540, the majority of which would expire if unused in years 2024 through 2036. The Company had net operating loss carryforwards for state income tax purposes of approximately \$2,952, which would expire if unused in years 2028 through 2038. The Company had foreign net operating loss carryforwards of \$18,610, which would expire if unused starting in 2023.

At December 31, 2018, the Company had net operating loss carryforwards for federal income tax purposes of approximately \$19,422, which would expire if unused in years 2023 through 2037. The Company had net operating loss carryforwards for state income tax purposes of approximately \$11,839, which would expire if unused in years 2020 through 2038. The Company had foreign net operating loss carryforwards of \$44,723, which would expire if unused starting in 2019.

The Company had net operating losses and tax credits that were subject to limitation under Internal Revenue Code Section 382 and Section 383 due to changes in ownership. The Company analyzed the realizability of these tax attributes carried forward and recorded deferred tax assets for the attributes that meet the more-likely-than-not realizability threshold.

At December 31, 2019, the Company had \$2,202 of federal research and development credits that would expire if unused in years 2020 through 2039 and has \$811 of California research and development credits with an indefinite carryover period. The Company also had foreign tax credits of \$8,513 that would start to expire in 2025, and Canadian investment tax credits of \$1,832, which would expire between 2030 and 2036.

At December 31, 2018, the Company had \$1,785 of federal research and development credits that would expire if unused in years 2020 through 2039 and \$837 of California research and development credits that would expire ratably between 2019 and 2038. The Company also had foreign tax credits of \$5,154 that would begin to expire in 2024, and Canadian research and development credits of \$2,003, which would expire between 2028 and 2034.

Foreign undistributed earnings were considered permanently reinvested, therefore, no provision for U.S. income taxes was accrued as of December 31, 2019 and 2018, with the exception of the withholding tax liability of \$168 on the potential repatriation from Certara Canada Corporation.

The Company assessed its uncertain tax positions and determined that a liability of \$690 and \$592 was required to be recorded for uncertain tax positions as of December 31, 2019 and 2018, respectively. Uncertain tax positions relate solely to federal and state R&D credits. The Company's policy is to recognize interest and penalties as a component of the provision for income taxes. For December 31, 2019 and 2018, there were no interest or penalties recorded. The Company does not anticipate any significant changes to its uncertain tax positions during the next twelve months.

A reconciliation of the beginning and ending balance of unrecognized tax benefits is as follows:

Balance at December 31, 2017	\$ 460
Additions for tax positions related to the current year	50
Additions for tax positions of prior years	82
Balance at December 31, 2018	592
Additions for tax positions related to the current year	68
Additions for tax positions of prior years	30
Balance at December 31, 2019	\$ 690

The uncertain tax positions, exclusive of interest and penalties, were \$690 and \$592 as of December 31, 2019 and 2018, respectively, which also represents potential tax benefits that if recognized, would impact the effective tax rate.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AND UNIT DATA)

Audits for federal income tax returns are ongoing for the tax years ended December 31, 2017 and December 31, 2016. Additionally, the Internal Revenue Service can audit the NOLs generated in respective years in the years that the NOLs are utilized. State income tax returns are generally subject to examination for a period of three to six years after the filing of the respective tax return. The state impact of any federal changes remains subject to examination by various states for a period of up to one year after formal notification to the states. Foreign income tax returns are generally subject to examination based on the tax laws of the respective jurisdictions.

The Company is subject to tax on Global Intangible Low-Taxed Income ("GILTI") and has elected to account for GILTI as a current period expense.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security ("CARES") Act was enacted and implements certain tax legislation, including modifying the carryback period and limitation on the utilization of net operating losses and temporarily increasing the interest expense limitation pursuant to Section 163(j). The Company will evaluate the impact of the CARES Act on its financial statements in subsequent periods.

15. Net Loss per Share

Basic and diluted loss per share is computed by dividing net loss by the weighted-average shares outstanding:

	DECEMBER 31,	
	2019	2018
Numerator:		
Net loss	\$ (8,926)	\$ (33,258)
Denominator:		
Weighted average common shares outstanding, basic and diluted	100	100
Net loss per common share, basic and diluted	<u>\$ (89,260)</u>	<u>\$ (332,580)</u>

16. Subsequent Events

In December 2019 and early 2020, the coronavirus was reported to have surfaced in China. The spread of this virus globally in early 2020 has caused business disruption domestically in the United States, the area in which the Company primarily operates. While the disruption is currently expected to be temporary, there is considerable uncertainty around the duration of this uncertainty. Therefore, while the Company expects that this matter may impact the Company's financial condition, results of operations, or cash flows, the extent of the financial impact and duration cannot be reasonably estimated at this time. On March 19, 2020, the Company borrowed \$19,880 on the revolving credit facility as a precautionary measure. On July 15, 2020, the Company paid \$20,000, using cash on hand, towards the fixed rate term loan bearing a fixed interest rate of 8.25%. In September 2020, the Company paid off the outstanding balance of \$19,880 on the revolving credit facility.

CERTARA, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)

(IN THOUSANDS, EXCEPT PER COMMON SHARE AND SHARE DATA)	SEPTEMBER 30, 2020	DECEMBER 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	\$ 29,937	\$ 29,256
Accounts receivable, net of allowance for doubtful accounts of \$216 and \$185, respectively	48,830	49,642
Restricted cash	1,812	506
Prepaid expenses and other current assets	12,219	8,119
Total current assets	92,798	87,523
Other assets:		
Property and equipment, net	4,355	4,623
Long-term deposits	1,140	1,096
Goodwill	515,587	514,996
Intangible assets, net of accumulated amortization of \$115,595 and \$85,925, respectively	404,255	427,998
Deferred offering costs	1,430	—
Deferred income taxes	815	833
Total assets	<u>\$ 1,020,380</u>	<u>\$ 1,037,069</u>
Liabilities and stockholder's equity		
Current liabilities:		
Accounts payable	\$ 5,436	\$ 4,917
Accrued expenses	23,888	27,036
Due to affiliate	237	—
Current portion of deferred revenue	24,900	26,240
Current portion of interest rate swap liability	2,475	551
Current portion of long-term debt	3,153	4,210
Current portion of capital lease obligations	252	48
Total current liabilities	60,341	63,002
Long-term liabilities:		
Capital lease obligations, net of current portion	399	—
Deferred revenue, net of current portion	885	1,137
Deferred income taxes	83,485	82,160
Long-term portion of interest rate swap liability	1,695	1,601
Long-term debt, net of current portion and debt discount	376,037	397,121
Total liabilities	522,842	545,021
Commitments and contingencies (Note 6)		
Stockholder's equity		
Common shares, 0.01 par value, 1,000 shares authorized, 100 shares issued and outstanding	—	—
Additional paid-in capital	511,943	510,486
Accumulated deficit	(7,891)	(12,941)
Accumulated other comprehensive loss	(6,514)	(5,497)
Total stockholder's equity	497,538	492,048
Total liabilities and stockholder's equity	<u>\$ 1,020,380</u>	<u>\$ 1,037,069</u>

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE
INCOME (LOSS)

(UNAUDITED)

(IN THOUSANDS, EXCEPT PER COMMON SHARE AND SHARE DATA)	NINE MONTHS ENDED SEPTEMBER 30,	
	2020	2019
Revenues	\$ 178,889	\$ 154,654
Cost of revenues	65,860	57,817
Operating expenses:		
Sales and marketing	8,773	7,946
Research and development	9,139	8,651
General and administrative	36,125	35,630
Intangible asset amortization	28,056	26,908
Depreciation and amortization expense	1,836	2,140
Total operating expenses	83,929	81,275
Income from operations	29,100	15,562
Other expenses:		
Interest expense	(19,810)	(21,011)
Miscellaneous, net	456	(163)
Total other expenses	(19,354)	(21,174)
Income (loss) before income taxes	9,746	(5,612)
Provision for (benefit) from income taxes	4,696	(2,701)
Net income (loss)	5,050	(2,911)
Other comprehensive income (loss)		
Foreign currency translation adjustment	513	(3,383)
Change in fair value from interest rate swap, net of taxes of \$488 and \$607, respectively	(1,530)	(4,441)
Total other comprehensive loss	(1,017)	(7,824)
Comprehensive income (loss)	\$ 4,033	\$ (10,735)
Net income (loss) per common shares—basic and diluted	\$ 50,500	\$ (29,110)
Basic and diluted weighted average common shares outstanding	100	100

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDER'S EQUITY (UNAUDITED)

(IN THOUSANDS, EXCEPT SHARE DATA)	COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED DEFICIT	ACCUMULATED OTHER COMPREHENSIVE LOSS	TOTAL STOCKHOLDER'S EQUITY
	SHARES	AMOUNT				
Balance as of December 31, 2018	100	\$—	\$ 508,848	\$ (14,432)	\$ (1,647)	\$ 492,769
Cumulative effect adjustment upon adoption of Topic 606	—	—	—	10,417	—	10,417
Equity compensation	—	—	1,141	—	—	1,141
Repurchase of Parent Class B units	—	—	(703)	—	—	(703)
Capital contribution	—	—	650	—	—	650
Change in fair value of interest rate swap, net of tax of \$607	—	—	—	—	(4,441)	(4,441)
Net loss	—	—	—	(2,911)	—	(2,911)
Foreign currency translation adjustment	—	—	—	—	(3,383)	(3,383)
Balance as of September 30, 2019	<u>100</u>	<u>\$—</u>	<u>\$ 509,936</u>	<u>\$ (6,926)</u>	<u>\$ (9,471)</u>	<u>\$ 493,539</u>

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDER'S EQUITY (UNAUDITED)

(IN THOUSANDS, EXCEPT SHARE DATA)	COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED DEFICIT	ACCUMULATED OTHER COMPREHENSIVE LOSS	TOTAL STOCKHOLDER'S EQUITY
	SHARES	AMOUNT				
Balance as of December 31, 2019	100	\$—	\$ 510,486	\$ (12,941)	\$ (5,497)	\$ 492,048
Equity compensation	—	—	2,286	—	—	2,286
Repurchase of Parent Class B units	—	—	(1,079)	—	—	(1,079)
Capital contribution	—	—	250	—	—	250
Change in fair value of interest rate swap, net of tax of \$488	—	—	—	—	(1,530)	(1,530)
Net income	—	—	—	5,050	—	5,050
Foreign currency translation adjustment	—	—	—	—	513	513
Balance as of September 30, 2020	100	\$—	\$ 511,943	\$ (7,891)	\$ (6,514)	\$ 497,538

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

(IN THOUSANDS)	NINE MONTHS ENDED	
	SEPTEMBER 30,	
	2020	2019
Cash flows from operating activities:		
Net income (loss)	\$ 5,050	\$ (2,911)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation and amortization of property and equipment	1,836	2,140
Amortization of intangible assets	29,804	28,505
Amortization of debt issuance costs	1,142	1,536
Provision for doubtful accounts	31	—
Loss on retirement of assets	9	10
Equity compensation expense	2,286	1,141
Deferred income taxes	1,263	(6,605)
Changes in assets and liabilities:		
Accounts receivable	1,565	2,416
Prepaid expenses and other assets	(8,610)	(1,716)
Accounts payable and accrued expenses	(1,658)	(2,004)
Deferred revenue	(589)	(6,729)
Net cash provided by operating activities	<u>32,129</u>	<u>15,783</u>
Cash flows from investing activities:		
Capital expenditures	(782)	(1,335)
Capitalized software development costs	(5,752)	(5,531)
Business acquisitions, net of cash acquired	(675)	—
Net cash used in investing activities	<u>(7,209)</u>	<u>(6,866)</u>
Cash flows from financing activities:		
Capital contributions	250	650
Unit repurchase	(1,079)	(703)
Proceeds from borrowings on line of credit	19,880	—
Proceeds from borrowings from affiliate	237	—
Payments on long-term debt and capital lease obligations	(23,511)	(2,587)
Payment on line of credit	(19,880)	(5,000)
Net cash used in financing activities	<u>(24,103)</u>	<u>(7,640)</u>
Effect due to foreign exchange rate changes on cash, cash equivalents, and restricted cash	1,170	1,546
Net increase in cash, cash equivalents, and restricted cash	1,987	2,823
Cash, cash equivalents, and restricted cash, at beginning of period	29,762	12,187
Cash, cash equivalents, and restricted cash, at end of period	<u>\$ 31,749</u>	<u>\$ 15,010</u>
Supplemental disclosures of cash flow information		
Cash paid for interest	\$ 21,077	\$ 21,407
Cash paid for taxes	\$ 6,675	\$ 3,149
Supplemental schedule of noncash investing and financing activities		
Capital leases	\$ 831	\$ —
Deferred offering costs	\$ 1,430	\$ —

The accompanying notes are an integral part of the condensed consolidated financial statements

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE, SHARE AND UNIT DATA)

1. Description of Business

Certara, Inc. and its wholly-owned subsidiaries (together, the “Company”) deliver software products and technology-enabled services to customers to efficiently carry out and realize the full benefits of biosimulation in drug discovery, preclinical and clinical research, regulatory submissions and market access. The Company is a global leader in biosimulation, and the Company’s biosimulation software and technology-enabled services help optimize, streamline, or even waive certain clinical trials to accelerate programs, reduce costs, and increase the probability of success. The Company’s regulatory science and market access software and services are underpinned by technologies such as regulatory submissions software, natural language processing, and Bayesian analytics. When combined, these solutions allow the Company to offer customers end-to-end support across the entire product life cycle. On October 1, 2020, the Company amended its certificate of incorporation of EQT Avatar Topco, Inc. to change the name of the Company to Certara, Inc.

The Company has operations in the United States, Canada, Spain, Luxembourg, Portugal, United Kingdom, Germany, France, Netherlands, Denmark, Switzerland, Italy, Poland, Japan, Philippines, India, and Australia.

2. Summary of Significant Accounting Policies

There have been no changes other than what is discussed herein to the Company’s significant accounting policies as compared to the significant accounting policies described in Note 2 to the Company’s consolidated financial statements as of and for the year ended December 31, 2019. These unaudited condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes as of and for the year ended December 31, 2019.

(a) Basis of Presentation and Use of Estimates

The preparation of condensed consolidated financial statements in conformity with U.S. generally accepted accounting principles (“U.S. GAAP”) requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates include, among other estimates, the determination of fair values and useful lives of long-lived assets as well as intangible assets, goodwill, allowance for doubtful accounts receivable, recoverability of deferred tax assets, recognition of deferred revenue (including at the date of business combinations), value of interest rate swap agreements, determination of fair value of equity-based awards and assumptions used in testing for impairment of long-lived assets. Actual results could differ from those estimates, and such differences may be material to the condensed consolidated financial statements.

The Company is an Emerging Growth Company, as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”). Under the JOBS Act, Emerging Growth Companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until those standards apply to private companies. The Company has elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that it (i) is no longer an Emerging Growth Company or (ii) it affirmatively and irrevocably opts out of the extended transition period provided in the JOBS Act. As a result, these condensed consolidated financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates. The adoption dates discussed below reflect this election.

(b) Unaudited Interim Financial Statements

The accompanying condensed consolidated balance sheet as of September 30, 2020, the condensed consolidated statements of operations and comprehensive income (loss) for the nine months ended September 30, 2020 and 2019, the condensed consolidated statements of stockholder’s equity for the nine months ended September 30, 2020 and 2019, the condensed consolidated statements of cash flows for the nine months ended September 30, 2020 and 2019, and the related interim disclosures are unaudited.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE, SHARE AND UNIT DATA)

In management's opinion, the accompanying unaudited condensed financial statements have been prepared in accordance with U.S. GAAP for interim financial information. These unaudited condensed consolidated financial statements include all adjustments necessary, consisting of only normal recurring adjustments, to fairly state the financial position and the results of the Company's operations and cash flows for interim periods in accordance with U.S. GAAP. Interim period results are not necessarily indicative of results of operations or cash flows for a full year or any subsequent interim period. The accompanying condensed consolidated financial statements should be read in conjunction with the Company's 2019 and 2018 audited consolidated financial statements and notes thereto.

(c) Recently Adopted Accounting Pronouncements

In August 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2018-15, "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract", which included updated guidance on ASC 350-40, "Intangibles — Goodwill and Other — Internal-Use Software". The new guidance requires a customer in a cloud computing arrangement that is a service contract to follow the internal-use software guidance in ASC 350-40 to determine which implementation costs to capitalize as assets or expense as incurred. ASU 2018-15 is effective for calendar-year public business entities in 2020. For all other calendar-year entities, it is effective for annual periods beginning in 2021 and interim periods in 2022. Early adoption is permitted. The Company has adopted ASU 2018-15 during the year beginning January 1, 2020. The adoption of ASU 2018-15 did not materially impact the condensed consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, "Changes to Disclosure Requirements for Fair Value Measurements (Topic 820)", which improved the effectiveness of disclosure requirements for recurring and nonrecurring fair value measurements. The standard removes, modifies, and adds certain disclosure requirements. The amendments in this Update are effective for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted. The Company has adopted ASU 2018-13 during the year beginning January 1, 2020. The adoption of ASU 2018-13 did not materially impact the condensed consolidated financial statements.

(d) Principles of Consolidation

The accompanying condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

(e) Cash, Cash Equivalents and Restricted Cash

Cash equivalents include highly liquid investments with maturities of three months or less from the date purchased.

Restricted cash represents cash that is used as collateral to support an unsecured Company credit card program through a major bank and a grant funding. The restricted cash balance was \$1,812 and \$506 at September 30, 2020 and December 31, 2019, respectively.

The following table provides a reconciliation of cash and cash equivalents and restricted cash to the amounts presented in the condensed consolidated statements of cash flows:

	SEPTEMBER 30, 2020	DECEMBER 31, 2019
Cash and cash equivalents	\$ 29,937	\$ 29,256
Restricted cash, current	1,812	506
Total cash and cash equivalents, and restricted cash	<u>\$ 31,749</u>	<u>\$ 29,762</u>

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE, SHARE AND UNIT DATA)

(f) Deferred Offering Costs

The Company capitalizes certain legal, accounting and other third-party fees that are directly associated with in-process equity financing as deferred offering costs until such financings are consummated. After consummation of the equity financing, these costs will be reclassified to stockholder's equity as a reduction of additional paid-in capital generated as a result of the offering. Should the equity financing for which those costs relate no longer be considered probable of being consummated, all deferred offering costs will be charged to operating expenses in the condensed consolidated statements of operations and comprehensive income (loss) at such time. As of September 30, 2020, \$1,430 of deferred offering costs are capitalized in the condensed consolidated balance sheet.

(g) Derivative Instruments

The Company has an interest rate swap agreement that is designated as a cash flow hedge of interest rate risk for a notional amount of \$217,500 that fixed the interest rate at 1.8523%. This interest rate swap has a maturity date of November 30, 2020. On May 22, 2019, the Company entered into a second interest rate swap agreement, which is effective upon the maturity of the interest rate swap agreement, of November 30, 2020. This second interest rate swap was also designated as a cash flow hedge of interest rate risk for a notional amount of \$230,000 with an effective date as of November 30, 2020 that fixed the interest rate of 2.1284%, non-inclusive of the fixed credit spread through May 31, 2022. The Company recorded the fair value of its interest rate swaps in the amount of \$4,170 and \$2,152, as a derivative liability as of September 30, 2020 and December 31, 2019, respectively, in its condensed consolidated balance sheets. The Company's interest rate swaps qualify for hedge accounting. The fair value of the interest rate swaps is recognized in the condensed consolidated balance sheets and the changes in the fair value of the derivatives are recognized in other comprehensive loss.

The following table sets forth the liability that is measured at fair value on a recurring basis by the levels in the fair value hierarchy at September 30, 2020:

	<u>LEVEL 1</u>	<u>LEVEL 2</u>	<u>LEVEL 3</u>	<u>TOTAL</u>
Liability				
Interest rate swap liability	\$ —	\$ 4,170	\$ —	\$ 4,170
Total	<u>\$ —</u>	<u>\$ 4,170</u>	<u>\$ —</u>	<u>\$ 4,170</u>

The following table sets forth the liability that is measured at fair value on a recurring basis by the levels in the fair value hierarchy at December 31, 2019:

	<u>LEVEL 1</u>	<u>LEVEL 2</u>	<u>LEVEL 3</u>	<u>TOTAL</u>
Liability				
Interest rate swap liability	\$ —	\$ 2,152	\$ —	\$ 2,152
Total	<u>\$ —</u>	<u>\$ 2,152</u>	<u>\$ —</u>	<u>\$ 2,152</u>

The net amount of deferred gains/(losses) related to derivative instruments designated as cash flow hedges that is expected to be reclassified from Accumulated other comprehensive loss into earnings over the next twelve months is \$1,695.

(h) Revenue Recognition ASC 606

Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for promised goods or services. The Company's revenue consists of fees for perpetual and term licenses for the Company's software products, post-contract customer support (referred to as maintenance), software as a service ("SaaS") and

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE, SHARE AND UNIT DATA)

professional services including training and other revenue. For contracts with multiple performance obligations, the Company allocates the transaction price of the contract to each performance obligation on a relative standalone selling price basis. The delivery of a particular type of software and each of the user licenses would be one performance obligation. However, any training, implementation, or support and maintenance promises as part of the software license agreement would be considered separate performance obligations, as those promises are distinct and separately identifiable from the software licenses. The payment terms in these arrangements are sufficiently short such that there is no significant financing component to the transaction.

The Company typically recognizes license revenue at a point in time upon delivering the applicable license. The revenue related to the support and maintenance performance obligation will be recognized on an over time basis using time elapsed methodology. The revenue related to software training and software implementation performance will be recognized at the completion of the service.

Contract Balances

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (deferred revenue) on the condensed consolidated balance sheets. Amounts are billed as work progresses in accordance with agreed-upon contractual terms, either at periodic intervals (e.g., quarterly or monthly) or upon achievement of contractual milestones.

Contract assets relate to the Company's rights to consideration for performance obligations satisfied but not billed at the reporting date on contracts (i.e., unbilled revenue, a component of accounts receivable in the condensed consolidated balance sheets). Contract assets are billed and transferred to customer accounts receivable when the rights become unconditional. The Company typically invoices customers for term licenses, subscriptions, maintenance and support fees in advance with payment due before the start of the subscription term, ranging from one to three years. The Company records the amounts collected in advance of the satisfaction of performance obligations, usually over time, as a contract liability or deferred revenue. Invoice amounts for non-cancelable services starting in future periods are included in contract assets and deferred revenue. The portion of deferred revenue that will be recognized within twelve months is recorded as current deferred revenue, and the remaining portion is recorded as non-current deferred revenue in the condensed consolidated balance sheets.

The unsatisfied performance obligations as of September 30, 2020 was approximately \$70,000.

Sources and Timing of Revenue

The Company's performance obligations are satisfied either over time or at a point in time. The following table presents the Company's revenue by timing of revenue recognition to understand the risks of timing of transfer of control and cash flows:

	NINE MONTHS ENDED SEPTEMBER 30,	
	2020	2019
Software licenses transferred at a point in time	\$ 28,652	\$ 25,168
Software licenses transferred over time	27,273	26,285
Service revenues earned over time	122,964	103,201
Total	<u>\$ 178,889</u>	<u>\$ 154,654</u>

(i) Net Income (Loss) per Share

Basic net income (loss) per common share is computed by dividing the net income (loss) by the weighted-average number of shares outstanding during the reporting period, without consideration for potentially dilutive securities.

Diluted net income (loss) per share is computed by dividing the net income (loss) attributable to

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE, SHARE AND UNIT DATA)

stockholders by the weighted-average number of shares and potentially dilutive securities outstanding during the period. The Company had no potentially dilutive securities outstanding as of September 30, 2020 and 2019.

(j) Coronavirus

In December 2019 and early 2020, the coronavirus was reported to have surfaced in China. The spread of this virus globally in early 2020 has caused business disruption domestically in the United States, the area in which the Company primarily operates. While the disruption is currently expected to be temporary, there is considerable uncertainty around the duration of this uncertainty. Therefore, while the Company expects that this matter may impact the Company's financial condition, results of operations, or cash flows, the extent of the financial impact and duration cannot be reasonably estimated at this time.

3. Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk have consisted principally of cash and cash equivalent investments and trade receivables. The Company invests available cash in bank deposits, investment-grade securities, and short-term interest-producing investments, including government obligations and other money market instruments. At September 30, 2020 and December 31, 2019, the investments were bank deposits and overnight sweep accounts. The Company has adopted credit policies and standards to evaluate the risk associated with sales that require collateral, such as letters of credit or bank guarantees, whenever deemed necessary. Management believes that any risk of loss is significantly reduced due to the nature of the customers and distributors with which the Company does business.

As of September 30, 2020 and December 31, 2019, no customer accounted for more than 10% of the Company's accounts receivable or revenues during the periods presented.

4. Long-Term Debt and Revolving Line of Credit

Effective August 14, 2017, the Company entered into a credit agreement with lenders for a \$250,000 term loan ("variable interest term loan"). The credit agreement is a syndicated arrangement with various lenders providing the financing. The term loan is due to mature on August 14, 2024. The Company also entered into a \$20,000 revolving line of credit with lenders. As of September 30, 2020 and December 31, 2019, available borrowings under the \$20,000 revolving line of credit are reduced by a \$120 standby letter of credit issued to a landlord in lieu of a security deposit in addition to any outstanding borrowings. Both loan agreements are collateralized by substantially all U.S. assets and stock pledges for the non-U.S. subsidiaries and contain various financial and nonfinancial covenants. The Company was in compliance with all of these covenants as of September 30, 2020 and December 31, 2019. Borrowings under the term loan are subject to a variable interest rate at LIBOR plus a margin. The applicable margins are based on achieving certain levels of compliance with financial covenants. The effective interest rate was 4.79% and 5.89% for the nine months ended September 30, 2020 and year ended December 31, 2019, respectively, for the term loan. As discussed previously, the Company entered into interest rate swap agreements that fixed the interest rate.

The Company and lenders entered into a restated and amended loan agreement on January 25, 2018 where an additional tranche of \$25,000 was added to the term loan. The amortization schedule of the new tranche was made coterminous with the rest of the term loan. There were no other changes to the terms of the agreement.

The Company and lenders entered into a second restated and amended loan agreement on April 3, 2018 where an additional tranche of \$40,000 was added to the term loan. The amortization schedule of the new tranche was made coterminous with the rest of the term loan. There were no other changes to the terms of the agreement.

Effective August 14, 2017, the Company, entered into an unsecured credit agreement with another lender for a \$100,000 term loan ("fixed rate term loan"). The loan bears interest at 8.25% which is payable in

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE, SHARE AND UNIT DATA)

semi-annual installments on January and July 15 through August 14, 2025, at which time all outstanding principal and interest are due. Interest paid on the loan amounted to \$8,388 and \$8,365 for the nine months ended September 30, 2020 and 2019, respectively, and \$8,365 for the year ended December 31, 2019. Accrued interest payable on the loan amounting to \$1,430 and \$3,896 at September 30, 2020 and December 31, 2019, respectively, is included in accrued expenses. On July 15, 2020, the Company made a \$20,000 prepayment on the loan, which reduced the amount outstanding to \$80,000.

Long-term debt consists of the following:

	SEPTEMBER 30, 2020	DECEMBER 31, 2019
Term loans	\$ 384,888	\$ 408,170
Revolving line of credit	—	—
Less: debt issuance costs	(5,698)	(6,839)
Total	379,190	401,331
Current portion of long-term debt	(3,153)	(4,210)
Long-term debt, net of current portion and debt issuance costs	<u>\$ 376,037</u>	<u>\$ 397,121</u>

The principal amount of long-term debt outstanding as of September 30, 2020, matures in the following years:

	2020	2021	2022	2023	2024	THEREAFTER	TOTAL
Maturities	\$789	\$3,153	\$3,153	\$3,153	\$294,640	\$ 80,000	\$384,888

The variable interest term loan agreement dated August 14, 2017 requires the Company to make an annual mandatory prepayment as it relates to the Company's Excess Cash Flow calculation. For the year ended December 31, 2019, the Company was required to make a mandatory prepayment on the term loan of approximately \$1,057 on or before April 29, 2020. The prepayment is included in the current portion of long-term debt on the condensed consolidated balance sheet at December 31, 2019.

On March 19, 2020, the Company borrowed \$19,880 on the revolving credit facility as a precautionary measure during the COVID-19 pandemic. As of September 30, 2020, the Company has repaid the outstanding borrowings on the revolving credit facility.

5. Related Party

On September 18, 2020, a limited partnership, an affiliate and limited partner of the Company's parent, entered into an unsecured, interest free loan agreement with the Company for \$237. The loan has a maturity date of September 18, 2021.

6. Commitments and Contingencies

Leases

The Company leases certain office facilities and equipment under non-cancelable operating and capital leases with remaining terms from one to eight years. The gross amounts of assets under capital leases were \$1,489 and \$663 at September 30, 2020 and December 31, 2019, respectively. The total accumulated amortization associated with equipment under capital leases was \$866 and \$659 at September 30, 2020 and December 31, 2019, respectively. The related amortization expense is included in depreciation expense. Rent expense under the operating leases was \$4,929 and \$4,644 for the nine months ended September 30, 2020 and 2019, respectively.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE, SHARE AND UNIT DATA)

Non-cancelable future minimum lease commitments as of September 30, 2020 are:

	OPERATING LEASE	CAPITAL LEASES
Remainder of 2020	\$ 1,547	\$ 76
2021	5,779	304
2022	4,538	304
2023	3,054	25
2024	2,459	—
Thereafter	4,287	—
Non-cancelable future minimum lease payments	21,664	709
Less amount representing interest	—	(58)
Net non-cancelable future minimum lease payments	<u>\$ 21,664</u>	<u>651</u>
Current portion of net non-cancelable future minimum lease payments		252
Net long-term non-cancelable future minimum lease payments		<u>\$ 399</u>

7. Equity-Based Compensation

Class B Incentive Units

The Company, through its affiliation with its parent, entered into a 2017 Class B Profits Interest Unit Incentive Plan (the "Class B Plan") whereby it was authorized to issue a total of 6,366,891 Class B profits interest units, representing the right to share a portion of the value appreciation in the Company's parent. As of September 30, 2020, 6,328,153 Class B Profits Interest Units ("Class B Units") were issued and outstanding to the Company employees. The fair value of the Class B units is measured at the grant date and is recognized as expense over the employee's requisite service period. The expense related to the vesting of the units is recorded on the Company's books because the Company directly benefits from the services provided by unit holders. The grant date fair value for the units granted in 2020 and 2019 was determined using a Monte Carlo simulation analysis utilizing the Black-Scholes option pricing framework. As the performance-based units are not probable of vesting at this time, no expense has been recorded for the performance-based vesting units.

The Company recorded compensation expense related to the Class B Units of \$2,286 and \$1,141 for the nine months ended September 30, 2020 and 2019, respectively. Class B Unit compensation expense was recorded within cost of revenues, sales and marketing, research and development and general and administrative expenses within the condensed consolidated statements of operations and comprehensive income (loss):

	NINE MONTHS ENDED SEPTEMBER 30,	
	2020	2019
Cost of revenues	\$ 151	\$ 103
Sales and marketing	99	82
Research and development	97	91
General and administrative expenses	1,939	865
Total	<u>\$ 2,286</u>	<u>\$ 1,141</u>

The Company granted 1,357,404 and 2,174,414 units during the nine months ended September 30, 2020 and 2019, respectively. The Company recorded actual forfeitures of 377,626 and 1,323,121 during the

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE, SHARE AND UNIT DATA)

nine months ended September 30, 2020 and 2019, respectively. During the nine months ended September 30, 2020 and 2019, the Company funded the repurchase of 87,930 units and 157,751 units for \$1,079 and \$703, respectively, on behalf of its parent.

8. Segment data

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker (“CODM”), in deciding how to allocate resources and in assessing performance.

The Company has determined that its chief executive officer (“CEO”) is its CODM. The Company manages its operations as a single segment for the purposes of assessing and making operating decisions. The Company’s CODM allocates resources and assesses performance based upon financial information at the consolidated level. Since the Company operates in one operating segment, all required financial segment information can be found in the condensed consolidated financial statements.

The following table summarizes revenue by geographic area for the nine months ended September 30, 2020 and 2019:

	NINE MONTHS ENDED SEPTEMBER 30,	
	2020	2019
Revenue ⁽¹⁾ :		
United States	\$ 134,053	\$ 112,707
EMEA	30,601	29,975
Others	14,235	11,972
Total	<u>\$ 178,889</u>	<u>\$ 154,654</u>

⁽¹⁾ Revenue is attributable to the countries based on the location of the customer

9. Income Taxes

The Company generally records its interim tax provision based upon a projection of its estimated annual effective tax rate (“EAETR”). This EAETR is applied to the year-to-date consolidated pre-tax income to determine the interim provisions for income taxes before discrete items. The effective tax rate (“ETR”) each period is impacted by a number of factors, including the relative mix of domestic and international earnings, adjustments to the valuation allowances, and discrete items. The currently forecasted ETR may vary from the actual year-end due to the changes in these factors. The Company’s global ETR for the nine months ended September 30, 2020 and 2019 was 48% and 48%, respectively, including discrete tax items. The ETR remained consistent year over year and is susceptible to changes in the mix of domestic and international earnings.

On March 27, 2020, the President of the United States signed the Coronavirus Aid, Relief, and Economic Security Act (“CARES Act”) into law providing certain relief as a result of the COVID-19 pandemic. The CARES Act, among other things, includes provisions relating to net operating loss carryback periods, alternative minimum tax credit refunds, modification to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property. The Company quantified the impact of the interest deduction limitation provision on its valuation allowance and reflected the benefit as a component of income tax expense for the period ended September 30, 2020.

CERTARA, INC. AND SUBSIDIARIES
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(IN THOUSANDS, EXCEPT PER SHARE, SHARE AND UNIT DATA)

10. Net Income (Loss) per Share

Basic and diluted income (loss) per share is computed by dividing net income (loss) by the weighted-average common shares outstanding:

	NINE MONTHS ENDED SEPTEMBER 30,	
	2020	2019
Numerator:		
Net income (loss)	\$ 5,050	\$ (2,911)
Denominator:		
Weighted average common shares outstanding, basic and diluted	100	100
Net income (loss) per common share, basic and diluted	<u>\$ 50,500</u>	<u>\$ (29,110)</u>

11. Subsequent Events

The Company evaluated subsequent events through November 18, 2020, the date the accompanying condensed consolidated financial statements were available to be issued. No material subsequent events have occurred through that date which would require recognition or disclosure in these condensed consolidated financial statements.

Through and including _____, 2021, (the 25th day after the date of this prospectus), all dealers effecting transactions in the common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

Shares



COMMON STOCK

PROSPECTUS

Jefferies

Morgan Stanley

BofA Securities

Barclays

Credit Suisse

William Blair

, 2020

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the costs and expenses, other than the underwriting discount, payable by the registrant in connection with the sale and distribution of the securities being registered. All amounts are estimated except the Securities and Exchange Commission (the "SEC") registration fee, the Financial Industry Regulatory Authority ("FINRA") filing fee and The Nasdaq Global Select Market (the "Nasdaq") listing fee.

	AMOUNT TO BE PAID
SEC Registration Fee	\$ 10,910
FINRA Filing Fee	*
Initial Nasdaq Listing Fee	*
Legal Fees and Expenses	*
Accounting Fees and Expenses	*
Printing Fees and Expenses	*
Blue Sky Fees and Expenses	*
Transfer Agent and Registrar Fees	*
Miscellaneous Expenses	*
Total	\$ *

* To be provided by amendment.

Item 14. Indemnification of Directors and Officers

Section 102(b)(7) of the Delaware General Corporation Law (the "DGCL") allows a corporation to provide in its certificate of incorporation that a director of the corporation will not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except where the director breached the duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our amended and restated certificate of incorporation will provide for this limitation of liability.

Section 145 of the DGCL, provides, among other things, that a Delaware corporation may indemnify any person who was, is or is threatened to be made, party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was unlawful. A Delaware corporation may indemnify any persons who were or are a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit, provided such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests, provided further that no indemnification is permitted without judicial approval if the officer, director, employee or agent is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against the expenses (including attorneys' fees) which such officer or director has actually and reasonably incurred.

Section 145 further authorizes a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against any liability asserted against such person and incurred by such person in any such capacity, or arising out of his or her status as such, whether or not the corporation would otherwise have the power to indemnify such person under Section 145.

Our amended and restated bylaws will provide that we must indemnify and advance expenses to our directors and officers to the full extent authorized by the DGCL.

Further, prior to the completion of the offering, we expect to enter into indemnification agreements with each of our directors and executive officers that may be broader than the specific indemnification provisions contained in our amended and restated bylaws or the DGCL. Such agreements may require us, among other things, to advance expenses and otherwise indemnify our executive officers and directors against certain liabilities that may arise by reason of their status or service as executive officers or directors, to the fullest extent permitted by law. We intend to enter into indemnification agreements with any new directors and executive officers in the future.

The indemnification rights set forth above shall not be exclusive of any other right which an indemnified person may have or hereafter acquire under any statute, any provision of our amended and restated certificate of incorporation, our bylaws, agreement, vote of stockholders or disinterested directors or otherwise. Notwithstanding the foregoing, we shall not be obligated to indemnify a director or officer in respect of a proceeding (or part thereof) instituted by such director or officer, unless such proceeding (or part thereof) has been authorized by the board of directors pursuant to the applicable procedure outlined in the bylaws.

Section 174 of the DGCL provides, among other things, that a director, who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption, may be held jointly and severally liable for such actions. A director who was either absent when the unlawful actions were approved or dissented at the time may avoid liability by causing his or her dissent to such actions to be entered in the books containing the minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

We expect to maintain standard policies of insurance that provide coverage (1) to our directors and officers against loss rising from claims made by reason of breach of duty or other wrongful act and (2) to us with respect to indemnification payments that we may make to such directors and officers.

The underwriting agreement provides for indemnification by the underwriters of us and our officers and directors, and by us of the underwriters, for certain liabilities arising under the Securities Act or otherwise in connection with this offering.

Item 15. Recent Sales of Unregistered Securities

None.

Item 16. Exhibits and Financial Statement Schedules

- (a) *Exhibits.* See Exhibit Index immediately preceding the signature pages hereto, which is incorporated by reference as if fully set forth herein.

Item 17. Undertakings

- (1) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate

jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

- (2) The undersigned registrant hereby undertakes that:
 - (a) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus as filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
 - (b) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

EXHIBIT INDEX

EXHIBIT NUMBER	DESCRIPTION
1.1†	Form of Underwriting Agreement
3.1†	Form of Amended and Restated Certificate of Incorporation of Certara, Inc.
3.2†	Form of Amended and Restated Bylaws of Certara, Inc.
4.1†	Form of Stock Certificate for Common Stock
5.1†	Form of Opinion of Simpson Thacher & Bartlett LLP
10.1†	Form of Stockholders Agreement by and among Certara, Inc. and the other parties named therein
10.2†	Form of Amended and Restated Registration Rights Agreement by and among Certara, Inc. and the other parties named therein
10.3	<u>Credit Agreement, dated as of August 15, 2017, among Certara Holdings, Inc. (f/k/a EQT Avatar Holdings, Inc.), Certara Holdco, Inc., Certara USA, Inc., EQT Avatar Intermediate, Inc., Jefferies Finance LLC, as Administrative Agent and Issuing Bank, Golub Capital LLC as Issuing Bank and each lender from time to time party thereto</u>
10.4	<u>First Amendment, dated as of January 24, 2018, to the Credit Agreement, among Certara Holdings, Inc. (f/k/a EQT Avatar Holdings, Inc.), Certara Holdco, Inc., Certara USA, Inc., EQT Avatar Intermediate, Inc., Jefferies Finance LLC, as Administrative Agent and Issuing Bank, Golub Capital LLC as Issuing Bank and each lender from time to time party thereto</u>
10.5	<u>Second Amendment, dated as of April 3, 2018, to the Credit Agreement, among Certara Holdings, Inc. (f/k/a EQT Avatar Holdings, Inc.), Certara Holdco, Inc., Certara USA, Inc., Certara Intermediate, Inc. (f/k/a EQT Avatar Intermediate, Inc.), Jefferies Finance LLC, as Administrative Agent and Issuing Bank, Golub Capital LLC as Issuing Bank and each lender from time to time party thereto</u>
10.6	<u>Loan Guaranty, dated as of August 15, 2017, by and among the Loan Guarantors, as defined therein, and Jefferies Finance LLC, as Administrative Agent</u>
10.7	<u>Pledge and Security Agreement, dated as of August 15, 2017, by and among the Grantors, as defined therein, and Jefferies Finance LLC, as Agent</u>
10.8	<u>Loan Agreement, dated as of July 6, 2017, between Santo Holding (Deutschland) GmbH and Certara, Inc. (f/k/a EQT Avatar Topco, Inc.)</u>
10.9†*	Form of Indemnification Agreement between Certara, Inc. and directors and executive officers of Certara, Inc.
10.10*	<u>Employment Agreement, dated as of May 14, 2019, by and among EQT Avatar Parent L.P., Certara USA, Inc. and William Feehery</u>
10.11*	<u>Employment Agreement, dated as of May 15, 2014, by and between Certara Holdco, Inc. (as successor in interest to Arsenal MBDD Holding, L.P.) and Edmundo Muniz</u>
10.12*	<u>Amendment to Employment Agreement of Edmond Muniz, dated as of February 21, 2019, by and between Certara Holdco, Inc. and Edmundo Muniz</u>
10.13†*	Employment Agreement, dated as of September 2, 2016, by and between Certara Australia Pty Ltd. and Craig Rayner
10.14*	<u>Employment Agreement, dated as of September 17, 2020, by and between Certara USA, Inc. and Craig Rayner</u>
10.15*	<u>Employment Agreement, dated as of January 23, 2019, by and between EQT Certara USA, Inc. and Justin Edge</u>
10.16*	<u>Contract of Employment, dated as of June 20, 2014, by and between Quantitative Solutions B.V. and Thomas Kerbusch</u>
10.17*	<u>Addendum to the Contract of Employment of Thomas Kerbusch, dated as of June 20, 2014, by and between Quantitative Solutions B.V. and Thomas Kerbusch</u>

EXHIBIT NUMBER	DESCRIPTION
10.18†*	Certara, Inc. 2020 Incentive Plan
10.19†*	Form of Exchange Acknowledgement and Agreement under the Certara, Inc. 2020 Incentive Plan
10.20†*	Form of Restricted Stock Agreement under the Certara, Inc. 2020 Incentive Plan
10.21†*	Certara, Inc. 2020 Employee Stock Purchase Plan
21.1†	Subsidiaries of the Registrant
23.1†	Consent of Simpson Thacher & Bartlett LLP (included in Exhibit 5.1)
23.2	Consent of CohnReznick LLP
24.1	Power of Attorney (included in the signature page to the Registration Statement)

† To be filed by amendment.

* Management contract or compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of the Securities Act, we have duly caused this registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Princeton, New Jersey, on November 18, 2020.

Certara, Inc.By: /s/ WILLIAM F. FEEHERY

Name: William F. Feehery

Title: Chief Executive Officer

The undersigned directors and officers of Certara, Inc. hereby constitute and appoint William F. Feehery, M. Andrew Schemick and Richard M. Traynor and each of them, any of whom may act without joinder of the other, the individual's true and lawful attorneys in fact and agents, with full power of substitution and resubstitution, for the person and in his or her name, place and stead, in any and all capacities, to sign this registration statement and any or all amendments, including post effective amendments to the Registration Statement, including a prospectus or an amended prospectus therein and any registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act, and all other documents in connection therewith to be filed with the SEC, granting unto said attorneys in fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys in fact as agents or any of them, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereto.

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities indicated on November 18, 2020.

<u>SIGNATURE</u>	<u>TITLE</u>
<u>/s/ WILLIAM F. FEEHERY</u> William F. Feehery	Chief Executive Officer (Principal Executive Officer)
<u>/s/ M. ANDREW SCHEMICK</u> M. Andrew Schemick	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)
<u>/s/ SHERILYN S. MCCOY</u> Sherilyn S. McCoy	Chairman
<u>/s/ JAMES E. CASHMAN III</u> James E. Cashman III	Director
<u>/s/ ERIC C. LIU</u> Eric C. Liu	Director
<u>/s/ STEPHEN M. MCLEAN</u> Stephen M. McLean	Director

SIGNATURE	TITLE
<hr/> <i>/s/ MASON P. SLAINE</i> <hr/> <p>Mason P. Slaine</p>	Director
<hr/> <i>/s/ MATTHEW WALSH</i> <hr/> <p>Matthew Walsh</p>	Director
<hr/> <i>/s/ ETHAN WAXMAN</i> <hr/> <p>Ethan Waxman</p>	Director

CREDIT AGREEMENT

Dated as of August 15, 2017

among

EQT AVATAR HOLDINGS, INC.,
as the Initial Borrower and,
together with CERTARA HOLDCO, INC. and CERTARA USA, INC.,
as the Borrowers,

EQT AVATAR INTERMEDIATE, INC.,
as Holdings,

THE FINANCIAL INSTITUTIONS PARTY HERETO,
as Lenders,

JEFFERIES FINANCE LLC,
as Administrative Agent,

and

JEFFERIES FINANCE LLC and GOLUB CAPITAL LLC,
as Issuing Banks

JEFFERIES FINANCE LLC,

and

GOLUB CAPITAL LLC,
as Joint Lead Arrangers and Joint Bookrunners

Table of Contents

		Page
ARTICLE 1	DEFINITIONS	2
Section 1.01.	Defined Terms	2
Section 1.02.	Classification of Loans and Borrowings	68
Section 1.03.	Terms Generally	68
Section 1.04.	Accounting Terms	69
Section 1.05.	Effectuation of Transactions	70
Section 1.06.	Timing of Payment of Performance	70
Section 1.07.	Times of Day	70
Section 1.08.	Currency Equivalents Generally; Exchange Rate	70
Section 1.09.	Cashless Rollovers	71
Section 1.10.	Certain Calculations and Tests	71
Section 1.11.	Limited Condition Transactions	72
ARTICLE 2	THE CREDITS	73
Section 2.01.	Commitments	73
Section 2.02.	Loans and Borrowings	73
Section 2.03.	Requests for Borrowings	74
Section 2.04.	[Reserved]	75
Section 2.05.	Letters of Credit	75
Section 2.06.	[Reserved]	80
Section 2.07.	Funding of Borrowings	80
Section 2.08.	Type; Interest Elections	81
Section 2.09.	Termination and Reduction of Commitments	81
Section 2.10.	Repayment of Loans; Evidence of Debt	82
Section 2.11.	Prepayment of Loans	83

Section 2.12.	Fees and Premium	88
Section 2.13.	Interest	90
Section 2.14.	Alternate Rate of Interest	90
Section 2.15.	Increased Costs	91
Section 2.16.	Break Funding Payments	92
Section 2.17.	Taxes	93
Section 2.18.	Payments Generally; Allocation of Proceeds; Sharing of Payments	97
Section 2.19.	Mitigation Obligations; Replacement of Lenders	99
Section 2.20.	Illegality	100
Section 2.21.	Defaulting Lenders	101
Section 2.22.	Incremental Credit Extensions	103

Table of Contents

		Page
Section 2.23.	Extensions of Loans and Revolving Commitments	107
ARTICLE 3	REPRESENTATIONS AND WARRANTIES	111
Section 3.01.	Organization; Powers	111
Section 3.02.	Authorization; Enforceability	111
Section 3.03.	Governmental Approvals; No Conflicts	111
Section 3.04.	Financial Condition; No Material Adverse Effect	111
Section 3.05.	Properties	112
Section 3.06.	Litigation and Environmental Matters	112
Section 3.07.	Compliance with Laws	112
Section 3.08.	Investment Company Status	113
Section 3.09.	Taxes	113
Section 3.10.	ERISA	113
Section 3.11.	Disclosure	113
Section 3.12.	Solvency	113
Section 3.13.	Capitalization and Subsidiaries	114
Section 3.14.	Security Interest in Collateral	114
Section 3.15.	Labor Disputes	114
Section 3.16.	Federal Reserve Regulations	114
Section 3.17.	Economic Sanctions, Anti-Terrorism and Anti-Corruption Laws	114
Section 3.18.	Senior Indebtedness	115
Section 3.19.	Use of Proceeds	115
ARTICLE 4	CONDITIONS	115
Section 4.01.	Closing Date	115
Section 4.02.	Each Credit Extension	118

ARTICLE 5	AFFIRMATIVE COVENANTS	119
Section 5.01.	Financial Statements and Other Reports	119
Section 5.02.	Existence	121
Section 5.03.	Payment of Taxes	122
Section 5.04.	Maintenance of Properties	122
Section 5.05.	Insurance	122
Section 5.06.	Inspections	123
Section 5.07.	Maintenance of Book and Records	123
Section 5.08.	Compliance with Laws	123
Section 5.09.	Environmental	123
Section 5.10.	Designation of Subsidiaries	124

Table of Contents

		Page
Section 5.11.	Use of Proceeds	124
Section 5.12.	Covenant to Guarantee Obligations and Provide Security	125
Section 5.13.	Maintenance of Ratings	127
Section 5.14.	Further Assurances	127
Section 5.15.	[Reserved]	127
Section 5.16.	Annual Lender Calls	127
Section 5.17.	Changes in Fiscal Periods	127
Section 5.18.	Conduct of Business	127
ARTICLE 6	NEGATIVE COVENANTS	128
Section 6.01.	Indebtedness	128
Section 6.02.	Liens	136
Section 6.03.	Reserved	140
Section 6.04.	Restricted Payments; Restricted Debt Payments	140
Section 6.05.	Burdensome Agreements	145
Section 6.06.	Investments	146
Section 6.07.	Fundamental Changes; Disposition of Assets	150
Section 6.08.	Sale and Lease-Back Transactions	154
Section 6.09.	Transactions with Affiliates	154
Section 6.10.	Amendments of or Waivers with Respect to Restricted Debt	156
Section 6.11.	Permitted Activities of Holdings and the Initial Borrower	156
Section 6.12.	Financial Covenant	157
ARTICLE 7	EVENTS OF DEFAULT	158
Section 7.01.	Events of Default	158
ARTICLE 8	THE ADMINISTRATIVE AGENT	162

ARTICLE 9	MISCELLANEOUS	170
Section 9.01.	Notices	170
Section 9.02.	Waivers; Amendments	172
Section 9.03.	Expenses; Indemnity	179
Section 9.04.	Waiver of Claim	181
Section 9.05.	Successors and Assigns	181
Section 9.06.	Survival	189
Section 9.07.	Counterparts; Integration; Effectiveness	190
Section 9.08.	Severability	190
Section 9.09.	Right of Setoff	190
Section 9.10.	Governing Law; Jurisdiction; Consent to Service of Process	191

Table of Contents

		Page
Section 9.11.	Waiver of Jury Trial	192
Section 9.12.	Headings	192
Section 9.13.	Confidentiality	193
Section 9.14.	No Fiduciary Duty	194
Section 9.15.	Several Obligations	194
Section 9.16.	Anti-Money Laundering Legislation	194
Section 9.17.	Disclosure of Agent Conflicts	195
Section 9.18.	Appointment for Perfection; Release of Liens and Guarantees	195
Section 9.19.	Interest Rate Limitation	195
Section 9.20.	Acceptable Intercreditor Agreements	196
Section 9.21.	Conflicts	196
Section 9.22.	Effectiveness of the Closing Date Assumption and Joint and Several Obligations.	196
Section 9.23.	Acknowledgement and Consent to Bail-In of EEA Financial Institutions	197

SCHEDULES:

Schedule 1.01(a)	–	Commitment Schedule
Schedule 1.01(b)	–	Dutch Auction
Schedule 1.01(d)	–	Administrative Agent’s Office
Schedule 2.01	–	LC Commitments
Schedule 3.13	–	Subsidiaries
Schedule 5.10	–	Unrestricted Subsidiaries
Schedule 6.01	–	Existing Indebtedness
Schedule 6.02	–	Existing Liens
Schedule 6.06	–	Existing Investments
Schedule 6.07	–	Certain Dispositions
Schedule 9.01	–	Borrowers’ Website Address for Electronic Delivery

EXHIBITS:

Exhibit A-1	–	Form of Assignment and Assumption
Exhibit A-2	–	Form of Affiliated Lender Assignment and Assumption
Exhibit B	–	Form of Borrowing Request
Exhibit C	–	Form of Compliance Certificate
Exhibit D	–	Form of Interest Election Request
Exhibit E	–	Form of Perfection Certificate
Exhibit F	–	Form of Perfection Certificate Supplement
Exhibit G	–	Form of Promissory Note
Exhibit H	–	Form of Pledge and Security Agreement
Exhibit I	–	Form of Guaranty Agreement
Exhibit J	–	Form of Intellectual Property Security Agreement
Exhibit K	–	Form of Letter of Credit Request
Exhibit L-1	–	Form of U.S. Tax Compliance Certificate (For Foreign Lenders That Are Not Partnerships For U.S. Federal Income Tax Purposes)
Exhibit L-2	–	Form of U.S. Tax Compliance Certificate (For Foreign Participants That Are Not Partnerships For U.S. Federal Income Tax Purposes)
Exhibit L-3	–	Form of U.S. Tax Compliance Certificate (For Foreign Participants That Are Partnerships For U.S. Federal Income Tax Purposes)
Exhibit L-4	–	Form of U.S. Tax Compliance Certificate (For Foreign Lenders That Are Partnerships For U.S. Federal Income Tax Purposes)
Exhibit M	–	Form of Solvency Certificate
Exhibit N	–	Form of Acceptable Intercreditor Agreement
Exhibit O	–	Form of Intercompany Note

CREDIT AGREEMENT

CREDIT AGREEMENT, dated as of August 15, 2017 (this "Agreement"), by and among EQT Avatar Intermediate, Inc., a Delaware corporation ("Holdings"), immediately prior to the Closing Date Assumption (as defined below), EQT Avatar Holdings, Inc., a Delaware corporation (the "Initial Borrower" or the "Buyer") and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation (the "Parent Borrower" or the "Target"), and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined below) and (ii) Certara USA, Inc., a Delaware corporation ("Certara USA" or the "Co-Borrower" and, together with the Initial Borrower and the Parent Borrower, each a "Borrower" and collectively the "Borrowers"), and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition, the Lenders from time to time party hereto, Jefferies Finance LLC ("Jefferies"), in its capacities as administrative agent and collateral agent for the Lenders (in its capacities as administrative agent and collateral agent, the "Administrative Agent") and Jefferies and Golub Capital LLC as Issuing Banks.

RECITALS

A. On the Closing Date, pursuant to the terms of that certain Securities Purchase Agreement, dated as of July 6, 2017 (the "Acquisition Agreement"), by and among, *inter alios*, the Buyer, the Target and Arsenal MBDD Holding, LP, the Buyer will acquire (the "Acquisition") 100% of the issued and outstanding Capital Stock of the Target.

B. To fund a portion of the Acquisition, the Sponsor and certain other investors (including the other Investors) will make cash equity contributions (or, in the case of existing shareholders of the Target and the Management Investors, cash or non-cash equity contributions) in the form of common Capital Stock or otherwise in a form reasonably satisfactory to the Arrangers, directly or indirectly, to Holdings and/or the Buyer, which equity, when combined with the equity of the existing shareholders of the Target and the Management Investors that will be retained, rolled over or converted, if any, shall be not less than 35% of the sum of (a) the aggregate principal amount of the Loans borrowed on the Closing Date (excluding any Loans borrowed under the Revolving Facility used to fund any ordinary course working capital needs of the Initial Borrower and its subsidiaries), plus (b) the aggregate gross proceeds of loans borrowed on the Closing Date under the Holdco Facility, plus (c) the equity capitalization of Holdings and its subsidiaries on the Closing Date after giving effect to the Transactions (such contribution, retention, rollover and/or conversion, collectively, the "Equity Contribution"); it being understood and agreed that the Sponsor will, directly or indirectly, contribute no less than a majority of the Equity Contribution.

C. The Initial Borrower has requested that the Lenders extend credit in the form of (a) Initial Term Loans in an aggregate initial principal amount of \$250,000,000 and (b) a Revolving Facility with an available amount of \$20,000,000, in each case, subject to increase as provided herein.

D. To consummate the Transactions, the direct parent of Holdings will borrow term loans in an aggregate initial principal amount of up to \$100,000,000 under the Holdco Loan Agreement (as defined below).

E. Immediately following the Borrowings on the Closing Date and the consummation of the Acquisition, the Parent Borrower and Co-Borrower shall jointly and severally assume (the "Closing Date Assumption") the right and obligations of the Initial Borrower hereunder as parties hereto pursuant to Section 9.22,

F. The Lenders are willing to extend credit to the Borrowers on the terms and subject to the conditions set forth herein.

Accordingly, the parties hereto agree as follows:

ARTICLE 1 DEFINITIONS

Section 1.01. Defined Terms. As used in this Agreement, the following terms have the meanings specified below:

“ABR”, when used in reference to any Loan or Borrowing, refers to whether such Loan, or the Loans comprising such Borrowing, bear interest at a rate determined by reference to the Alternate Base Rate.

“Acceptable Intercreditor Agreement” means (a) with respect to any Indebtedness secured by a Lien on the Collateral that ranks junior to the Lien on the Collateral, an intercreditor agreement substantially in the form of Exhibit N (with such changes that are reasonably satisfactory to the Administrative Agent and the Parent Borrower) and (b) otherwise, an “equal priority” intercreditor agreement that is reasonably satisfactory to the Administrative Agent and the Parent Borrower and to which the Administrative Agent is a party.

“ACH” means automated clearing house transfers.

“Acquisition” has the meaning assigned to such term in the Recitals to this Agreement.

“Acquisition Agreement” has the meaning assigned to such term in the Recitals to this Agreement.

“Additional Agreement” has the meaning assigned to such term in Article 8.

“Additional Commitment” means any commitment hereunder added pursuant to Sections 2.22, 2.23 and/or 9.02(c).

“Additional Lender” has the meaning assigned to such term in Section 2.22(b).

“Additional Loans” means any Additional Revolving Loans and any Additional Term Loans.

“Additional Revolving Credit Commitments” means any revolving credit commitment added pursuant to Sections 2.22, 2.23 and/or 9.02(c)(ii).

“Additional Revolving Credit Exposure” means, with respect to any Lender at any time, the aggregate Outstanding Amount at such time of all Additional Revolving Loans of such Lender, plus the aggregate outstanding amount at such time of such Lender’s LC Exposure attributable to its Additional Revolving Credit Commitment.

“Additional Revolving Lender” means any Lender with an Additional Revolving Credit Commitment or any Additional Revolving Credit Exposure.

“Additional Revolving Loans” means any revolving loan added hereunder pursuant to Section 2.22, 2.23 and/or Section 9.02(c)(ii).

“Additional Term Lender” means any Lender with an Additional Term Loan Commitment or an outstanding Additional Term Loan.

“Additional Term Loan Commitment” means any term commitment added pursuant to Sections 2.22, 2.23 and/or 9.02(c)(i).

“Additional Term Loans” means any term loan added pursuant to Sections 2.22, 2.23 and/or 9.02(c)(i).

“Adjusted Eurocurrency Rate” means, with respect to any Eurocurrency Rate Borrowing for any Interest Period, an interest rate per annum equal to the greater of (a) the Eurocurrency Rate determined under clause (a) of the definition of “Eurocurrency Rate” for such Interest Period, multiplied by the Statutory Reserve Rate, and (b) in the case of Initial Term Loans only, 1.00% per annum. The Adjusted Eurocurrency Rate for any Eurocurrency Rate Borrowing that includes the Statutory Reserve Rate as a component of the calculation will be adjusted automatically with respect to all such Eurocurrency Rate Borrowings then outstanding as of the effective date of any change in the Statutory Reserve Rate. When used in reference to any Loan or Borrowing, “Adjusted Eurocurrency Rate” shall refer to whether such Loan, or the Loans comprising such Borrowing, bear interest at a rate determined by reference to the Adjusted Eurocurrency Rate as set forth in the preceding sentence.

“Adjustment Date” means the date of delivery of financial statements and the Compliance Certificate required to be delivered pursuant to Section 5.01(a) or Section 5.01(b), as applicable, and Section 5.01(c), respectively.

“Administrative Agent” has the meaning assigned to such term in the preamble to this Agreement.

“Administrative Agent’s Office” means the Administrative Agent’s address and account as set forth on Schedule 1.01(d), or such other address or account as the Administrative Agent may from time to time notify the Parent Borrower and the Lenders.

“Administrative Questionnaire” has the meaning assigned to such term in Section 2.22(d).

“Adverse Proceeding” means any action, suit, proceeding (whether administrative, judicial or otherwise), governmental investigation or arbitration (whether or not purportedly on behalf of Holdings, any Borrower or any of their respective Restricted Subsidiaries) at law or in equity, or before or by any Governmental Authority, domestic or foreign (including any Environmental Claim), whether pending or, to the knowledge of Holdings, any Borrower or any of their respective Restricted Subsidiaries, threatened in writing, against or affecting Holdings, any Borrower or any of their respective Restricted Subsidiaries or any property of Holdings, any Borrower or any of their respective Restricted Subsidiaries.

“Affiliate” means, as applied to any Person, any other Person directly or indirectly Controlling, Controlled by, or under common Control with, that Person. No Person shall be an “Affiliate” of Holdings or any subsidiary thereof solely because it is an unrelated portfolio company of the Sponsor and none of the Administrative Agent, the Arrangers, any Lender (other than any Affiliated Lender or any Debt Fund Affiliate) or any of their respective Affiliates shall be considered an Affiliate of Holdings or any subsidiary thereof. For purposes of this Agreement and the other Loan Documents, Jefferies LLC and its Affiliates shall be deemed to be Affiliates of Jefferies and its Affiliates.

“Affiliated Lender” means any Non-Debt Fund Affiliate, Holdings, any Borrower and/or any subsidiary of Holdings or any Borrower.

“Affiliated Lender Assignment and Assumption” means an assignment and assumption entered into by a Lender and an Affiliated Lender (with the consent of any party whose consent is required by Section 9.05) or an assignee and an Affiliated Lender and accepted by the Administrative Agent in the form of Exhibit A-2 or any other form approved by the Administrative Agent and the Parent Borrower.

“Affiliated Lender Cap” has the meaning assigned to such term in Section 9.05(g)(iv).

“Agreement” has the meaning assigned to such term in the preamble to this Credit Agreement.

“Alternate Base Rate” means, for any day, a rate per annum equal to the highest of (a) the Federal Funds Effective Rate in effect on such day plus 0.50%, (b) to the extent ascertainable, the Eurocurrency Rate (determined in accordance with clause (b) of the definition of “Eurocurrency Rate”) plus 1.00%, and (c) the Prime Rate. Any change in the Alternate Base Rate due to a change in the Prime Rate, the Federal Funds Effective Rate or the Eurocurrency Rate, as the case may be, shall be effective from and including the effective date of such change in the Prime Rate, the Federal Funds Effective Rate or the Eurocurrency Rate, as the case may be. Notwithstanding the foregoing, and solely with respect to the Initial Term Loans, the Alternate Base Rate will be deemed to be 2.00% per annum if the Alternate Base Rate calculated pursuant to the foregoing provisions would otherwise be less than 2.00% per annum.

“AML Legislation” has the meaning assigned to such term in Section 9.16.

“Annual Financial Statements” has the meaning assigned to such term in Section 4.01(c).

“Anti-Terrorism Laws” means any Requirement of Law relating to terrorism or money laundering, including Executive Order No. 13224 on Terrorist Financing, effective September 24, 2001, The Currency and Foreign Transactions Reporting Act (also known as the “Bank Secrecy Act”, 31 U.S.C. §§ 5311-5330 and 12 U.S.C. §§ 1818(s), 1820(b) and 1951-1959).

“Applicable Percentage” means (a) with respect to any Term Lender of any Class, a percentage equal to a fraction the numerator of which is the aggregate outstanding principal amount of the Term Loans and unused Additional Term Loan Commitments of such Term Lender under the applicable Class and the denominator of which is the aggregate outstanding principal amount of the Term Loans and unused Additional Term Loan Commitments of all Term Lenders under the applicable Class and (b) with respect to any Revolving Lender of any Class, the percentage of the aggregate amount of the Revolving Credit Commitments of such Class represented by such Lender’s Revolving Credit Commitment of such Class; provided that for purposes of Section 2.21 and otherwise herein (except with respect to Section 2.11(a)(ii)), when there is a Defaulting Lender, such Defaulting Lender’s Revolving Credit Commitment shall be disregarded for any relevant calculation. In the case of clause (b), in the event that the Revolving Credit Commitments of any Class have expired or been terminated, the Applicable Percentage of any Revolving Lender of such Class shall be determined on the basis of the Revolving Credit Exposure of such Revolving Lender attributable to its Revolving Credit Commitment of such Class, giving effect to any assignment thereof.

“Applicable Rate” means, for any day, (a) with respect to any Initial Term Loan or Initial Revolving Loan, the rate per annum set forth below under the caption “ABR Spread” or “Adjusted Eurocurrency Rate” of the grid titled “Initial Term Loans” or “Initial Revolving Loans”, respectively, as the case may be, based upon the First Lien Leverage Ratio; provided that at any time following a Qualifying IPO the Applicable Rate applicable to any Initial Term Loan for each Category set forth below shall be reduced by an additional 0.25%; provided further that until the first Adjustment Date following the completion of at least one full Fiscal Quarter ended after the Closing Date, the “Applicable Rate” for any Initial Term Loan or Initial Revolving Loan shall be the applicable rate per annum set forth below in Category 1 and (b) with respect to any Additional Term Loan and Additional Revolving Loan of any Class, the rate or rates per annum specified in the applicable Refinancing Amendment, Incremental Facility Agreement or Extension Amendment:

Initial Term Loans

<u>First Lien Leverage Ratio</u>	<u>ABR Spread</u>	<u>Adjusted Eurocurrency Rate Spread</u>
<u>Category 1</u> Greater than 4.50 to 1.00	3.00%	4.00%
<u>Category 2</u> Less than or equal to 4.50 to 1.00	2.75%	3.75%

Initial Revolving Loans

<u>First Lien Leverage Ratio</u>	<u>ABR Spread</u>	<u>Adjusted Eurocurrency Rate Spread</u>
<u>Category 1</u> Greater than 4.50 to 1.00	3.00%	4.00%
<u>Category 2</u> Less than or equal to 4.50 to 1.00 but greater than 4.00 to 1.00	2.75%	3.75%
<u>Category 3</u> Less than or equal 4.00 to 1.00	2.50%	3.50%

The Applicable Rate with respect to Initial Term Loans and Initial Revolving Loans shall be adjusted quarterly on a prospective basis on each Adjustment Date based upon the First Lien Leverage Ratio in accordance with the tables above; provided that if financial statements (and the corresponding Compliance Certificate required pursuant to Section 5.01(c)) are not delivered when required pursuant to Section 5.01(a) or (b), as applicable, the “Applicable Rate” for any Initial Term Loan or Initial Revolving Loan shall, at the option of the Administrative Agent (at the direction of the Required Lenders) and upon notice to the Parent Borrower, be the rate per annum set forth above in Category 1 of the applicable table above until such financial statements (and the corresponding Compliance Certificate required pursuant to Section 5.01(c)) are delivered in compliance with Section 5.01(a) or (b), as applicable.

“Applicable Revolving Credit Percentage” means, with respect to any Revolving Lender at any time, the percentage of the Total Revolving Credit Commitment at such time represented by such Revolving Lender’s Revolving Credit Commitments at such time; provided that for purposes of Section 2.21, when there is a Defaulting Lender, any such Defaulting Lender’s Revolving Credit Commitment shall be disregarded in the relevant calculations. In the event that (a) the Revolving Credit Commitments of any Class have expired or been terminated in accordance with the terms hereof (other than pursuant to Article 7), the Applicable Revolving Credit Percentage shall be recalculated without giving effect to the Revolving Credit Commitments of such Class or (b) the Revolving Credit Commitments of all Classes have terminated (or the Revolving Credit Commitments of any Class have terminated pursuant to Article 7), the Applicable Revolving Credit Percentage shall be determined based upon the Revolving Credit Commitments (or the Revolving Credit Commitments of such Class) most recently in effect, giving effect to any assignments thereof.

“Approved Fund” means, with respect to any Lender, any Person (other than a natural person) that is engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of its activities and is administered, advised or managed by (a) such Lender, (b) any Affiliate of such Lender or (c) any entity or any Affiliate of any entity that administers, advises or manages such Lender.

“Arrangers” means Jefferies and Golub Capital LLC, in their capacities as joint lead arrangers and joint bookrunners with respect to the Facilities initially made available hereunder.

“Assignment and Assumption” means (a) an assignment and assumption entered into by a Lender and an assignee (with the consent of any party whose consent is required by Section 9.05), and accepted by the Administrative Agent in the form of Exhibit A-1 or any other form approved by the Administrative Agent and the Parent Borrower or (b) if the assignee or assignor party to the relevant assignment and assumption is an Affiliated Lender, an Affiliated Lender Assignment and Assumption.

“Available Amount” means, at any time, an amount equal to, without duplication:

(a) the sum of:

(i) the greater of \$15,000,000 and 30.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period; plus

(ii) if greater than zero, the CNI Growth Amount; plus

(iii) the amount of any capital contribution or the proceeds of any issuance of Qualified Capital Stock after the Closing Date (other than any amount (A) constituting a Cure Amount or an Available Excluded Contribution Amount, (B) received from any Borrower or any of its Restricted Subsidiaries or (C) consisting of the proceeds of any loan or advance made pursuant to Section 6.06(h) (i) received as Cash equity by any Borrower or any of its Restricted Subsidiaries), plus the fair market value, as reasonably determined in good faith by the Parent Borrower, of Cash Equivalents, marketable securities or other property received by any Borrower or any of its Restricted Subsidiaries as a capital contribution or in return for any issuance of Qualified Capital Stock (other than any amounts (1) constituting a Cure Amount or an Available Excluded Contribution Amount, (2) used to make a Restricted Payment pursuant to Section 6.04(a)(ii)(B) or (3) received from any Borrower or any of its Restricted Subsidiaries), in each case, during the period from and including the day immediately following the Closing Date through and including such time; plus

(iv) the aggregate principal amount of any Indebtedness or Disqualified Capital Stock, in each case, of any Borrower or any of its Restricted Subsidiaries issued after the Closing Date (other than Indebtedness or such Disqualified Capital Stock issued to any Borrower or any of its Restricted Subsidiaries), which has been converted into or exchanged for Capital Stock of any Borrower, any of its Restricted Subsidiaries or any Parent Company that does not constitute Disqualified Capital Stock, together with the fair market value of any Cash Equivalents and the fair market value (as reasonably determined in good faith by the Parent Borrower) of any assets received by such Borrower or such Restricted Subsidiary upon such exchange or conversion, in each case, during the period from and including the day immediately following the Closing Date through and including such time; plus

(v) the net cash proceeds received by any Borrower or any of its Restricted Subsidiaries during the period from and including the day immediately following the Closing Date through and including such time in connection with the Disposition to any Person (other than any Borrower or any of its Restricted Subsidiaries) of any Investment made pursuant to Section 6.06(r)(i); plus

(vi) to the extent not already reflected as a return of capital with respect to such Investment for purposes of determining the amount of such Investment, the proceeds received by any Borrower or any of its Restricted Subsidiaries during the period from and including the day immediately following the Closing Date through and including such time in connection with cash returns, cash profits, cash distributions and similar cash amounts, including cash principal repayments of loans, in each case received in respect of any Investment made after the Closing Date pursuant to Section 6.06(r)(i), but excluding any return, profit, distribution or similar amount paid by any Unrestricted Subsidiary to any Borrower or any of its Restricted Subsidiaries in respect of the payment of any Tax liability of such Unrestricted Subsidiary; plus

(vii) an amount equal to the sum of (A) the amount of any Investment by any Borrower or any of its Restricted Subsidiaries pursuant to Section 6.06(r)(i) in any Unrestricted Subsidiary that has been re-designated as a Restricted Subsidiary or has been merged, consolidated or amalgamated with or into, or is liquidated, wound up or dissolved into, any Borrower or any of its Restricted Subsidiaries (up to the lesser of (1) the fair market value (as reasonably determined in good faith by the Parent Borrower) of the Investment of the Borrowers and their respective Restricted Subsidiaries in such Unrestricted Subsidiary at the time of such re-designation or merger, consolidation or amalgamation and (2) the fair market value (as reasonably determined in good faith by the Parent Borrower) of the original Investment by the Borrowers and their respective Restricted Subsidiaries in such Unrestricted Subsidiary; provided that in the case of original Investments made in Cash the fair market value thereof shall be such cash value), (B) the fair market value (as reasonably determined in good faith by the Parent Borrower) of the assets of any Unrestricted Subsidiary that have been transferred, conveyed or otherwise distributed to any Borrower or any of its Restricted Subsidiaries and (C) the Net Proceeds of any Disposition of any Unrestricted Subsidiary (including the issuance or sale of the Capital Stock thereof) received by any Borrower or any of its Restricted Subsidiaries, in each case, during the period from and including the day immediately following the Closing Date through and including such time; plus

(viii) the amount of any Declined Proceeds; plus

(ix) the amount of any Retained Asset Sale Proceeds; minus

(b) an amount equal to the sum of (i) Restricted Payments made pursuant to Section 6.04(a)(iii)(A), plus (ii) Restricted Debt Payments made pursuant to Section 6.04(b)(vi)(A), plus (iii) Investments made pursuant to Section 6.06(r)(i), in each case, after the Closing Date and prior to such time or contemporaneously therewith.

“Available Excluded Contribution Amount” means the aggregate amount of Cash or Cash Equivalents or the fair market value of other assets (as reasonably determined in good faith by the Parent Borrower, but excluding any Cure Amount) received by any Borrower or any of its Restricted Subsidiaries after the Closing Date from:

- (a) contributions in respect of Qualified Capital Stock (other than any amounts received from any Borrower or any of its Restricted Subsidiaries), and
- (b) the sale of Qualified Capital Stock of any Borrower or any of its Restricted Subsidiaries (other than (i) to any Borrower or any of its Restricted Subsidiaries, (ii) pursuant to any management equity plan or stock option plan or any other management or employee benefit plan or (iii) with the proceeds of any loan or advance made pursuant to Section 6.06(h)(i)),

in each case, designated as an Available Excluded Contribution Amount pursuant to a certificate of a Responsible Officer on or promptly after the date on which the relevant capital contribution is made or the relevant proceeds are received, as the case may be, and which have not been applied in reliance on the Available Amount or to make a Restricted Payment pursuant to Section 6.04(a)(ii)(B).

“Bail-In Action” means the exercise of any Write-Down and Conversion Powers by the applicable EEA Resolution Authority in respect of any liability of an EEA Financial Institution.

“Bail-In Legislation” means, with respect to any EEA Member Country implementing Article 55 of Directive 2014/59/EU of the European Parliament and of the Council of the European Union, the implementing law for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule.

“Banking Services” means each and any of the following bank services: commercial credit cards, stored value cards, purchasing cards, treasury management services, netting services, overdraft protections, check drawing services, automated payment services (including depository, overdraft, controlled disbursement, ACH transactions, return items and interstate depository network services), employee credit card programs, cash pooling services and any arrangements or services similar to any of the foregoing and/or otherwise in connection with Cash management and Deposit Accounts.

“Banking Services Obligations” means any and all obligations of Holdings, any Borrower or any Restricted Subsidiary, whether absolute or contingent and however and whenever created, arising, evidenced or acquired (including all renewals, extensions and modifications thereof and substitutions therefor) (a) under any arrangement that is in effect on the Closing Date between Holdings, any Borrower or any Restricted Subsidiary and a counterparty that is (or is an Affiliate of) either (i) the Administrative Agent, any Arranger or any Lender as of the Closing Date or (ii) any other Person identified to the Administrative Agent on or prior to the Closing Date or (b) under any arrangement that is entered into after the Closing Date by Holdings, any Borrower or any Restricted Subsidiary with any counterparty that is (or is an Affiliate of) the Administrative Agent, any Arranger or any Lender at the time such arrangement is entered into, in each case in connection with Banking Services, in each case, that have been designated to the Administrative Agent in writing by the Parent Borrower as being “Banking Services Obligations” for purposes of the Loan Documents; it being understood that each counterparty thereto shall be deemed (A) to appoint the Administrative Agent as its agent under the applicable Loan Documents and (B) to agree to be bound by the provisions of Article 8, Section 9.03 and Section 9.10 and each applicable Acceptable Intercreditor Agreement as if it were a Lender.

“Bankruptcy Code” means Title 11 of the United States Code (11 U.S.C. § 101 et seq.).

“Board” means the Board of Governors of the Federal Reserve System of the US.

“Board of Directors” means, with respect to any Person, (a) in the case of any corporation, the board of directors of such Person or any committee thereof duly authorized to act on behalf of such board, (b) in the case of any limited liability company, the board of managers, board of directors, manager or managing member of such Person or the functional equivalent of the foregoing, (c) in the case of any partnership, the board of directors, board of managers, manager or managing member of a general partner of such Person or the functional equivalent of the foregoing and (d) in any other case, the functional equivalent of the foregoing. In addition, the term “director” means a director or functional equivalent thereof with respect to the relevant Board of Directors.

“Bona Fide Debt Fund” means any debt fund, investment vehicle, regulated bank entity or unregulated lending entity that is engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of business which is managed, sponsored or advised by any Person controlling, controlled by or under common control with (a) any competitor of any Borrower and/or any of its subsidiaries or (b) any Affiliate of such competitor, but with respect to which no personnel involved with any investment in such Person (other than a limited number of senior employees in connection with the relevant Person’s internal legal, compliance, risk management and/or credit practices) (i) directly or indirectly makes, has the right to make or participates with others in making any investment decisions with respect to such debt fund, investment vehicle, regulated bank entity or unregulated lending entity or (ii) has access to any information (other than information that is publicly available) relating to Holdings, any Borrower or any of their respective subsidiaries or any entity that forms a part of any of their respective businesses; it being understood and agreed that the term “Bona Fide Debt Fund” shall not include any Person that is separately identified to the Arrangers or the Administrative Agent, as applicable, in accordance with clause (a) of the definition of “Disqualified Institution” or any Affiliate of any such Person that is reasonably identifiable as an Affiliate of such Person on the basis of such Affiliate’s name.

“Borrower” and “Borrowers” have the meaning assigned to such terms in the preamble to this Agreement; provided, however, that on and after the effectiveness of the Closing Date Assumption, the terms “Borrower” and “Borrowers” shall cease to include the Buyer.

“Borrower Materials” has the meaning assigned to such term in Section 9.01.

“Borrowing” means any Loans of the same Type and Class made, converted or continued on the same date and, in the case of Adjusted Eurocurrency Rate Loans, as to which a single Interest Period is in effect.

“Borrowing Request” means a request by a Borrower for a Borrowing in accordance with Section 2.03 and substantially in the form attached hereto as Exhibit B or such other form that is reasonably acceptable to the Administrative Agent and the Parent Borrower.

“Business Day” means:

(a) any day other than a Saturday, Sunday or other day on which commercial banks are authorized to close under the laws of, or are in fact closed in, New York City; and

(b) if such day relates to any funding, disbursement, settlement and/or payments in respect of an Adjusted Eurocurrency Rate Loan or Letter of Credit or any other dealing to be carried out pursuant to this Agreement in respect of any such Adjusted Eurocurrency Rate Loan, any such day described in clause (a) above that is also a London Banking Day.

“Buyer” has the meaning assigned to such term in the preamble to this Agreement.

“Capital Expenditures” means, with respect to the Parent Borrower and its Restricted Subsidiaries for any period, the aggregate amount, without duplication, of (a) all expenditures (whether paid in cash or accrued as liabilities and including in all events all amounts expended or capitalized under Capital Leases) that would, in accordance with GAAP, be included as additions to property, plant and equipment, (b) other capital expenditures of such Person for such period (whether paid in cash or accrued as liabilities and including in all events all amounts expended or capitalized under Capital Leases) that are reported in the Parent Borrower’s consolidated statement of cash flows for such period and (c) other capital expenditures of such Person for such period (whether paid in cash or accrued as liabilities and including in all events all amounts expended or capitalized under Capital Leases, including any capitalized bonus payment).

“Capital Lease” means, as applied to any Person, any lease of any property (whether real, personal or mixed) by that Person as lessee that, in conformity with GAAP, is or should be accounted for as a capital lease on the balance sheet of that Person.

“Capital Stock” means any and all shares, interests, participations or other equivalents (however designated) of capital stock of a corporation, any and all equivalent ownership interests in a Person (other than a corporation), including partnership interests and membership interests, and any and all warrants, rights or options to purchase or other arrangements or rights to acquire any of the foregoing, but excluding for the avoidance of doubt any Indebtedness convertible into or exchangeable for any of the foregoing.

“Captive Insurance Subsidiary” means any Restricted Subsidiary of any Borrower that is subject to regulation as an insurance company (and any Restricted Subsidiary thereof).

“Cash” means money, currency or a credit balance in any Deposit Account, in each case determined in accordance with GAAP.

“Cash Equivalents” means, as at any date of determination,

(a) Dollars, euro, pounds, Canadian dollars or such other currencies held by it from time to time in the ordinary course of business;

(b) readily marketable securities (i) issued or directly and unconditionally guaranteed or insured as to interest and principal by the government of the US, Canada, the United Kingdom or any member nation of the European Union rated at least A-2 from S&P or at least P-2 from Moody’s (or, if at any time either S&P or Moody’s is not rating such obligations, an equivalent rating from another nationally recognized statistical rating agency) or (ii) issued by any agency or instrumentality of any of the foregoing, the obligations of which are backed by the full faith and credit of the US, Canada, the United Kingdom or any such member nation of the European Union, as applicable, in each case having average maturities of not more than twelve months from the date of acquisition thereof and, in each case, repurchase agreements and reverse repurchase agreements relating thereto;

(c) readily marketable direct obligations issued by any state, commonwealth or territory of the US or any political subdivision, taxing authority or any public instrumentality thereof or by any foreign government, in each case having average maturities of not more than 12 months from the acquisition thereof and having, at the time of the acquisition thereof, a rating of at least A-2 from S&P or at least P-2 from Moody’s (or, if at any time either S&P or Moody’s is not rating such obligations, an equivalent rating from another nationally recognized statistical rating agency) and, in each case, repurchase agreements and reverse repurchase agreements relating thereto;

(d) commercial paper having average maturities of not more than 12 months from the date of creation thereof and having, at the time of the acquisition thereof, a rating of at least A-2 from S&P or at least P-2 from Moody's (or, if at any time either S&P or Moody's is not rating such obligations, an equivalent rating from another nationally recognized statistical rating agency);

(e) deposits, money market deposits, time deposit accounts, certificates of deposit or bankers' acceptances (or similar instruments) maturing within one year after such date and issued or accepted by any Lender or by any bank organized under, or authorized to operate as a bank under, the laws of the US, any state thereof or the District of Columbia or any political subdivision thereof and that has capital and surplus of not less than \$100,000,000 and, in each case, repurchase agreements and reverse repurchase agreements relating thereto;

(f) securities with maturities of six months or less from the date of acquisition backed by standby letters of credit issued by any commercial bank having capital and surplus of not less than \$100,000,000;

(g) marketable short-term money market and similar highly liquid funds having a rating of at least P-2 or A-2 from either Moody's or S&P, respectively (or, if at any time either S&P or Moody's is not rating such obligations, an equivalent rating from another nationally recognized statistical rating agency);

(h) investments with average maturities of 12 months or less from the date of acquisition in money market funds rated AAA- (or the equivalent thereof) or better by S&P or Aaa3 (or the equivalent thereof) or better by Moody's (or, if at any time either S&P or Moody's is not rating such obligations, an equivalent rating from another nationally recognized statistical rating agency);

(i) shares of any money market mutual fund that has (i) substantially all of its assets invested in the types of investments referred to in clauses (a) through (h) above, (ii) net assets of not less than \$250,000,000 and (iii) a rating of at least A-2 from S&P or at least P-2 from Moody's (or, if at any time either S&P or Moody's is not rating such fund, an equivalent rating from another nationally recognized statistical rating agency); and

(j) solely with respect to any Captive Insurance Subsidiary, any investment that such Captive Insurance Subsidiary is not prohibited to make in accordance with applicable law.

The term "Cash Equivalents" shall also include (x) Investments of the type and maturity described in clauses (a) through (j) above of foreign obligors, which Investments or obligors (or the parent companies thereof) have the ratings described in such clauses or equivalent ratings from comparable foreign rating agencies and (y) other short-term Investments utilized by Foreign Subsidiaries in accordance with normal investment practices for cash management in Investments that are analogous to the Investments described in clauses (a) through (j) and in this paragraph.

"Certara USA" has the meaning assigned to such term in the preamble to this Agreement.

“CFC” means any Foreign Subsidiary that is a “controlled foreign corporation” within the meaning of Section 957 of the Code.

“Change in Law” means (a) the adoption of any law, treaty, rule or regulation after the Closing Date, (b) any change in any law, treaty, rule or regulation or in the interpretation or application thereof by any Governmental Authority after the Closing Date or (c) compliance by any Lender or any Issuing Bank (or, for purposes of Section 2.15(b), by any lending office of such Lender or such Issuing Bank or by such Lender’s or such Issuing Bank’s holding company, if any) with any request, guideline or directive (whether or not having the force of law) of any Governmental Authority made or issued after the Closing Date (other than any such request, guideline or directive to comply with any law, rule or regulation that was in effect on the Closing Date). For purposes of this definition and Section 2.15, (x) the Dodd-Frank Wall Street Reform and Consumer Protection Act and all requests, rules, guidelines, requirements and directives thereunder or issued in connection therewith or in implementation thereof and (y) all requests, rules, guidelines, requirements or directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority) or US regulatory authorities, in each case pursuant to Basel III, shall in each case described in clauses (a), (b) and (c) above, be deemed to be a Change in Law, regardless of the date enacted, adopted, issued or implemented.

“Change of Control” means the earliest to occur of:

- (a) at any time prior to a Qualifying IPO, the Permitted Holders ceasing to beneficially own, either directly or indirectly, Capital Stock representing more than 50% of the total voting power of all of the outstanding voting stock of Holdings unless the Permitted Holders otherwise have the right (pursuant to contract, proxy or otherwise), directly or indirectly, to designate, nominate or appoint (and do so designate, nominate or appoint) directors of Holdings having a majority of the aggregate votes on the Board of Directors of Holdings;
- (b) at any time on or after a Qualifying IPO, the acquisition by any Person or group, including any group acting for the purpose of acquiring, holding or disposing of Securities, other than one or more Permitted Holders, of Capital Stock representing more than the greater of (i) 35% of the total voting power of all of the outstanding voting stock of Holdings and (ii) the percentage of the total voting power of all of the outstanding voting stock of Holdings owned, directly or indirectly, beneficially by the Permitted Holders unless the Permitted Holders otherwise have the right (pursuant to contract, proxy or otherwise), directly or indirectly, to designate, nominate or appoint (and do so designate, nominate or appoint) directors of Holdings having a majority of the aggregate votes on the Board of Directors of Holdings; and
- (c) any Borrower ceasing to be a direct or indirect Wholly-Owned Subsidiary of Holdings.

For purposes of this definition, including other defined terms used herein in connection with this definition, (i) “beneficial ownership” shall be as defined in Rules 13(d)-3 and 13(d)-5 under the Exchange Act as in effect on the date hereof and (ii) the words “Person” and “group” shall be within the meaning of Section 13(d) or 14(d) of the Exchange Act, but shall exclude any employee benefit plan of such Person or group or its subsidiaries and any Person acting in its capacity as trustee, agent or other fiduciary or administrator of any such plan.

Notwithstanding anything to the contrary in this definition or any provision of Section 13(d)-3 or 13(d)-5 of the Exchange Act, (A) if any group includes one or more Permitted Holders, the issued and outstanding Capital Stock of Holdings that is directly or indirectly owned by the Permitted Holders that are part of such group shall not be treated as being beneficially owned by such group or any other member of such group for purposes of this definition, (B) a Person or group shall not be deemed to beneficially own Capital Stock to be acquired by such Person or group pursuant to a stock or asset purchase agreement, merger agreement, option agreement, warrant agreement or similar agreement (or voting or option or similar agreement related thereto) until the consummation of the acquisition of Capital Stock in connection with the transactions contemplated by such agreement and (C) a Person or group will not be deemed to beneficially own Capital Stock of another Person as a result of its ownership of Capital Stock or other securities of such other Person’s parent (or related contractual rights) unless it owns 50% or more of the total voting power of the Capital Stock entitled to vote for the election of directors of such Person’s parent; provided that, notwithstanding this clause (C), after a Qualifying IPO of a Parent Company, the determination of beneficial ownership of outstanding voting stock of Holdings resulting from any Person’s or group’s ownership of Capital Stock or other securities of such Parent Company shall be deemed to equal the percentage of voting stock of such Parent Company directly owned by such Person or group multiplied by the percentage ownership of voting stock of Holdings owned directly or indirectly by such Parent Company.

“Charge” means any fee, loss, charge, expense, cost, accrual or reserve of any kind (in each case, if applicable, as defined under GAAP).

“Charged Amounts” has the meaning assigned to such term in Section 9.19.

“Class”, when used with respect to (a) any Loan or Borrowing, refers to whether such Loan, or the Loans comprising such Borrowing, are Initial Term Loans, Additional Term Loans of any series established as a separate “Class” pursuant to Section 2.22, 2.23 and/or 9.02(c)(i), Initial Revolving Loans or Additional Revolving Loans of any series established as a separate “Class” pursuant to Section 2.22, 2.23 and/or 9.02(c)(ii), (b) any Commitment, refers to whether such Commitment is an Initial Term Commitment, an Additional Term Loan Commitment of any series established as a separate “Class” pursuant to Section 2.22, 2.23 and/or 9.02(c)(i), an Initial Revolving Credit Commitment or an Additional Revolving Credit Commitment of any series established as a separate “Class” pursuant to Section 2.22, 2.23 and/or 9.02(c)(ii), (c) any Lender, refers to whether such Lender has a Loan or Commitment of a particular Class and (d) any Revolving Credit Exposure, refers to whether such Revolving Credit Exposure is attributable to a Revolving Credit Commitment of a particular Class.

“Closing Date” means the date on which the conditions specified in Section 4.01 are satisfied (or waived in accordance with Section 9.02).

“Closing Date Material Adverse Effect” has the meaning given to the term “Material Adverse Effect” in the Acquisition Agreement.

“CNI Growth Amount” means, at any date of determination, an amount determined on a cumulative basis equal to 50% of Consolidated Net Income for the period (treated as one accounting period) from the first day of the Fiscal Quarter commencing immediately prior to the Closing Date to the end of the most recent Fiscal Quarter for which financial statements have been delivered pursuant to Section 5.01(a) or (b), as applicable.

“Co-Borrower” has the meaning assigned to such term in the preamble to this Agreement.

“Code” means the Internal Revenue Code of 1986, as amended from time to time, and the regulations promulgated and rulings issued thereunder.

“Collateral” means any and all property subject (or purported to be subject) to a Lien under any Collateral Document and any and all other property, now existing or hereafter acquired by any Loan Party, that is or becomes subject (or purported to be subject) to a Lien pursuant to any Collateral Document to secure the Secured Obligations.

“Collateral and Guarantee Requirement” means, at any time, subject to (a) the applicable limitations set forth in this Agreement and/or any other Loan Document and (b) the time periods (and extensions thereof) set forth in Section 5.12, the requirement that the Administrative Agent shall have received in the case of any Restricted Subsidiary that is required or elects to become a Loan Party after the Closing Date (i) a joinder to the Loan Guaranty in substantially the form attached as an exhibit thereto, (ii) a supplement to the Security Agreement in substantially the form attached as an exhibit thereto, (iii) if the Restricted Subsidiary required to comply with the requirements set forth in this definition pursuant to Section 5.12(a) owns registrations of or applications for Patents, Trademarks, Copyrights and/or exclusive Copyright Licenses that constitute Collateral, an Intellectual Property Security Agreement in substantially the form attached as Exhibit J, (iv) a completed Perfection Certificate and, in accordance with Section 5.01(i), a Perfection Certificate Supplement, (v) UCC financing statements in appropriate form for filing in such jurisdictions as the Administrative Agent may reasonably request, (vi) each item of Collateral that such Restricted Subsidiary is required to deliver under Section 4.02 of the Security Agreement (which, for the avoidance of doubt, shall be delivered within the time periods set forth in Section 5.12(a)) and (vii) an executed joinder to each Acceptable Intercreditor Agreement in substantially the form attached as an exhibit thereto.

“Collateral Documents” means, collectively, (a) the Security Agreement, (b) each Mortgage, (c) each Intellectual Property Security Agreement, (d) any supplement to any of the foregoing delivered to the Administrative Agent pursuant to the definition of “Collateral and Guarantee Requirement” or the requirements of any other Collateral Document, (e) the Perfection Certificate (including any Perfection Certificate delivered to the Administrative Agent pursuant to the definition of “Collateral and Guarantee Requirement”) and each Perfection Certificate Supplement and (f) each other document and/or instrument pursuant to which any Loan Party grants (or purports to grant) a Lien on any Collateral as security for payment of the Secured Obligations.

“Commercial Letter of Credit” means any letter of credit issued for the purpose of providing the primary payment mechanism in connection with the purchase of any materials, goods or services by the Borrowers or any of its subsidiaries in the ordinary course of business of such Person.

“Commercial Tort Claim” has the meaning set forth in Article 9 of the UCC.

“Commitment” means, with respect to each Lender, such Lender’s Initial Term Loan Commitment, Initial Revolving Credit Commitment and Additional Commitment, as applicable, in effect as of such time.

“Commitment Fee Rate” means, on any date (a) with respect to the Initial Revolving Credit Commitments, the applicable rate per annum set forth below based upon the First Lien Leverage Ratio; provided that until the first Adjustment Date following the completion of at least one full Fiscal Quarter after the Closing Date, “Commitment Fee Rate” shall be the applicable rate per annum set forth below in Category 1 and (b) with respect to Additional Revolving Credit Commitments of any Class, the rate or rates per annum specified in the applicable Refinancing Amendment, Incremental Facility Agreement or Extension Amendment:

First Lien Leverage Ratio	Commitment Fee Rate
<u>Category 1</u> Greater than 4.50 to 1.00	0.50%
<u>Category 2</u> Less than or equal to 4.50 to 1.00 and greater than 4.00 to 1.00	0.375%
<u>Category 3</u> Less than or equal to 4.00 to 1.00	0.25%

The Commitment Fee Rate with respect to the Initial Revolving Credit Commitment shall be adjusted quarterly on a prospective basis on each Adjustment Date based upon the First Lien Leverage Ratio in accordance with the table set forth above; provided that if financial statements (and the corresponding Compliance Certificate required to be delivered pursuant to Section 5.01(c)) are not delivered when required pursuant to Section 5.01(a) or (b), as applicable, the Commitment Fee Rate shall, at the option of the Administrative Agent (at the direction of the Required Lenders) and upon notice to the Parent Borrower, be the rate per annum set forth above in Category 1 until such financial statements (and the corresponding Compliance Certificate required to be delivered pursuant to Section 5.01(c)) are delivered in compliance with Section 5.01(a) or (b), as applicable.

“Commitment Schedule” means the Schedule attached hereto as Schedule 1.01(a).

“Commodity Exchange Act” means the Commodity Exchange Act (7 U.S.C. § 1 et seq.).

“Communications” has the meaning assigned to such term in Section 9.01.

“Company Competitor” means any competitor of the Target and/or any of its subsidiaries.

“Compliance Certificate” means a Compliance Certificate substantially in the form of Exhibit C.

“Confidential Information” has the meaning assigned to such term in Section 9.13.

“Consolidated Adjusted EBITDA” means, with respect to any Person on a consolidated basis for any period, the sum of:

- (a) Consolidated Net Income for such period; plus
- (b) without duplication, those amounts which, in the determination of Consolidated Net Income for such period, have been deducted for:
 - (i) total interest expense and, to the extent not reflected in such total interest expense, any losses on hedging obligations or other derivative instruments entered into for the purpose of hedging interest rate risk, and bank and letter of credit fees and costs of surety bonds in connection with financing activities, together with items excluded from the definition of “Consolidated Interest Expense” pursuant to clauses (a) through (l) thereof;
 - (ii) Taxes paid and any provision for Taxes, including income, capital, profit, revenue, state, foreign, provincial, franchise, excise and similar Taxes, property Taxes, foreign withholding Taxes and foreign unreimbursed value added Taxes (including (x) penalties and interest related to any such Tax or arising from any Tax examination, (y) pursuant to any Tax sharing arrangement or as a result of any Tax distribution and (z) in respect of repatriated funds) of such Person paid or accrued during such period and (without duplication) any payments to a Parent Company pursuant to Section 6.04(a)(i)(A) or (B) in respect of Taxes;

(iii) (A) depreciation and (B) amortization (including amortization of goodwill, software, internal labor costs, deferred financing fees or costs and other intangible assets);

(iv) any non-cash Charge, including the excess of GAAP rent expense over actual cash rent paid during such period due to the use of straight line rent for GAAP purposes (provided that (x) to the extent that any such non-cash Charge represents an accrual or reserve for any potential cash item in any future period, (A) such Person may elect not to add back such non-cash Charge in the current period and (B) to the extent such Person elects to add back such non-cash Charge, the cash payment in respect thereof in such future period shall be subtracted from Consolidated Adjusted EBITDA (as a deduction in calculating net income or otherwise) to such extent and (y) any non-cash Charge representing amortization of a prepaid cash item that was paid and not expensed in a prior period shall be excluded);

(v) (A) any Charge incurred as a result of, in connection with or pursuant to any management equity plan, profits interest or stock option plan or any other management or employee benefit plan or agreement, any pension plan (including any post-employment benefit scheme to which the relevant pension trustee has agreed), any stock subscription or shareholder agreement, any employee benefit trust, any employee benefit scheme or any similar equity plan or agreement (including any deferred compensation arrangement), including any payment made to option holders in connection with, or as a result of, any distribution being made to, or share repurchase from, a shareholder, which payments are being made to compensate option holders as though they were shareholders at the time of, and entitled to share in, such distribution or share repurchase and (B) any Charge incurred in connection with the rollover, acceleration or payout of Capital Stock held by management of Holdings (or any other Parent Company), the Parent Borrower and/or any Restricted Subsidiary;

(vi) Public Company Costs;

(vii) the amount of any Charge or deduction associated with any Restricted Subsidiary that is attributable to any non-controlling interest and/or minority interest of any third party;

(viii) the amount of any contingent payments in connection with the licensing of intellectual property or other assets;

(ix) the amount of management, monitoring, consulting, transaction and advisory fees and related expenses (including any termination fees payable in connection with the early termination of management and monitoring agreements) actually paid by or on behalf of, or accrued by, such Person or any of its subsidiaries (A) to any Investor (and/or any Affiliate thereof and/or related management company) to the extent permitted under this Agreement and/or (B) prior to the Closing Date;

(x) the amount of fees, expense reimbursements and indemnities paid to directors, including directors of Holdings or any other Parent Company;

(xi) the amount of any Charge incurred or accrued in connection with sales of receivables and related assets in connection with any Permitted Receivables Financing; and

(xii) any net pension or other post-employment benefit costs representing amortization of unrecognized prior service costs, actuarial losses, including amortization of such amounts arising in prior periods, amortization of the unrecognized net obligation (and loss or cost) existing at the date of initial application of FASB Accounting Standards Codification 715, and any other items of a similar nature; plus

(c) to the extent not included in Consolidated Net Income for such period, cash actually received (or any netting arrangement resulting in reduced cash expenditures) during such period so long as the non-cash gain relating to the relevant cash receipt or netting arrangement was deducted in the calculation of Consolidated Adjusted EBITDA pursuant to clause (f) below for any previous period and not added back; plus

(d) without duplication, the amount of “run rate” cost savings, operating expense reductions and synergies (collectively, “Expected Cost Savings”) related to the Transactions or any Investment, Disposition, operating improvement, restructuring, cost savings initiative and/or any similar transaction or initiative (any such operating improvement, restructuring, cost savings initiative or similar transaction or initiative, a “Cost Saving Initiative”) projected by the Parent Borrower in good faith to be realized as a result of actions that have been taken or initiated or are expected to be taken (in the good faith determination of the Parent Borrower), including any cost savings, expenses and Charges (including restructuring and integration charges) in connection with, or incurred by or on behalf of, any joint venture of the Parent Borrower or any of its Restricted Subsidiaries (whether accounted for on the financial statements of any such joint venture or the Parent Borrower) (i) with respect to the Transactions, on or prior to the date that is 24 months after the Closing Date (including actions initiated prior to the Closing Date) and (ii) with respect to any other Cost Savings Initiative whether initiated before, on or after the Closing Date, within 24 months after such Cost Savings Initiative (which Expected Cost Savings shall be added to Consolidated EBITDA until fully realized and calculated on a Pro Forma Basis as though such Expected Cost Savings had been realized on the first day of the relevant period), net of the amount of actual benefits realized from such actions; provided that (A) such cost savings are reasonably identifiable and factually supportable, (B) no Expected Cost Savings shall be added pursuant to this clause (d) to the extent duplicative of any Charges relating to such Expected Cost Savings that increased Consolidated Net Income pursuant to clause (d) of the definition thereof (it being understood and agreed that “run rate” shall mean the full annual recurring benefit that is associated with any action taken) and (C) the share of any such cost savings, expenses and Charges with respect to a joint venture that are to be allocated to the Parent Borrower or any of its Restricted Subsidiaries shall not exceed the total amount thereof for any such joint venture multiplied by the percentage of income of such venture expected to be included in Consolidated EBITDA for the relevant Test Period; plus

(e) the excess (if any) of (i) the aggregate amount of “run rate” profits pursuant to Recurring Contracts entered into during the relevant Test Period (net of actual profits pursuant to such Recurring Contracts during such Test Period) projected by the Parent Borrower, in good faith, as if such contracted pricing was applicable (at the contracted rate and calculated based on an assumed margin determined by the Parent Borrower to be a reasonable good faith estimate of the actual costs (including increased overhead costs) associated with such Recurring Contracts) during the entire Test Period, and (ii) profits associated with Recurring Contracts that were cancelled or otherwise terminated during such Test Period; minus

- (f) any amount which, in the determination of Consolidated Net Income for such period, has been included for any non-cash income or non-cash gain, all as determined in accordance with GAAP (provided that if any non-cash income or non-cash gain represents an accrual or deferred income in respect of potential cash items in any future period, such Person may determine not to deduct the relevant non-cash gain or income in the then-current period); minus
- (g) the amount of any cash payment made during such period in respect of any non-cash accrual, reserve or other non-cash Charge that is accounted for in a prior period and that was added to Consolidated Net Income to determine Consolidated Adjusted EBITDA for such prior period and that does not otherwise reduce Consolidated Net Income for the current period; minus
- (h) the excess of actual cash rent paid over rent expense during such period due to the use of straight-line rent for GAAP purposes; minus
- (i) the amount of any income or gain associated with any Restricted Subsidiary that is attributable to any non-controlling interest and/or minority interest of any third party.

Notwithstanding anything to the contrary herein, it is agreed that for the purpose of calculating Consolidated Adjusted EBITDA for any period that includes the Fiscal Quarters ended June 30, 2017, March 31, 2017, December 31, 2016 and/or September 30, 2016 (i) Consolidated Adjusted EBITDA for the Fiscal Quarter ended June 30, 2017 shall be deemed to be \$13,600,000, (ii) Consolidated Adjusted EBITDA for the Fiscal Quarter ended March 31, 2017 shall be deemed to be \$12,700,000, (iii) Consolidated Adjusted EBITDA for the Fiscal Quarter ended December 31, 2016 shall be deemed to be \$12,200,000 and (iv) Consolidated Adjusted EBITDA for the Fiscal Quarter ended September 30, 2016 shall be deemed to be \$12,800,000 in each case, as adjusted on a Pro Forma Basis, as applicable, and as further adjusted pursuant to paragraph (d) or (e) above to the extent such adjustment was not otherwise included in the calculation of the foregoing amounts.

“Consolidated First Lien Debt” means, as to any Person at any date of determination, the aggregate principal amount of Consolidated Total Debt outstanding on such date that is (a) incurred pursuant to the Loan Documents or (b) secured by a Lien on the Collateral that does not rank junior to the Lien on the Collateral securing the Secured Obligations.

“Consolidated Interest Expense” means, cash interest expense (including that attributable to Capital Leases), net of cash interest income of the Parent Borrower and the Restricted Subsidiaries with respect to all outstanding Indebtedness of the Parent Borrower and the Restricted Subsidiaries (plus, to the extent the Parent Borrower distributes cash to Holdings (or its applicable Parent Company) to pay cash interest in respect of the Holdco Facility, such cash interest paid by Holdings (or its applicable Parent Company)), including all commissions, discounts and other cash fees and Charges owed with respect to letters of credit and bankers’ acceptance financing and net costs (less net cash payments in connection therewith) under hedging agreements, but excluding, for the avoidance of doubt, (a) amortization of original issue discount resulting from the issuance of Indebtedness at less than par, amortization of deferred financing costs, debt issuance costs, commissions, fees and expenses and any other amounts of non-cash interest expense and any capitalized interest, whether paid or accrued (including as a result of the effects of purchase accounting or pushdown accounting), (b) non-cash interest expense attributable to the movement of the mark-to-market valuation of obligations under hedging agreements or other derivative instruments pursuant to FASB Accounting Standards Codification No. 815-Derivatives and Hedging, (c) any one-time cash costs associated with breakage in respect of hedging agreements for interest rates, (d) commissions, discounts, yield and other fees and Charges (including any interest expense) incurred in connection with any Permitted Receivables Financing, (e) all non-recurring interest expense or “additional interest” for failure to timely comply with registration rights obligations, (f) any interest expense attributable to the exercise of appraisal rights and the settlement of any claims or actions (whether actual, contingent or potential) with respect thereto and with respect to the Transactions or any other Investment, all as calculated on a consolidated basis in accordance with GAAP, (g) any payments with respect to make-whole premiums or other breakage costs of any Indebtedness, including, without limitation, any Indebtedness issued in connection with the Transactions, (h) penalties and interest relating to taxes, (i) accretion or accrual of discounted liabilities not constituting Indebtedness, (j) any interest expense attributable to a Parent Company resulting from push down accounting, (k) any expense resulting from the discounting of Indebtedness in connection with the application of recapitalization or purchase accounting and (l) expensing of bridge, arrangement, structuring, commitment or other financing fees.

“Consolidated Net Income” means, with respect to any Person (the “Subject Person”) on a consolidated basis, an amount equal to the sum of net income (loss), determined in accordance with GAAP, but excluding:

- (a) (i) the income of any Person (other than a Restricted Subsidiary of the Subject Person) in which any other Person (other than the Subject Person or any of its Restricted Subsidiaries) has a joint interest, except to the extent of the amount of dividends or distributions or other payments (including any ordinary course dividend, distribution or other payment) paid in cash (or to the extent converted into cash) to the Subject Person or any of its Restricted Subsidiaries by such Person during such period or (ii) the loss of any Person (other than a Restricted Subsidiary of the Subject Person) in which any other Person (other than the Subject Person or any of its Restricted Subsidiaries) has a joint interest, other than to the extent that the Subject Person or any of its Restricted Subsidiaries has contributed cash or Cash Equivalents to such Person in respect of such loss during such period;
- (b) any gain or loss (less all fees and expenses chargeable thereto) attributable to any asset Disposition (including asset retirement costs) or of returned or surplus assets outside the ordinary course of business;
- (c) any gain or Charge from (A) any extraordinary item and/or (B) any non-recurring or unusual item (including any non-recurring or unusual accruals or reserves in respect of any extraordinary, non-recurring or unusual items) and/or (ii) any Charge associated with and/or payment of any actual or prospective legal settlement, fine, judgment or order;
- (d) any Charge attributable to the development, undertaking and/or implementation of any Cost Savings Initiatives (including, in connection with any integration, restructuring or transition, any reconstruction, decommissioning, recommissioning or reconfiguration of fixed assets for alternative uses, any facility/location opening and/or pre-opening, any inventory optimization program and/or any curtailment), any business optimization Charge, any restructuring Charge (including any Charge relating to any tax restructuring and/or any acquisitions after the Closing Date and adjustments to existing reserves and whether or not classified as a restructuring expense on the consolidated financial statements), any Charge relating to the closure or consolidation of any facility or location and/or discontinued operations (including but not limited to severance, rent termination costs, moving costs and legal costs), any systems implementation Charge, any severance Charge, any Charge relating to entry into a new market, any Charge relating to any strategic initiative, any signing Charge, any retention or completion bonus, any other recruiting, signing and retention Charges, any expansion and/or relocation Charge, any Charge associated with any curtailments or modification to any pension and post-retirement employee benefit plan (including any settlement of pension liabilities and charges resulting from changes in estimates, valuations and judgments thereof), any software development Charge, any Charge associated with new systems design, any implementation Charge, any project startup Charge, any Charge in connection with new operations, any consulting Charge and/or any business development Charge;

(e) Transaction Costs (including any Charges associated with the rollover, acceleration or payout of Equity Interests held by management of the Target or any of their respective direct or indirect subsidiaries or parents in connection with the Transactions and any other payments contemplated by the Acquisition Agreement as in effect on the Closing Date);

(f) any Charge (including any transaction or retention bonus or similar payment or any amortization thereof for such period) incurred in connection with the consummation of any transaction (including any such transaction consummated prior to the Closing Date and any such transaction undertaken but not completed), including any issuance or offering of Capital Stock (including in connection with any Qualifying IPO), any Disposition, any recapitalization, any merger, consolidation or amalgamation, any option buyout or any incurrence, repayment, refinancing, amendment or modification of Indebtedness (including any amortization or write-off of debt issuance or deferred financing costs, premiums and prepayment penalties) or any similar transaction and/or any Investment, including any Permitted Acquisition, and/or “growth” Capital Expenditure, including, in each case any earnout obligation expense, integration expense or non-recurring merger costs incurred during such period as a result of any such transactions (including, for the avoidance of doubt, the effects of expensing all transaction-related expenses in accordance with FASB Accounting Standards Codification 805 and gains or losses associated with FASB Accounting Standards Codification 460);

(g) the amount of any Charge that is actually reimbursed or reimbursable by one or more third parties pursuant to indemnification or reimbursement provisions or similar agreements or insurance; provided that the relevant Person in good faith expects to receive reimbursement for such fee, cost, expense or reserve within the next four Fiscal Quarters (it being understood that to the extent any reimbursement amount is not actually received within such four Fiscal Quarters, such reimbursement amount shall be deducted in calculating Consolidated Net Income in the next succeeding Fiscal Quarter);

(h) any net gain or Charge with respect to (i) any disposed, abandoned, divested and/or discontinued asset, property or operation (other than (A) at the option of the Parent Borrower, any asset, property or operation pending the disposal, abandonment, divestiture and/or termination thereof and (B) dispositions of inventory in the ordinary course of business) and/or (ii) any location that has been closed during such period;

(i) any net income or Charge attributable to the early extinguishment of Indebtedness or any Hedge Agreement;

(j) any Charge that is established, adjusted and/or incurred, as applicable, that is required to be established, adjusted or incurred, as applicable, as a result of the Transactions in accordance with GAAP;

(k) (i) the effects of adjustments (including the effects of such adjustments pushed down to the relevant Person and its subsidiaries) in component amounts required or permitted by GAAP (including, without limitation, in the inventory, property and equipment, lease, software, goodwill, intangible asset, in-process research and development, deferred revenue, advanced billing and debt line items thereof), resulting from the application of acquisition method, purchase and/or recapitalization accounting in relation to the Transactions or any consummated acquisition or similar Investment or recapitalization accounting or the amortization or write-off of any amounts thereof, net of Taxes and/or (ii) the cumulative effect of any change in accounting principles (effected by way of either a cumulative effect adjustment or a retroactive application, in each case, in accordance with GAAP) and/or any change resulting from the adoption or modification of accounting principles and/or policies in accordance with GAAP;

(l) any non-cash compensation Charge and/or any other non-cash Charge arising from the granting of any stock option or similar arrangement (including any profits interest), the granting of any stock appreciation right, management equity plan, employee benefit plan or agreement, stock option plan and/or similar arrangement (including any repricing, amendment, modification, substitution or change of any such stock option, stock appreciation right, profits interest or similar arrangement);

(m) amortization of intangible assets;

(n) any impairment charge or asset write-off or write-down (including related to intangible assets (including goodwill), long-lived assets, and investments in debt and equity securities);

(o) solely for purposes of calculating the Available Amount, (i) the income or loss of any Person accrued prior to the date on which such Person becomes a Restricted Subsidiary of such Person or is merged into or consolidated with such Person or any Restricted Subsidiary of such Person or the date that such other Person's assets are acquired by such Person or any Restricted Subsidiary of such Person and (ii) the net income in such period of any Restricted Subsidiary (other than any Loan Party) that, as of the date of determination, is subject to any restriction on its ability to pay dividends or make other distributions, directly or indirectly, by operation of its organizational documents or any agreement, instrument, judgment, decree, order or Requirement of Law applicable thereto (other than (A) any restriction that has been waived or otherwise released and/or (B) any restriction set forth in the Loan Documents or the documents related to any Incremental Equivalent Debt and the documents relating to any Refinancing Indebtedness in respect of any of the foregoing); it being understood and agreed that Consolidated Net Income will be increased by the amount of any payments made in Cash (or converted into Cash) or in Cash Equivalents to the Parent Borrower or any Restricted Subsidiary (other than the Restricted Subsidiary that is subject to the relevant restriction) in respect of any such income;

(p) (i) any realized or unrealized gain or loss in respect of (A) any obligation under any Hedge Agreement as determined in accordance with GAAP and/or (B) any other derivative instrument pursuant to, in the case of this clause (B), Financial Accounting Standards Board's Accounting Standards Codification No. 815-Derivatives and Hedging and (ii) any realized or unrealized foreign currency exchange gain or loss (including any currency re-measurement of Indebtedness, any net gain or loss resulting from Hedge Agreements for currency exchange risk associated with the foregoing or any other currency related risk and any gain or loss resulting from intercompany Indebtedness);

(q) any deferred Tax expense associated with any tax deduction or net operating loss arising as a result of the Transactions, or the release of any valuation allowance related to any such item; and

(r) any non-cash Charges related to adjustments to historical tax exposures (provided, in each case, that the cash payment in respect thereof in such future period shall be subtracted from Consolidated Net Income for the period in which such cash payment was made).

In addition, to the extent not already included in Consolidated Net Income, Consolidated Net Income shall include the amount of proceeds received or due from business interruption insurance in an amount representing the earnings for the applicable period that such proceeds are intended to replace (whether or not received during such period so long as such Person in good faith expects to receive the same within the next four Fiscal Quarters; it being understood that to the extent such proceeds are not actually received within the next four Fiscal Quarters, such proceeds shall be deducted in calculating Consolidating Net Income for such Fiscal Quarters).

“Consolidated Total Assets” means, at any date, all amounts that would, in conformity with GAAP, be set forth opposite the caption “total assets” (or any like caption) on a consolidated balance sheet of the applicable Person at such date.

“Consolidated Total Debt” means, as to any Person at any date of determination, the aggregate principal amount of all third party debt for borrowed money (including LC Disbursements that have not been reimbursed within three Business Days and the outstanding principal balance of all Indebtedness of such Person represented by notes, bonds and similar instruments), Capital Leases and purchase money Indebtedness (but excluding, for the avoidance of doubt, (a) undrawn letters of credit and (b) Hedging Obligations), in each case of such Person and its Restricted Subsidiaries on such date, on a consolidated basis and determined in accordance with GAAP (excluding, in any event, the effects of any discounting of Indebtedness resulting from the application of purchase or pushdown accounting in connection with the Transactions or any Permitted Acquisition or other Investment); provided that “Consolidated Total Debt” shall be calculated (i) net of the Unrestricted Cash Amount, (ii) to exclude any obligation, liability or indebtedness of such Person if, upon or prior to the maturity thereof, such Person has irrevocably deposited with the proper Person in trust or escrow the necessary funds (or evidences of indebtedness) for the payment, redemption or satisfaction of such obligation, liability or indebtedness, and thereafter such funds and evidences of such obligation, liability or indebtedness or other security so deposited are not included in the calculation of the Unrestricted Cash Amount and (iii) notwithstanding the foregoing, in the case of the Borrowers, to include the aggregate principal amount outstanding under the Holdco Facility as of such date of determination.

“Consolidated Working Capital” means, as at any date of determination, the excess of Current Assets over Current Liabilities.

“Contractual Obligation” means, as applied to any Person, any provision of any Security issued by that Person or of any indenture, mortgage, deed of trust, contract, undertaking, agreement or other instrument to which that Person is a party or by which it or any of its properties is bound or to which it or any of its properties is subject.

“Control” means the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of a Person, whether through the ability to exercise voting power, by contract or otherwise. “Controlling” and “Controlled” have meanings correlative thereto.

“Copyright” means the following: (a) all copyrights, rights and interests in works protectable by copyright whether published or unpublished and whether registered or unregistered, including copyright registrations and copyright applications (including all copyrights embodied in Software); (b) all renewals of any of the foregoing; (c) all income, royalties, damages, and payments now or hereafter due and/or payable under any of the foregoing, including, without limitation, damages or payments for past or future infringements for any of the foregoing; (d) the right to sue for past, present, and future infringements of any of the foregoing; and (e) all rights corresponding to any of the foregoing anywhere in the world.

“Copyright License” means any written agreement, now or hereafter in effect, granting to any Person any right to use any Copyright owned by any Loan Party or that any Loan Party otherwise has the right to license, or granting to any Loan Party any right to use any Copyright owned by any other Person or that any other Person otherwise has the right to license, and all rights of any Loan Party under any such agreement.

“Cost Saving Initiative” has the meaning assigned to such term in the definition of “Consolidated Adjusted EBITDA”.

“Credit Extension” means each of (i) the making of any Revolving Loan (other than any Letter of Credit Reimbursement Loan) or (ii) the issuance, amendment, modification, renewal or extension of any Letter of Credit (other than any such amendment, modification, renewal or extension that does not increase the Stated Amount of the relevant Letter of Credit).

“Credit Facilities” means the Revolving Facility and the Term Facility.

“Cure Amount” has the meaning assigned to such term in Section 6.12(b).

“Cure Right” has the meaning assigned to such term in Section 6.12(b).

“Current Assets” means, at any date, all assets of the Parent Borrower and its Restricted Subsidiaries which under GAAP would be classified as current assets on the consolidated balance sheet of the Parent Borrower (excluding (a) any Cash or Cash Equivalents (including Cash and Cash Equivalents held on deposit for third parties by the Parent Borrower and/or any Restricted Subsidiary), (b) the current portion of current and deferred Taxes, (c) assets held for sale, (d) permitted loans to third parties, (e) deferred bank fees, (f) pension assets and (g) management fees receivables).

“Current Liabilities” means, means, at any date, all liabilities of the Parent Borrower and its Restricted Subsidiaries which under GAAP would be classified as current liabilities on the consolidated balance sheet of the Parent Borrower, other than (a) the current portion of any Funded Debt, (b) outstanding revolving loans (including any Revolving Loans) and letter of credit or similar exposure (including any LC Obligations), (c) the current portion of interest, (d) the current portion of current and deferred Taxes, (e) liabilities in respect of unpaid earnouts and/or holdbacks, (f) accruals relating to restructuring reserves, (g) liabilities in respect of funds of third parties on deposit with the Parent Borrower or any Restricted Subsidiary, (h) management fee payables, (i) the current portion of any Capital Lease Obligation, (j) deferred revenue arising from cash receipts that are earmarked for specific projects and (k) the current portion of any other long-term liability.

“Customary Bridge Loans” means customary bridge loans with a maturity date of not longer than one year; provided that (a) the Weighted Average Life to Maturity of any loans, notes, securities or other Indebtedness which are exchanged for or otherwise replace such bridge loans is not shorter than the Weighted Average Life to Maturity of the then-existing Term Loans and (b) the final maturity date of any loans, notes, securities or other Indebtedness which are exchanged for or otherwise replace such bridge loans is no earlier than the Latest Term Loan Maturity Date on the date of the issuance or incurrence thereof.

“Debt Fund Affiliate” means any Affiliate of the Sponsor (other than a natural person, Holdings, any Borrower or any of their respective subsidiaries) that is a bona fide debt fund or investment vehicle that is primarily engaged in, or advises (or whose general partner or manager advises (as appropriate)) funds or other investment vehicles that are primarily engaged in, making, purchasing, holding or otherwise investing in commercial loans, bonds and similar extensions of credit or securities in the ordinary course and with respect to which no personnel making investment decisions in respect of such affiliate are engaged in making investment decisions with respect to the equity investment in Holdings, any Borrower and their respective Restricted Subsidiaries.

“Debtor Relief Laws” means the Bankruptcy Code and all other liquidation, conservatorship, bankruptcy, general assignment for the benefit of creditors, moratorium, rearrangement, receivership, insolvency, reorganization or similar debtor relief laws of the US or other applicable jurisdictions from time to time in effect and affecting the rights of creditors generally.

“Declined Proceeds” has the meaning assigned to such term in Section 2.11(b)(v).

“Default” means any event or condition which upon notice, lapse of time or both would become an Event of Default.

“Defaulting Lender” means any Lender that has (a) defaulted in its obligations under this Agreement, including (i) to make a Loan within two Business Days of the date required to be made by it hereunder or (ii) to fund its participation in a Letter of Credit within two Business Days of the date such obligation arose or such Loan or Letter of Credit was required to be made or funded, (b) notified the Administrative Agent or any Issuing Bank or the Parent Borrower in writing that it does not intend to satisfy any such obligation or has made a public statement to the effect that it does not intend to comply with its funding obligations under this Agreement or under agreements in which it commits to extend credit generally, (c) failed, within two Business Days after the request of the Administrative Agent or the Parent Borrower, to confirm in writing that it will comply with the terms of this Agreement relating to its obligations to fund prospective Loans and participations in then outstanding Letters of Credit; provided that such Lender shall cease to be a Defaulting Lender pursuant to this clause (c) upon receipt of such written confirmation by the Administrative Agent, (d) become (or any parent company thereof has become) insolvent or been determined by any Governmental Authority having regulatory authority over such Person or its assets, to be insolvent, or the assets or management of which has been taken over by any Governmental Authority, (e) become the subject of a bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee, administrator, assignee for the benefit of creditors or similar Person charged with reorganization or liquidation of its business or custodian, appointed for it, or has taken any action in furtherance of, or indicating its consent to, approval of or acquiescence in, any such proceeding or appointment, unless in the case of any Lender subject to this clause (e), the Parent Borrower and the Administrative Agent have each determined that such Lender intends, and has all approvals (in form and substance satisfactory to the Parent Borrower and the Administrative Agent) required to enable it to continue to perform its obligations as a Lender hereunder or (f) become the subject of a Bail-In Action; provided that no Lender shall be deemed to be a Defaulting Lender solely by virtue of the ownership or acquisition of any Capital Stock in such Lender or its parent by any Governmental Authority so long as such action does not result in or provide such Lender with immunity from the jurisdiction of courts within the US or from the enforcement of judgments or writs of attachment on its assets or permit such Lender (or such Governmental Authority) to reject, repudiate, disavow or disaffirm any contract or agreement to which such Lender is a party.

“Deposit Account” means a demand, time, savings, passbook or like account with a bank, excluding, for the avoidance of doubt, any investment property (within the meaning of the UCC) or any account evidenced by an instrument (within the meaning of the UCC).

“Derivative Transaction” means (a) any interest-rate transaction, including any interest-rate swap, basis swap, forward rate agreement, interest rate option (including a cap, collar or floor), and any other instrument linked to interest rates that gives rise to similar credit risks (including when-issued securities and forward deposits accepted), (b) any exchange-rate transaction, including any cross-currency interest-rate swap, any forward foreign-exchange contract, any currency option, and any other instrument linked to exchange rates that gives rise to similar credit risks, (c) any equity derivative transaction, including any equity-linked swap, any equity-linked option, any forward equity-linked contract, and any other instrument linked to equities that gives rise to similar credit risk and (d) any commodity (including precious metal) derivative transaction, including any commodity-linked swap, any commodity-linked option, any forward commodity-linked contract, and any other instrument linked to commodities that gives rise to similar credit risks; provided, that no phantom stock or similar plan providing for payments only on account of services provided by current or former directors, officers, employees, members of management, managers or consultants of any Borrower or their subsidiaries shall constitute a Derivative Transaction.

“Designated Non-Cash Consideration” means the fair market value (as reasonably determined by the Parent Borrower in good faith) of non-Cash consideration received by any Borrower or any of its Restricted Subsidiaries in connection with any Disposition pursuant to Section 6.07(h) and/or Section 6.08 that is designated as Designated Non-Cash Consideration pursuant to a certificate of a Responsible Officer of the Parent Borrower, setting forth the basis of such valuation (which amount will be reduced by the amount of Cash or Cash Equivalents received in connection with a subsequent sale or conversion of such Designated Non-Cash Consideration to Cash or Cash Equivalents).

“Designs” means any and all and any part of the following: (a) all design patents and intangibles of like nature (whether registered or unregistered), all registrations and recordings thereof, and all applications in connection therewith; (b) all reissues, extensions or renewals thereof; (c) all income, royalties, damages and payments now or hereafter due or payable with respect thereto, including, without limitation, damages, claims, and payments for past and future infringements thereof; (d) all rights to sue for past, present, and future infringements of the foregoing; and (e) all rights corresponding to any of the foregoing.

“Disposition” or “Dispose” means the sale, lease, sublease, or other disposition of any property of any Person.

“Disqualified Capital Stock” means any Capital Stock which, by its terms (or by the terms of any security into which it is convertible or for which it is exchangeable), or upon the happening of any event, (a) matures (excluding any maturity as the result of an optional redemption by the issuer thereof) or is mandatorily redeemable (other than for Qualified Capital Stock and cash in lieu of fractional shares of such Capital Stock), pursuant to a sinking fund obligation or otherwise, or is redeemable at the option of the holder thereof (other than for Qualified Capital Stock and cash in lieu of fractional shares of such Capital Stock), in whole or in part, on or prior to the date that is 91 days following the Latest Maturity Date at the time such Capital Stock is issued (it being understood that if any such redemption is in part, only such part coming into effect prior to the date that is 91 days following the Latest Maturity Date shall constitute Disqualified Capital Stock), (b) is or becomes convertible into or exchangeable (unless at the sole option of the issuer thereof) for (i) debt securities or (ii) any Capital Stock that would constitute Disqualified Capital Stock, in each case at any time on or prior to the date that is 91 days following the Latest Maturity Date at the time such Capital Stock is issued, (c) contains any mandatory repurchase obligation or any other repurchase obligation at the option of the holder thereof (other than for Qualified Capital Stock), in whole or in part, which may come into effect prior to the date that is 91 days following the Latest Maturity Date at the time such Capital Stock is issued (it being understood that if any such repurchase obligation is in part, only such part coming into effect prior to the date that is 91 days following the Latest Maturity Date shall constitute Disqualified Capital Stock) or (d) provides for the scheduled payments of dividends in Cash on or prior to the date that is 91 days following the Latest Maturity Date at the time such Capital Stock is issued; provided that any Capital Stock that would not constitute Disqualified Capital Stock but for provisions thereof giving holders thereof (or the holders of any security into or for which such Capital Stock is convertible, exchangeable or exercisable) the right to require the issuer thereof to redeem or purchase such Capital Stock upon the occurrence of any change of control, Qualifying IPO, any Disposition or any similar event, occurring prior to the date that is 91 days following the Latest Maturity Date at the time such Capital Stock is issued shall not constitute Disqualified Capital Stock if such Capital Stock provides that the issuer thereof will not redeem or purchase any such Capital Stock pursuant to such provisions prior to the Termination Date.

Notwithstanding the preceding sentence, (A) if such Capital Stock is issued pursuant to any plan for the benefit of directors, officers, employees, members of management, managers or consultants or by any such plan to such directors, officers, employees, members of management, managers or consultants, in each case in the ordinary course of business of Holdings, the Borrowers or any Restricted Subsidiary, such Capital Stock shall not constitute Disqualified Capital Stock solely because it may be required to be repurchased by the issuer thereof in order to satisfy applicable statutory or regulatory obligations, and (B) no Capital Stock held by any future, present or former employee, director, officer, manager, member of management or consultant (or their respective Affiliates or Immediate Family Members) of the Borrowers (or any Parent Company or any subsidiary) shall be considered Disqualified Capital Stock solely because such stock is redeemable or subject to repurchase pursuant to any management equity subscription agreement, stock option, stock appreciation right or other stock award agreement, stock ownership plan, put agreement, stockholder agreement or similar agreement that may be in effect from time to time.

“Disqualified Institution” means:

(a) (i) any Person identified as such by the Parent Borrower or the Sponsor in writing to the Arrangers on or prior to the Closing Date (the Persons described in this clause (a)(i), the “Identified Disqualified Lenders”) and (ii) any Affiliate of any Identified Disqualified Lender that is identified in writing to the Administrative Agent as such, and

(b) (i) any Person that is or becomes a Company Competitor and is (A) identified as such in writing to the Arrangers on or prior to July 7, 2017, (B) identified in writing as such to the Administrative Agent after July 7, 2017 and prior to the Closing Date or (C) identified in writing as such to the Administrative Agent on or after the Closing Date and (ii) any Affiliate of any Person described in clause (b)(i) above (other than a Bona Fide Debt Fund) that is identified in writing to the Administrative Agent as such, and

(c) any Affiliate of any Person described in clause (a) or (b) above that is reasonably identifiable as an Affiliate of such Person on the basis of such Affiliate’s name, other than as specified by the Parent Borrower or the Sponsor and, in the case of clause (b) above, a Bona Fide Debt Fund;

it being understood and agreed that the identification of any Person as a Disqualified Institution after the Closing Date shall not apply to retroactively disqualify any Person that has previously acquired an assignment or participation interest in any Loan, subject, in the case of assignments and participations made after the date on which any such Person is identified as a Disqualified Institution, to the provisions of Section 9.05(f).

“Disqualified Person” has the meaning assigned to such term in Section 9.05(f).

“Dollars” or “\$” refers to lawful money of the US.

“Domain Name” means Internet domain names and associated uniform resource locator addresses.

“Domestic Subsidiary” means any Restricted Subsidiary that is a US Person.

“Domestic Subsidiary Holdco” means any direct or indirect Domestic Subsidiary of any Borrower that has no material assets other than Capital Stock or Indebtedness of one or more direct or indirect Foreign Subsidiaries that are CFCs.

“Dutch Auction” has the meaning assigned to such term on Schedule 1.01(b).

“EEA Financial Institution” means (a) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (b) any entity established in an EEA Member Country which is a parent of an institution described in clause (a) of this definition, or (c) any financial institution established in an EEA Member Country which is a subsidiary of an institution described in clauses (a) or (b) of this definition and is subject to consolidated supervision with its parent;

“EEA Member Country” means any of the member states of the European Union, Iceland, Liechtenstein, and Norway.

“EEA Resolution Authority” means any public administrative authority or any person entrusted with public administrative authority of any EEA Member Country (including any delegee) having responsibility for the resolution of any EEA Financial Institution.

“Effective Yield” means, as to any Indebtedness, the effective yield applicable thereto calculated by the Administrative Agent in consultation with the Parent Borrower in a manner consistent with generally accepted financial practices, taking into account (a) interest rate margins, (b) interest rate floors (subject to the proviso set forth below), (c) any amendment to the relevant interest rate margins and interest rate floors prior to the applicable date of determination and (d) original issue discount and upfront or similar fees (based on an assumed four-year average life to maturity or lesser remaining average life to maturity and assuming, if applicable, that the Initial Revolving Facility and the applicable Incremental Revolving Facility are fully drawn), but excluding (i) any arrangement, commitment, structuring, underwriting and/or amendment fees (regardless of whether any such fees are paid to or shared in whole or in part with any lender) and (ii) any other fee that is not payable to all relevant lenders generally; provided, however, that (A) to the extent that the Eurocurrency Rate (for a period of three months) or Alternate Base Rate (without giving effect to any floor specified in the definition thereof) is less than any floor applicable to the loans in respect of which the Effective Yield is being calculated on the date on which the Effective Yield is determined, the amount of the resulting difference will be deemed added to the interest rate margin applicable to the relevant Indebtedness for purposes of calculating the Effective Yield and (B) to the extent that the Eurocurrency Rate (for a period of three months) or Alternate Base Rate (without giving effect to any floor specified in the definition thereof) is greater than any applicable floor on the date on which the Effective Yield is determined, the floor will be disregarded in calculating the Effective Yield.

“Eligible Assignee” means (a) any Lender, (b) any commercial bank, insurance company, or finance company, financial institution, any fund that invests in loans or any other “accredited investor” (as defined in Regulation D of the Securities Act), (c) any Affiliate of any Lender, (d) any Approved Fund of any Lender and (e) to the extent permitted under Section 9.05(g), any Affiliated Lender or any Debt Fund Affiliate; provided that in any event, “Eligible Assignee” shall not include (i) any natural person, (ii) any Disqualified Institution or (iii) except as permitted under Section 9.05(g), any Borrower or any of its Affiliates.

“Environmental Claim” means any investigation, notice, notice of violation, claim, action, suit, proceeding, demand, abatement order or other order or directive (conditional or otherwise), by any Governmental Authority or any other Person, arising (a) pursuant to or in connection with any actual or alleged violation of, or liability under, any Environmental Law, or (b) in connection with any release of any Hazardous Material.

“Environmental Laws” means any and all foreign or domestic, federal, provincial, territorial, municipal or state (or any subdivision of any of them), statutes, ordinances, orders, rules, regulations, judgments, Governmental Authorizations, or any other applicable and legally enforceable requirements of Governmental Authorities and the common law relating to (a) protection of the environment or (b) the generation, use, storage, transportation or Release of or exposure to Hazardous Materials, applicable to any Borrower or any of its Restricted Subsidiaries or any Facility.

“Environmental Liability” means any liability, contingent or otherwise, including any liability for damages, costs of environmental remediation, fines, penalties or indemnities resulting from or based upon (a) violation of any Environmental Law, (b) the generation, use, handling, transportation, storage, treatment or disposal of any Hazardous Materials, (c) exposure to any Hazardous Materials, (d) the Release or threatened Release of any Hazardous Materials into the environment or (e) any contract, agreement or other consensual arrangement pursuant to which liability is assumed or imposed with respect to any of the foregoing.

“Equity Contribution” has the meaning assigned to such term in the Recitals to this Agreement.

“ERISA” means the Employee Retirement Income Security Act of 1974, as amended from time to time, and the regulations promulgated and rulings issued thereunder.

“ERISA Affiliate” means any trade or business (whether or not incorporated) that is under common control with any Borrower or any of its Restricted Subsidiaries and is treated as a single employer within the meaning of Section 414 of the Code or Section 4001 of ERISA.

“ERISA Event” means (a) a Reportable Event with respect to a Pension Plan; (b) a withdrawal by any Borrower or any of its Restricted Subsidiaries or any ERISA Affiliate from a Pension Plan subject to Section 4063 of ERISA during a plan year in which it was a substantial employer (as defined in Section 4001(a)(2) of ERISA) or a cessation of operations at any facility of any Borrower or any of its Restricted Subsidiaries or any ERISA Affiliate as described in Section 4062(e) of ERISA, in each case, resulting in liability pursuant to Section 4063 of ERISA; (c) a complete or partial withdrawal by any Borrower or any of its Restricted Subsidiaries or any ERISA Affiliate from a Multiemployer Plan resulting in the imposition of Withdrawal Liability on any Borrower or any Restricted Subsidiary, notification of any Borrower or any of its Restricted Subsidiaries or any ERISA Affiliate of the imposition of Withdrawal Liability or notification that a Multiemployer Plan is “insolvent” within the meaning of Section 4245 of ERISA or the receipt by any Borrower, any of its Restricted Subsidiaries or any ERISA Affiliate, of any notice, or the receipt by any Multiemployer Plan from any Borrower, any of its Restricted Subsidiaries or any ERISA Affiliate of any notice, that a Multiemployer Plan is in endangered or critical status under Section 432 of the Code or Section 305 of ERISA; (d) the filing of a notice of intent to terminate a Pension Plan under Section 4041(c) of ERISA, the treatment of a Pension Plan amendment as a termination under Section 4041(c) of ERISA, the commencement of proceedings by the PBGC to terminate a Pension Plan or the receipt by any Borrower or any of its Restricted Subsidiaries or any ERISA Affiliate of notice of the treatment of a Multiemployer Plan amendment as a termination under Section 4041A of ERISA or of notice of the commencement of proceedings by the PBGC to terminate a Multiemployer Plan; (e) the occurrence of an event or condition which constitutes grounds under Section 4042 of ERISA for the termination of, or the appointment of a trustee to administer, any Pension Plan or Multiemployer Plan; (f) the imposition of any liability under Title IV of ERISA, other than for PBGC premiums due but not delinquent under Section 4007 of ERISA, upon any Borrower or any of its Restricted Subsidiaries or ERISA Affiliates, with respect to the termination of any Pension Plan; (g) the failure to make a required contribution to any Pension Plan that would result in the imposition of a Lien or other encumbrance under Section 430 of the Code or Section 303 or 4068 of ERISA, or the imposition of a Lien under Section 303(k) of ERISA with respect to any Pension Plan; or (h) the filing of any request for or receipt of a minimum funding waiver under Section 412 of the Code with respect to any Plan; or a determination that any Pension Plan is, or is expected to be, considered an at-risk plan within the meaning of Section 430 of the Code or Section 303 of ERISA; any Borrower, any Restricted Subsidiary or any ERISA Affiliate incurring any liability under Section 436 of the Code, or a violation of Section 436 of the Code with respect to a Pension Plan.

“EU Bail-In Legislation Schedule” means the EU Bail-In Legislation Schedule published by the Loan Market Association (or any successor person), as in effect from time to time.

“Eurocurrency Rate” means, for any Interest Period:

- (a) in the case of any Adjusted Eurocurrency Rate Loan:
 - (i) the rate per annum determined by the Administrative Agent to be the applicable Screen Rate; and
 - (ii) if no Screen Rate is available for the Interest Period of the requested Adjusted Eurocurrency Rate Loan, the rate per annum determined by the Administrative Agent to be the Interpolated Screen Rate for such Adjusted Eurocurrency Rate Loan; and
- (b) for any interest calculation with respect to an ABR Loan on any date:
 - (i) the rate per annum determined by the Administrative Agent at approximately 11:00 a.m. (London Time) on such day to be the Screen Rate for Adjusted Eurocurrency Rate Loans for an Interest Period of one month; and
 - (ii) if no Screen Rate is available for the Interest Period specified in clause (b)(i) above, the rate per annum determined by the Administrative Agent to be the Interpolated Screen Rate for Adjusted Eurocurrency Rate Loans for an Interest Period of one month;

in the case of clause (a) above, determined at approximately 11:00 a.m. (London time) two Business Days prior to the first day of such Interest Period; provided that if the Eurocurrency Rate is less than 0.00% per annum, then the Eurocurrency Rate shall be deemed to be 0.00% per annum. Each determination by the Administrative Agent of the Eurocurrency Rate shall be conclusive and binding for all purposes absent manifest error.

When used in reference to any Loan or Borrowing, “Eurocurrency Rate” shall refer to whether such Loan, or the Loans comprising such Borrowing, bear interest at a rate determined by reference to the Eurocurrency Rate as set forth in the preceding sentence.

“Event of Default” has the meaning assigned to such term in Article 7.

“Excess Cash Flow” means, for any Excess Cash Flow Period, any amount (if positive) equal to:

- (a) Consolidated Net Income for such Excess Cash Flow Period; plus
- (b) an amount equal to the amount of all non-cash Charges to the extent deducted in arriving at such Consolidated Net Income (provided, in each case, that if any non-cash charge represents an accrual or reserve for cash items in any future period, the cash payment in respect thereof in such future period shall be subtracted from Excess Cash Flow for such Excess Cash Flow Period in such future period); plus
- (c) the decreases, if any, in long-term receivables, long-term prepaid assets and/or Consolidated Working Capital from the first day to the last day of such Excess Cash Flow Period, but excluding any such decrease in Consolidated Working Capital arising from (i) the acquisition or Disposition of any Person by the Parent Borrower or any Restricted Subsidiary or any Unrestricted Subsidiary designation, (ii) the reclassification during such period of current assets to long term assets or current liabilities to long term liabilities, (iii) the application of acquisition method, purchase and/or recapitalization accounting and/or (iv) the effect of any fluctuation in the amount of accrued and contingent obligations under any Hedge Agreement; plus
- (d) increases in long-term deferred revenue; plus
- (e) an amount equal to the aggregate net non-cash loss on Dispositions by the Parent Borrower and the Restricted Subsidiaries during such Excess Cash Flow Period (other than Dispositions in the ordinary course of business) to the extent deducted in arriving at such Consolidated Net Income; plus
- (f) extraordinary gains for such Excess Cash Flow Period; minus
- (g) an amount equal to the amount of all non-cash gains for such Excess Cash Flow Period included in arriving at such Consolidated Net Income (including any amounts included in Consolidated Net Income pursuant to the last sentence of the definition of “Consolidated Net Income” to the extent such amounts are due but not received during such period, provided that such amounts are added to Excess Cash Flow in the period received) and cash Charges included in clauses (a) through (r) of the definition of “Consolidated Net Income” to the extent financed with internally generated cash flow of the Parent Borrower or its Restricted Subsidiaries; minus
- (h) without duplication of amounts deducted pursuant to clause (q) below in prior fiscal years, the amount of Capital Expenditures (including acquisitions of intellectual property) made in Cash or accrued during such Excess Cash Flow Period, to the extent that such Capital Expenditures were financed with internally generated cash flow of the Parent Borrower or its Restricted Subsidiaries; minus
- (i) (i) the aggregate amount of all principal payments of Indebtedness during such Excess Cash Flow Period, including (A) the principal component of payments in respect of Capital Leases and (B) the amount of any mandatory prepayment of Loans to the extent required due to a Disposition that resulted in an increase to Consolidated Net Income and not in excess of the amount of such increase but excluding (x) all other prepayments or repurchases of Term Loans and (y) all prepayments of revolving loans (including Revolving Loans) made during such period (other than in respect of any revolving credit facility (excluding Revolving Loans) to the extent there is an equivalent permanent reduction in commitments thereunder), except to the extent financed with the proceeds of other Indebtedness of the Parent Borrower or its Restricted Subsidiaries and (ii) the aggregate amount of any premium, make-whole or penalty payments actually paid in cash by the Parent Borrower and its Restricted Subsidiaries during such Excess Cash Flow Period that are required to be made in connection with any prepayment of Indebtedness; minus

(j) an amount equal to the aggregate net non-cash gain on Dispositions by the Parent Borrower and its Restricted Subsidiaries during such Excess Cash Flow Period (other than Dispositions in the ordinary course of business) to the extent included in arriving at such Consolidated Net Income; minus

(k) increases in long-term receivables, long-term prepaid assets and/or Consolidated Working Capital from the first day to the last day of such Excess Cash Flow Period but excluding any such increase in Consolidated Working Capital arising from (i) the acquisition or Disposition of any Person by the Parent Borrower or any Restricted Subsidiary or any Unrestricted Subsidiary designation, (ii) the reclassification during such period of current assets to long term assets or current liabilities to long term liabilities, (iii) the application of acquisition method, purchase and/or recapitalization accounting and/or (iv) the effect of any fluctuation in the amount of accrued and contingent obligations under any Hedge Agreement; minus

(l) decreases in long-term deferred revenue during such Excess Cash Flow Period; minus

(m) cash payments by the Parent Borrower and its Restricted Subsidiaries during such Excess Cash Flow Period in respect of purchase price holdbacks, earn out obligations, or long-term liabilities of the Parent Borrower and its Restricted Subsidiaries other than Indebtedness to the extent such payments are not expensed during such Excess Cash Flow Period or are not deducted in arriving at such Consolidated Net Income to the extent financed with internally generated cash flow of the Parent Borrower or its Restricted Subsidiaries; minus

(n) without duplication of amounts deducted pursuant to clause (q) below in prior fiscal years, the amount of Investments (other than Investments in Holdings, the Parent Borrower or any Restricted Subsidiary and other than Investments in Cash or Cash Equivalents) and acquisitions not prohibited by this Agreement made during such Excess Cash Flow Period, to the extent that such Investments and acquisitions were financed with internally generated cash flow of the Parent Borrower or its Restricted Subsidiaries; minus

(o) the amount of Restricted Payments paid in cash during such Excess Cash Flow Period not prohibited by this Agreement (other than Restricted Payments made pursuant to Section 6.04(a)(iii)(A), to the extent that such Restricted Payments were financed with internally generated cash flow of the Parent Borrower or its Restricted Subsidiaries; minus

(p) the aggregate amount of expenditures actually made by the Parent Borrower and its Restricted Subsidiaries in cash during such Excess Cash Flow Period (including expenditures for the payment of financing fees and cash restructuring charges) to the extent that such expenditures are not expensed during such Excess Cash Flow Period or are not deducted in arriving at such Consolidated Net Income, to the extent that such expenditure was financed with internally generated cash flow of the Parent Borrower or its Restricted Subsidiaries; minus

(q) without duplication of amounts deducted from Excess Cash Flow in prior periods, (i) the aggregate consideration required to be paid in Cash by the Parent Borrower or any of its Restricted Subsidiaries pursuant to binding contract commitments, letters of intent or purchase orders (the “Contract Consideration”), in each case, entered into prior to or during such Excess Cash Flow Period and (ii) to the extent set forth in a certificate of a Responsible Officer delivered to the Administrative Agent at or before the time the Compliance Certificate for the period ending simultaneously with such Test Period is required to be delivered pursuant to Section 5.01(c), the aggregate amount of cash that is reasonably expected to be paid in respect of planned cash expenditures by the Parent Borrower or any of its Restricted Subsidiaries (the “Planned Expenditures”), in the case of each of clauses (i) and (ii), relating to Permitted Acquisitions, other Investments (other than Investments in Cash Equivalents) or Capital Expenditures (including purchases of intellectual property) to be consummated or made within the succeeding 12-month period; provided, that to the extent the aggregate amount of internally generated cash actually utilized to finance such Permitted Acquisitions, Investments or Capital Expenditures during such succeeding 12-month period is less than the Contract Consideration or Planned Expenditures, the amount of such shortfall shall be added to the calculation of Excess Cash Flow at the end of such Test Period; minus

(r) the amount of taxes (including penalties and interest) paid in cash and/or tax reserves set aside or payable (without duplication) in such Excess Cash Flow Period to the extent they exceed the amount of tax expense deducted in arriving at such Consolidated Net Income for such Excess Cash Flow Period; minus

(s) extraordinary losses for such Excess Cash Flow Period; minus,

(t) amounts excluded under clause (g) of the definition of “Consolidated Net Income” for such Excess Cash Flow Period, to the extent the relevant insurance proceeds have not yet been received, minus

(u) cash expenditures in respect of Hedge Agreements during such Excess Cash Flow Period to the extent not deducted in arriving at such Consolidated Net Income

For purposes of this definition of “Excess Cash Flow”, (i) “deducted in arriving at such Consolidated Net Income” shall mean deducted in calculating the net income (loss) of the Parent Borrower and its Restricted Subsidiaries and not thereafter excluded pursuant to the definition of Consolidated Net Income, (ii) “included in arriving at such Consolidated Net Income” shall mean included in calculating the net income (loss) of the Parent Borrower and its Restricted Subsidiaries and not thereafter excluded pursuant to the definition of Consolidated Net Income and (iii) amounts shall be deducted from, or added to, Consolidated Net Income without duplication.

“Excess Cash Flow Period” means each Fiscal Year of the Parent Borrower, commencing with the Fiscal Year of the Parent Borrower ending on December 31, 2018.

“Exchange Act” means the Securities Exchange Act of 1934 and the rules and regulations of the SEC promulgated thereunder.

“Excluded Assets” means each of the following:

(a) any asset the grant of a security interest in which would (i) be prohibited by any enforceable anti-assignment provision set forth in any contract that is permitted or otherwise not prohibited by the terms of this Agreement, (ii) violate the terms of any contract relating to such asset that is permitted or otherwise not prohibited by the terms of this Agreement (in the case of clause (i) above and this clause (ii), after giving effect to any applicable anti-assignment provision of the UCC or other applicable Requirements of Law) or (iii) trigger termination of any contract relating to such asset that is permitted or otherwise not prohibited by the terms of this Agreement pursuant to any “change of control” or similar provision; it being understood that (A) the term “Excluded Asset” shall not include proceeds or receivables arising out of any contract described in this clause (a) to the extent that the assignment of such proceeds or receivables is expressly deemed to be effective under the UCC or any other applicable Requirement of Law notwithstanding the relevant prohibition, violation or termination right, (B) the exclusions referenced in clauses (a)(i), (a)(ii) and (a)(iii) above shall not apply to the extent that the relevant contract prohibits the grant of a security interest in all or substantially all of the assets of any Loan Party and (C) the exclusion set forth in this clause (a) shall only apply if the contractual prohibitions or contractual provisions that would be so violated or that would trigger any such termination under clause (a)(i), (a)(ii) or (a)(iii) above (x) existed on the Closing Date (or in the case of any contract of a Subsidiary that is acquired following the Closing Date, as of the date of such acquisition) and were not entered into in contemplation of the Closing Date (or such acquisition) and (y) cannot be waived unilaterally by Holdings, any Borrower or any of their respective Subsidiaries,

(b) (i) the Capital Stock of any (A) Captive Insurance Subsidiary, (B) Unrestricted Subsidiary, (C) not-for-profit subsidiary or (D) Receivables Subsidiary and/or (ii) Capital Stock representing in excess of 65% of the voting Capital Stock of any Foreign Subsidiary and/or Domestic Subsidiary Holdco,

(c) any intent-to-use (or similar) Trademark application prior to the filing and acceptance of a “Statement of Use”, “Declaration of Use”, “Amendment to Allege Use” or similar notice and/or filing with respect thereto, only to the extent, if any, that, and solely during the period if any, in which, the grant of a security interest therein may impair the validity or enforceability of such intent-to-use Trademark application under applicable Requirements of Law,

(d) any asset, the grant of a security interest in which would (i) require any governmental consent, approval, license or authorization that has not been obtained, (ii) be prohibited by applicable Requirements of Law, except, in each case of clause (i) above and this clause (ii), to the extent such requirement or prohibition would be rendered ineffective under the UCC or any other applicable Requirement of Law notwithstanding such requirement or prohibition; it being understood that the term “Excluded Asset” shall not include proceeds or receivables arising out of any asset described in clause (d)(i) or clause (d)(ii) to the extent that the assignment of such proceeds or receivables is expressly deemed to be effective under the UCC or any other applicable Requirement of Law notwithstanding the relevant requirement or prohibition or (iii) result in material adverse tax consequences to any Loan Party as reasonably determined by the Parent Borrower in consultation with the Administrative Agent, including as a result of the operation of Section 956 of the Code,

(e) (i) any leasehold Real Estate Asset and (ii) any owned Real Estate Asset that is not a Material Real Estate Asset,

(f) any interest in any partnership, joint venture or non-Wholly-Owned Subsidiary which cannot be pledged without (i) the consent of one or more third parties other than Holdings, any Borrower or any of their respective Restricted Subsidiaries (after giving effect to Sections 9-406, 9-407, 9-408 or 9-409 of the UCC (or any successor provision or provisions) of any relevant jurisdiction or any other applicable Requirement of Law) or (ii) giving rise to a “right of first refusal”, a “right of first offer” or a similar right permitted or otherwise not prohibited by the terms of this Agreement that may be exercised by any third party other than Holdings, any Borrower or any of their respective Restricted Subsidiaries in accordance with the Organizational Documents (and/or shareholders’ or similar agreement) of such partnership, joint venture or non-Wholly-Owned Subsidiary,

(g) [Reserved],

(h) any Margin Stock,

(i) any Cash or Cash Equivalents maintained in or credited to any Deposit Account or securities account that are comprised of (i) funds specifically and exclusively used or to be used for payroll and payroll taxes and other employee benefit payments to or for the benefit of any Loan Party's employees, (ii) funds specifically and exclusively used or to be used to pay all Taxes required to be collected, remitted or withheld (including withholding Taxes (including the employer's share thereof)) and (iii) any other funds which any Loan Party is permitted or otherwise not prohibited by the terms of this Agreement to hold as an escrow or fiduciary for the benefit of another Person,

(j) any lease, license or agreement or any asset subject to a purchase money security interest, Capital Lease or similar arrangement that is, in each case, permitted by this Agreement to the extent that the grant of a security interest therein would violate or invalidate such lease, license or agreement or purchase money, Capital Lease or similar arrangement or trigger a right of termination in favor of any other party thereto (other than Holdings, any Borrower or any of their respective Restricted Subsidiaries) after giving effect to the applicable anti-assignment provisions of the UCC or any other applicable Requirement of Law; it being understood that the term "Excluded Asset" shall not include any proceeds or receivables arising out of any asset described in this clause (j) to the extent that the assignment of such proceeds or receivables is expressly deemed to be effective under the UCC or any other applicable Requirement of Law notwithstanding the relevant requirement or prohibition,

(k) any asset with respect to which the Administrative Agent and the Parent Borrower have reasonably determined that the cost, burden, difficulty or consequence (including any effect on the ability of the relevant Loan Party to conduct its operations and business in the ordinary course of business) of obtaining or perfecting a security interest therein outweighs the benefit of a security interest to the relevant Secured Parties afforded thereby, which determination is evidenced in writing,

(l) all assets of Holdings other than the Capital Stock of the Parent Borrower;

(m) receivables and related assets (or interests therein) (i) sold to any Receivables Subsidiary or (ii) otherwise pledged, factored, transferred or sold in connection with any Permitted Receivables Financing, and

(n) any governmental licenses or state or local franchises, charters or authorizations, to the extent a security interest in any such license, franchise, charter or authorization would be prohibited or restricted thereby (including any legally effective prohibition or restriction, but excluding any prohibition or restriction that is ineffective under the UCC).

“Excluded Subsidiary” means:

- (a) any Restricted Subsidiary that is not a Wholly-Owned Subsidiary of the Parent Borrower,
- (b) any Immaterial Subsidiary,
- (c) any Restricted Subsidiary:
 - (i) that is prohibited from providing a Loan Guaranty by (A) any Requirement of Law or (B) any Contractual Obligation that, in the case of this clause (B), exists on the Closing Date or, if such Restricted Subsidiary is acquired or formed after the Closing Date, at the time such Restricted Subsidiary is acquired and which Contractual Obligation was not entered into in contemplation of such acquisition or formation,
 - (ii) that would require a governmental consent, approval, license or authorization to provide a Loan Guaranty (including any regulatory consent, approval, license or authorization) unless such consent, approval, license or authorization has been obtained, or
 - (iii) that is a Subsidiary the provision of a Loan Guaranty by which would result in material adverse tax consequences to the Parent Borrower or any of its subsidiaries as reasonably determined by the Parent Borrower in consultation with the Administrative Agent,
- (d) any not-for-profit subsidiary,
- (e) any Captive Insurance Subsidiary,
- (f) any Receivables Subsidiary,
- (g) (i) any Foreign Subsidiary, (ii) any Domestic Subsidiary Holdco and/or (iii) any Domestic Subsidiary that is a direct or indirect subsidiary of any Foreign Subsidiary or any Domestic Subsidiary Holdco,
- (h) any Unrestricted Subsidiary,
- (i) any Restricted Subsidiary acquired by any Borrower or any Restricted Subsidiary after the Closing Date that, at the time of the relevant acquisition, is an obligor in respect of assumed Indebtedness permitted by Section 6.01 to the extent (A) (and for so long as) the documentation governing the applicable assumed Indebtedness prohibits such subsidiary from providing a Loan Guaranty and (B) the relevant prohibition was not implemented in contemplation of the applicable acquisition,
- (j) any other Restricted Subsidiary with respect to which, in the reasonable judgment of the Administrative Agent and the Parent Borrower, the burden or cost of providing a Loan Guaranty outweighs the benefits afforded thereby, and
- (k) any broker-dealer Subsidiaries.

“Excluded Swap Obligation” means, with respect to any Loan Guarantor, any Swap Obligation if, and to the extent that, all or a portion of the Loan Guaranty of such Loan Guarantor of, or the grant by such Loan Guarantor of a security interest to secure, such Swap Obligation (or any Loan Guaranty thereof) is or becomes illegal under the Commodity Exchange Act or any rule, regulation or order of the Commodity Futures Trading Commission (or the application or official interpretation of any thereof) by virtue of such Loan Guarantor’s failure for any reason to constitute an “eligible contract participant” as defined in the Commodity Exchange Act and the regulations thereunder (determined after giving effect to Section 3.20 of the Loan Guaranty and any other “keepwell”, support or other agreement for the benefit of such Loan Guarantor) at the time the Loan Guaranty of such Loan Guarantor or the grant of such security interest becomes effective with respect to such Swap Obligation. If any Swap Obligation arises under a master agreement governing more than one swap, such exclusion shall apply only to the portion of such Swap Obligation that is attributable to swaps for which such Loan Guaranty or security interest is or becomes illegal.

“Excluded Taxes” means, with respect to the Administrative Agent, any Lender or any Issuing Bank, or any other recipient (a “Recipient”) of any payment to be made by or on account of any obligation of any Loan Party under any Loan Document, (a) Taxes imposed on (or measured by) its net or overall gross income or franchise Taxes (i) imposed as a result of such recipient being organized or having its principal office located in, or, in the case of any Lender, having its applicable lending office located in, the taxing jurisdiction or (ii) that are Other Connection Taxes, (b) any branch profits Taxes imposed under Section 884(a) of the Code or any similar Tax imposed by any jurisdiction described in clause (a), (c) in the case of any Lender, any U.S. federal withholding Tax that is imposed on amounts payable to the relevant Lender pursuant to a Requirement of Law in effect at the time the relevant Lender becomes a party to this Agreement (or designates a new lending office), except (i) in the case of any Lender that became a recipient pursuant to an assignment under Section 2.19 or any Lender that designates a new lending office under Section 2.19 and (ii) to the extent that the relevant Lender (or its assignor, if any) was entitled, immediately prior to the designation of a new lending office (or assignment), to receive additional amounts from any Loan Party with respect to such withholding Tax pursuant to Section 2.17, (d) any Tax imposed as a result of a failure by such Recipient to comply with Section 2.17(e) and (e) any U.S. federal withholding Tax under FATCA.

“Expected Cost Savings” has the meaning assigned to such term in the definition of “Consolidated Adjusted EBITDA”.

“Extended Revolving Credit Commitment” has the meaning assigned to such term in Section 2.23(a).

“Extended Revolving Loans” has the meaning assigned to such term in Section 2.23(a).

“Extended Term Loans” has the meaning assigned to such term in Section 2.23(a).

“Extension” has the meaning assigned to such term in Section 2.23(a).

“Extension Amendment” means an amendment to this Agreement that is reasonably satisfactory to the Administrative Agent and the Parent Borrower executed by each of (a) Holdings, the applicable Borrowers and the Subsidiary Guarantors, (b) the Administrative Agent and (c) each Lender that has accepted the applicable Extension Offer pursuant hereto and in accordance with Section 2.23.

“Extension Offer” has the meaning assigned to such term in Section 2.23(a).

“Facility” means any real property (including all buildings, fixtures or other improvements located thereon) now, hereafter or hereof owned, leased, operated or used by any Borrower or any of its Restricted Subsidiaries or any of their respective predecessors or Affiliates.

“FATCA” means Sections 1471 through 1474 of the Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof, any agreements entered into pursuant to current Section 1471(b)(1) of the Code (or any amended or successor version described above), any intergovernmental agreements (or related laws or official administrative guidance) implementing any of the foregoing and any laws, fiscal or regulatory legislation, rules, guidance notes and practices adopted by another jurisdiction to effect any such intergovernmental agreement.

“FCPA” has the meaning assigned to such term in Section 3.17(d).

“Federal Funds Effective Rate” means, for any day, the weighted average of the rates on overnight Federal funds transactions, as published on the next succeeding Business Day by the Federal Reserve Bank of New York, or, if such rate is not so published for any day that is a Business Day, the Federal Funds Rate for such day shall be the average rate charged to CS on such day on such transactions as determined by the Administrative Agent; provided that to the extent that the Federal Funds Effective Rate is less than 0.00% per annum, the Federal Funds Effective Rate shall be deemed to be 0.00% per annum for purposes hereof.

“Fee Letters” means the collective reference to (i) that certain Arranger Fee Letter, dated as of July 6, 2017, by and between the Buyer and the Administrative Agent and (ii) that certain Administrative Agent Fee Letter, dated as of July 7, 2017, by and between the Buyer and the Administrative Agent.

“Financial Covenant Standstill” has the meaning assigned to such term in Section 7.01(c).

“First Lien Leverage Ratio” means the ratio, as of any date, of (a) Consolidated First Lien Debt as of the last day of the Test Period then most recently ended to (b) Consolidated Adjusted EBITDA for the Test Period then most recently ended, in each case of the Parent Borrower and its Restricted Subsidiaries on a consolidated basis.

“First Priority” means, with respect to any Lien purported to be created in any Collateral pursuant to any Collateral Document, that such Lien is senior in priority to any other Lien to which such Collateral is subject, other than any Permitted Lien (excluding any Permitted Lien that is expressly subordinated to such Lien).

“Fiscal Quarter” means a fiscal quarter of any Fiscal Year.

“Fiscal Year” means the fiscal year of the Parent Borrower ending December 31 of each calendar year.

“Fixed Amounts” has the meaning assigned to such term in Section 1.10(c).

“Flood Hazard Property” means any parcel of any Material Real Estate Asset located in the US that is subject to a Mortgage in an area designated by the Federal Emergency Management Agency as having special flood or mud slide hazards.

“Flood Insurance Laws” means, collectively, (a) National Flood Insurance Reform Act of 1994 (which comprehensively revised the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973), (b) the Flood Insurance Reform Act of 2004 and (c) the Biggert-Waters Flood Insurance Reform Act of 2012, as amended.

“Foreign Lender” means any Lender or Issuing Bank that is not a “United States person” within the meaning of Section 7701(a)(30) of the Code.

“Foreign Subsidiary” means any Restricted Subsidiary that is not a Domestic Subsidiary.

“Funded Debt” means all Indebtedness of any Borrower and of its Restricted Subsidiaries for borrowed money that matures more than one year from the date of its creation, or that matures within one year from such date and that is renewable or extendable, at the option of such Person, to a date that is more than one year from such date, or arises under a revolving credit or similar agreement that obligates the lender or lenders thereunder to extend credit during a period of more than one year from such date, including Indebtedness in respect of the Loans.

“GAAP” means generally accepted accounting principles in the US, in effect and applicable to the accounting period in respect of which reference to GAAP is made, in each case, subject to the terms of Section 1.04.

“Governmental Authority” means any federal, state, provincial, territorial, municipal, national or other government, governmental department, ministry, commission, board, bureau, court, agency or instrumentality or political subdivision thereof or any entity or officer exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to any government or any court, in each case whether associated with the US, a foreign government or any political subdivision thereof.

“Governmental Authorization” means any permit, license, authorization, approval, plan, directive, consent order or consent decree of or from any Governmental Authority.

“Granting Lender” has the meaning assigned to such term in Section 9.05(e).

“Guarantee” of or by any Person (the “Guarantor”) means any obligation, contingent or otherwise, of the Guarantor guaranteeing or having the economic effect of guaranteeing any Indebtedness or other monetary obligation of any other Person (the “Primary Obligor”) in any manner and including any obligation of the Guarantor (a) to purchase or pay (or advance or supply funds for the purchase or payment of) such Indebtedness or other monetary obligation or to purchase (or to advance or supply funds for the purchase of) any security for the payment thereof, (b) to purchase or lease property, securities or services for the purpose of assuring the owner of such Indebtedness or other monetary obligation of the payment thereof, (c) to maintain working capital, equity capital or any other financial statement condition or liquidity of the Primary Obligor so as to enable the Primary Obligor to pay such Indebtedness or other monetary obligation, (d) as an account party in respect of any letter of credit or letter of guaranty issued to support such Indebtedness or monetary obligation, (e) entered into for the purpose of assuring in any other manner the obligee in respect of such Indebtedness or other monetary obligation of the payment or performance thereof or to protect such obligee against loss in respect thereof (in whole or in part) or (f) secured by any Lien on any assets of such Guarantor securing any Indebtedness or other monetary obligation of any other Person, whether or not such Indebtedness or monetary other obligation is assumed by such Guarantor (or any right, contingent or otherwise, of any holder of such Indebtedness or other monetary obligation to obtain any such Lien); provided that the term “Guarantee” shall not include endorsements for collection or deposit in the ordinary course of business, or customary and reasonable indemnity obligations in effect on the Closing Date or entered into in connection with any acquisition, Disposition or other transaction permitted under this Agreement (other than such obligations with respect to Indebtedness). The amount of any Guarantee shall be deemed to be an amount equal to the stated or determinable amount of the related primary obligation, or portion thereof, in respect of which such Guarantee is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by the guaranteeing Person in good faith.

“Hazardous Materials” means any material, substance or waste, which is classified or otherwise characterized as “hazardous”, or “toxic” or as a “pollutant” or “contaminant” or words of similar import pursuant to Environmental Laws.

“Hedge Agreement” means any agreement with respect to any Derivative Transaction between any Loan Party or any Restricted Subsidiary and any other Person.

“Hedging Obligations” means, with respect to any Person, the obligations of such Person under any Hedge Agreement.

“Holdco Facility” means that certain \$100,000,000 term loan obtained by EQT Avatar Topco, Inc., a Delaware corporation and the direct parent of Holdings, pursuant to the Holdco Loan Agreement.

“Holdco Loan Agreement” means that certain Loan Agreement, dated as of July 6, 2017, among EQT Topco, Inc. and Santo Holding (Deutschland) GmbH.

“Holdco Refinancing Debt” has the meaning assigned to such term in Section 6.01(x).

“Holdings” has the meaning assigned to such term in the preamble to this Agreement and shall, for the avoidance of doubt, include any Successor Holdings.

“Identified Disqualified Lender” has the meaning assigned to such term in the definition of “Disqualified Lender”.

“IFRS” means international accounting standards within the meaning of IAS Regulation 1606/2002, as in effect from time to time (subject to the provisions of Section 1.04), to the extent applicable to the relevant financial statements.

“Immaterial Subsidiary” means, as of any date, any Restricted Subsidiary of the Parent Borrower (a) the assets of which do not exceed 2.5% of Consolidated Total Assets of the Borrower and its Restricted Subsidiaries and (b) the contribution to Consolidated Adjusted EBITDA of which does not exceed 2.5% of the Consolidated Adjusted EBITDA of the Parent Borrower and its Restricted Subsidiaries, respectively, in each case, as of the last day of or for the most recently ended Test Period; provided that, the Consolidated Total Assets and Consolidated Adjusted EBITDA (as so determined) of all Immaterial Subsidiaries shall not exceed 5.0% of Consolidated Total Assets and 5.0% of Consolidated Adjusted EBITDA, in each case, of the Borrower and its Restricted Subsidiaries as of the last day of or for the most recently ended Test Period; provided further that, at all times prior to the first delivery of financial statements pursuant to Section 5.01(a) or (b), this definition shall be applied based on the pro forma consolidated financial statements of the Borrower delivered pursuant to Section 4.01.

“Immediate Family Member” means, with respect to any individual, such individual’s child, stepchild, grandchild or more remote descendant, parent, stepparent, grandparent, spouse, former spouse, domestic partner, former domestic partner, sibling, mother-in-law, father-in-law, son-in-law and daughter-in-law (including adoptive relationships), any trust, partnership or other bona fide estate-planning vehicle the only beneficiaries of which are any of the foregoing individuals, such individual’s estate (or an executor or administrator acting on its behalf), heirs or legatees or any private foundation or fund that is controlled by any of the foregoing individuals or any donor-advised fund of which any such individual is the donor.

“Impacted Loans” has the meaning assigned to such term in Section 2.14(a).

“Incremental Amount” means (a) the greater of (i) \$50,000,000 and (ii) 100% of Consolidated Adjusted EBITDA for the most recently ended Test Period minus (b) the aggregate outstanding principal amount of all Incremental Facilities and/or Incremental Equivalent Debt incurred or issued in reliance on the Incremental Amount.

“Incremental Cap” means:

(a) the Incremental Amount, plus

(b) (i) the amount of any optional prepayment of any Loan in accordance with Section 2.11(a) and/or the amount of any permanent reduction of any Revolving Credit Commitment, plus (ii) the aggregate principal amount of any Term Loan reduction resulting from any assignment of such Term Loan to (and/or purchase of such Term Loan by) Holdings, any Borrower and/or any Restricted Subsidiary so long as, in the case of any such optional prepayment or assignment, the relevant prepayment or assignment and/or purchase was not funded (A) with the proceeds of any long-term Indebtedness (including pursuant to clause (c) below) or (B) with the proceeds of any Incremental Facility incurred in reliance on the Incremental Amount, plus

(c) an unlimited amount so long as, in the case of this clause (c), after giving effect to the relevant Incremental Facility, the First Lien Leverage Ratio does not exceed (x) 5.00:1.00 or (y) in the case of any Incremental Facility being incurred to finance a Permitted Acquisition, the First Lien Leverage Ratio in effect immediately prior to giving effect to the incurrence of such Incremental Facility and consummation of such Permitted Acquisition, in each case, calculated on a Pro Forma Basis (but without giving effect to any Revolving Loans or amounts under the Incremental Amount or clause (b) above, in each case, incurred substantially simultaneously or contemporaneously therewith), including the application of the proceeds thereof (without “netting” the cash proceeds of the applicable Incremental Facility on the consolidated balance sheet of the Parent Borrower), and in the case of any Incremental Revolving Facility, assuming a full drawing of such Incremental Revolving Facility.

“Incremental Commitment” means any commitment made by a lender to provide all or any portion of any Incremental Facility or Incremental Loan.

“Incremental Equivalent Debt” means Indebtedness in the form of (i) notes or loans secured on a pari passu basis with the Secured Obligations, (ii) notes or loans secured on a junior basis to the Secured Obligations, (iii) unsecured notes or loans and/or (iv) commitments in respect of any of the foregoing issued, incurred or implemented in lieu of loans under an Incremental Facility; provided, that:

(a) the aggregate outstanding amount thereof, together with any outstanding Incremental Facilities, does not exceed the Incremental Cap; provided that, for purposes of this definition, in the case of Incremental Equivalent Debt that is secured by a Lien on the Collateral that is junior to the Lien securing the Secured Obligations or that is unsecured, an unlimited amount of Incremental Equivalent Debt may be incurred under clause (c) of the definition of “Incremental Cap” so long as after giving effect to the relevant incurrence of Incremental Equivalent Debt, either (x) the Total Leverage Ratio does not exceed 7.00:1.00 or (y) solely in the case of Incremental Equivalent Debt that is unsecured, the Interest Coverage Ratio is not less than 2.00:1.00, in each case, calculated on a Pro Forma Basis (but without giving effect to any Revolving Loans or amounts under the Incremental Amount or clause (b) of the definition of “Incremental Cap”, in each case, incurred substantially simultaneously or contemporaneously therewith and assuming any unsecured Indebtedness incurred as Incremental Equivalent Debt is secured by a Lien on the Collateral), including the application of the proceeds thereof (without “netting” the cash proceeds of the applicable Incremental Equivalent Debt on the consolidated balance sheet of the Parent Borrower), and in the case of any Incremental Equivalent Debt that is revolving debt, assuming a full drawing of such Incremental Equivalent Debt,

(b) no Event of Default then exists (except in the case of the incurrence or provision of any Incremental Equivalent Debt in connection with a Permitted Acquisition or other Investment not prohibited by the terms of this Agreement, in which case, no Event of Default under Section 7.01(a), (f) or (g) then exists) immediately prior to or after giving effect to such notes or loans,

(c) the Weighted Average Life to Maturity applicable to such notes or loans (other than Customary Bridge Loans) is no shorter than the Weighted Average Life to Maturity of any then-existing Class of Term Loans (without giving effect to any prepayment thereof); provided that at the option of the Parent Borrower, Incremental Equivalent Debt in an aggregate principal amount equal to the portion of the Maturity/Weighted Average Life Excluded Amount that the Parent Borrower elects to apply to this proviso may be incurred without regard to this clause (c),

(d) the final maturity date with respect to such notes or loans (other than Customary Bridge Loans) is no earlier than the Latest Term Loan Maturity Date on the date of the issuance or incurrence, as applicable, thereof,

(e) [Reserved],

(f) no such Indebtedness may be (i) guaranteed by any Person which is not a Loan Party or (ii) secured by any assets other than the Collateral,

(g) except as otherwise permitted in Section 2.22 (including with respect to maturity, amortization, pricing, currency, interest rate margins, rate floors, MFN terms, discounts, premiums, fees, and (subject to clause (h) below) prepayment or redemption terms and provisions, in each case, which shall each be determined by the Parent Borrower and the lenders with respect to such Incremental Equivalent Debt) with respect to an analogous Incremental Facility, (i) the terms of any Incremental Equivalent Debt (excluding other than any terms which are applicable only after the Maturity Date of any then-existing Class of Term Loans) must be not materially more restrictive on the Parent Borrower and its Restricted Subsidiaries (when taken as a whole) than those applicable to any then-existing Term Loans (when taken as a whole) or otherwise reasonably acceptable to the Administrative Agent (it being understood that to the extent that any financial maintenance covenant or other term is added for the benefit of any such Indebtedness, the terms and conditions of such Indebtedness will be deemed not to be more restrictive than the terms and conditions of this Agreement if such financial maintenance covenant or other term is also added for the benefit of all Classes of Loans) or (ii) such Incremental Equivalent Debt (other than any Incremental Equivalent Debt that is in the form of term loans that are pari passu with the Initial Term Loans in right of payment and with respect to security (other than Customary Bridge Loans)) may be provided on then-current market terms (as reasonably determined by the Parent Borrower) for the applicable type of Indebtedness, and

(h) no such Indebtedness (other than Customary Bridge Loans) shall have any mandatory prepayment or redemption features (other than customary asset sale events, insurance and condemnation proceeds events, change of control offers or events of default and in the case of loans, excess cash flow sweeps) that could result in prepayments or redemptions of such Indebtedness prior to the Maturity Date of any then-existing Class of Loans.

“Incremental Facilities” has the meaning assigned to such term in Section 2.22(a).

“Incremental Facility Agreement” means an amendment to this Agreement that is reasonably satisfactory to the Administrative Agent and the Parent Borrower executed by each of (a) the applicable Borrower, (b) the Administrative Agent and (c) each Lender that agrees to provide all or any portion of the Incremental Facility being incurred pursuant thereto and in accordance with Section 2.22.

“Incremental Increase Facility” has the meaning assigned to such term in Section 2.22(a).

“Incremental Loans” has the meaning assigned to such term in Section 2.22(a).

“Incremental Revolving Commitment” means any commitment made by a Lender to provide all or any portion of any Incremental Revolving Facility.

“Incremental Revolving Facilities” has the meaning assigned to such term in Section 2.22(a).

“Incremental Revolving Facility Lender” means, with respect to any Incremental Revolving Facility, each Revolving Lender providing any portion of such Incremental Revolving Facility.

“Incremental Revolving Loans” has the meaning assigned to such term in Section 2.22(a).

“Incremental Term Facility” has the meaning assigned to such term in Section 2.22(a).

“Incremental Term Loans” has the meaning assigned to such term in Section 2.22(a).

“Incurred Acquisition Debt” has the meaning assigned to such term in Section 6.01(g).

“Incurrence-Based Amounts” has the meaning assigned to such term in Section 1.10(c).

“Indebtedness” as applied to any Person means, without duplication:

- (a) all indebtedness for borrowed money;
- (b) that portion of obligations with respect to Capital Leases to the extent recorded as a liability on a balance sheet (excluding the footnotes thereto) of such Person prepared in accordance with GAAP;
- (c) all obligations of such Person evidenced by bonds, debentures, notes or similar instruments to the extent the same would appear as a liability on a balance sheet (excluding the footnotes thereto) of such Person prepared in accordance with GAAP;
- (d) any obligation of such Person owed for all or any part of the deferred purchase price of property or services (excluding (i) any earn out obligation or purchase price adjustment until such obligation (A) becomes a liability on the balance sheet (excluding the footnotes thereto) of such Person in accordance with GAAP and (B) has not been paid within 30 days after becoming due and payable, (ii) any such obligations incurred under ERISA, (iii) accrued expenses and trade accounts payable in the ordinary course of business (including on an inter-company basis) and (iv) liabilities associated with customer prepayments and deposits), which purchase price is (A) due more than six months from the date of incurrence of the obligation in respect thereof or (B) evidenced by a note or similar written instrument;

- (e) all Indebtedness of others that is secured by any Lien on any asset owned or held by such Person regardless of whether the Indebtedness secured thereby has been assumed by such Person or is non-recourse to the credit of such Person;
- (f) the face amount of any letter of credit issued for the account of such Person or as to which such Person is otherwise liable for reimbursement of drawings;
- (g) the Guarantee by such Person of the Indebtedness of another;
- (h) all obligations of such Person in respect of any Disqualified Capital Stock; and
- (i) all net obligations of such Person in respect of any Derivative Transaction, including any Hedge Agreement, whether or not entered into for hedging or speculative purposes;

provided that (i) in no event shall any obligation under any Derivative Transaction be deemed “Indebtedness” for any calculation of the Total Leverage Ratio, the First Lien Leverage Ratio, the Interest Coverage Ratio or any other financial ratio under this Agreement and (ii) the amount of Indebtedness of any Person for purposes of clause (e) shall be deemed to be equal to the lesser of (A) the aggregate unpaid amount of such Indebtedness and (B) the fair market value of the property encumbered thereby as reasonably determined by such Person in good faith.

For all purposes hereof, the Indebtedness of any Person shall include the Indebtedness of any third person (including any partnership in which such Person is a general partner and any unincorporated joint venture in which such Person is a joint venture) to the extent such Person would be liable therefor under applicable Requirements of Law or any agreement or instrument by virtue of such Person’s ownership interest in such Person, (A) except to the extent the terms of such Indebtedness provided that such Person is not liable therefor and (B) only to the extent the relevant Indebtedness is of the type that would be included in the calculation of Consolidated Total Debt; provided that notwithstanding anything herein to the contrary, the term “Indebtedness” shall not include, and shall be calculated without giving effect to, (x) the effects of Accounting Standards Codification Topic 815 or International Accounting Standard 39 and related interpretations to the extent such effects would otherwise increase or decrease an amount of Indebtedness for any purpose hereunder as a result of accounting for any embedded derivatives created by the terms of such Indebtedness (it being understood that any such amounts that would have constituted Indebtedness hereunder but for the application of this proviso shall not be deemed an incurrence of Indebtedness hereunder) and (y) the effects of Statement of Financial Accounting Standards No. 133 and related interpretations to the extent such effects would otherwise increase or decrease an amount of Indebtedness for any purpose under this Agreement as a result of accounting for any embedded derivative created by the terms of such Indebtedness (it being understood that any such amount that would have constituted Indebtedness under this Agreement but for the application of this sentence shall not be deemed to be an incurrence of Indebtedness under this Agreement). The amount of Indebtedness issued at a discount to its initial principal amount shall be calculated based on the initial stated principal amount thereof without giving effect to any such discount. For all purposes hereof, the Indebtedness of any Borrower and any of its Restricted Subsidiaries shall exclude (i) intercompany liabilities arising from their cash management and accounting operations and intercompany loans, advances or Indebtedness having a term not exceeding 364 days (inclusive of any rollover or extensions of terms) and made in the ordinary course of business, (ii) deferred or prepaid revenue, (iii) purchase price holdbacks in respect of a portion of the purchase price of an asset to satisfy warranty or other unperformed obligations of the seller, (iv) any obligations attributable to the exercise of appraisal rights and the settlement of any claims or actions (whether actual, contingent or potential) with respect thereto, (v) Indebtedness of any Parent Company appearing on the balance sheet of the Parent Borrower solely by reason of push down accounting under GAAP, (vi) accrued expenses and royalties, (vii) asset retirement obligations and other pension related obligations (including pensions and retiree medical care) that are not overdue by more than 60 days and (viii) any payments contemplated by the Acquisition Agreement.

“Indemnified Taxes” means all Taxes, other than Excluded Taxes or Other Taxes, imposed on or with respect to any payment made by or on account of any obligation of any Loan Party under any Loan Document.

“Indemnitee” has the meaning assigned to such term in Section 9.03(b).

“Information Memorandum” means the Confidential Information Memorandum dated July 2017, relating to the Target and its subsidiaries and the Transactions.

“Initial Lenders” means the Arrangers (or their applicable Affiliates) who are party to this Agreement as Lenders on the Closing Date.

“Initial Revolving Credit Commitment” means, with respect to each Lender, the commitment of such Lender to make Initial Revolving Loans (and acquire participations in Letters of Credit) hereunder as set forth on the Commitment Schedule, or in the Assignment and Assumption pursuant to which such Lender assumed its Initial Revolving Credit Commitment, as applicable, as the same may be (a) reduced from time to time pursuant to Section 2.09 or 2.19, (b) reduced or increased from time to time pursuant to assignments by or to such Lender pursuant to Section 9.05 or (c) increased pursuant to Section 2.22. The aggregate amount of the Initial Revolving Credit Commitments as of the Closing Date is \$20,000,000.

“Initial Revolving Credit Exposure” means, with respect to any Lender at any time, the aggregate Outstanding Amount at such time of all Initial Revolving Loans of such Lender, plus the aggregate amount at such time of such Lender’s LC Exposure attributable to its Initial Revolving Credit Commitment.

“Initial Revolving Credit Maturity Date” means the date that is five years after the Closing Date.

“Initial Revolving Facility” means the Initial Revolving Credit Commitments and the Initial Revolving Loans and other extensions of credit thereunder.

“Initial Revolving Lender” means any Lender with an Initial Revolving Credit Commitment or any Initial Revolving Credit Exposure.

“Initial Revolving Loan” means any revolving loan made by the Initial Revolving Lenders to applicable Borrower pursuant to Section 2.01(a)(ii).

“Initial Term Lender” means any Lender with an Initial Term Loan Commitment or an outstanding Initial Term Loan.

“Initial Term Loan Commitment” means, with respect to each Term Lender, the commitment of such Term Lender to make Initial Term Loans hereunder in an aggregate amount not to exceed the amount set forth opposite such Term Lender’s name on the Commitment Schedule or in the Assignment and Assumption pursuant to which such Term Lender becomes a party hereto, as the same may be (a) reduced from time to time pursuant to Section 2.09 or 2.19, (b) reduced or increased from time to time pursuant to assignments by or to such Term Lender pursuant to Section 9.05 or (c) increased from time to time pursuant to Section 2.22. The aggregate amount of the Term Lenders’ Initial Term Loan Commitments on the Closing Date is \$250,000,000.

“Initial Term Loan Applicable Percentage” means, for purposes of Section 2.18(a), with respect to any Initial Term Lender, a percentage equal to a fraction the numerator of which is the aggregate outstanding amount of the Initial Term Loans and Initial Term Loan Commitment of such Initial Term Lender and the denominator of which is the aggregate outstanding principal amount of the Initial Term Loans and Initial Term Loan Commitments of all Initial Term Lenders holding Initial Term Loans or Initial Term Loan Commitments.

“Initial Term Loan Maturity Date” means the date that is seven years after the Closing Date.

“Initial Term Loans” means the term loans made by the Initial Term Lenders to the Initial Borrower pursuant to Section 2.01(a)(i) and assumed by the Borrowers (other than the Initial Borrower) pursuant to Section 9.22.

“Insolvency Disposition” has the meaning assigned to such term in Article 8.

“Intellectual Property Security Agreement” means any agreement executed on or after the Closing Date confirming or effecting the grant of any Lien on IP Rights owned by any Loan Party to the Administrative Agent, for the benefit of the Secured Parties, in accordance with this Agreement and any Security Agreement, including an Intellectual Property Security Agreement substantially in the form of Exhibit J.

“Interest Election Request” means a request by applicable Borrower in the form of Exhibit D or another form reasonably acceptable to the Administrative Agent to convert or continue a Borrowing in accordance with Section 2.08.

“Interest Coverage Ratio” means, as of any date of determination, the ratio of (a) Consolidated Adjusted EBITDA for the most recently ended Test Period to (b) Consolidated Interest Expense for such Test Period, in each case of the Parent Borrower and its Restricted Subsidiaries on a consolidated basis.

“Interest Payment Date” means (a) with respect to any ABR Loan, the last Business Day of each March, June, September and December (commencing with the last Business Day of December 2017) and the Revolving Credit Maturity Date or the maturity date applicable to such Loan and (b) with respect to any Adjusted Eurocurrency Rate Loan, the last day of the Interest Period applicable to the Borrowing of which such Loan is a part and, in the case of an Adjusted Eurocurrency Rate Borrowing with an Interest Period of more than three months’ duration, each day that would have been an Interest Payment Date had successive Interest Periods of three months’ duration been applicable to such Borrowing.

“Interest Period” means with respect to any Adjusted Eurocurrency Rate Borrowing, the period commencing on the date of such Borrowing and ending on the numerically corresponding day in the calendar month that is one, two, three or six months (or, to the extent approved by all relevant affected Lenders, 12 months or a shorter period) thereafter, as the applicable Borrower may elect; provided that (i) if any Interest Period would end on a day other than a Business Day, such Interest Period shall be extended to the next succeeding Business Day unless such next succeeding Business Day would fall in the next calendar month, in which case such Interest Period shall end on the next preceding Business Day and (ii) any Interest Period that commences on the last Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the last calendar month of such Interest Period) shall end on the last Business Day of the last calendar month of such Interest Period; provided further that the initial Interest Period with respect to any Adjusted Eurocurrency Rate Borrowing on the Closing Date may be for such other period specified in the applicable Borrowing Request that is acceptable to the Administrative Agent. For purposes hereof, the date of a Borrowing initially shall be the date on which such Borrowing is made and thereafter shall be the effective date of the most recent conversion or continuation of such Borrowing.

“Interpolated Screen Rate” means, with respect to the Eurocurrency Rate for any Eurocurrency Rate Loan or ABR Loan, the rate which results from interpolating on a linear basis between:

(a) the applicable Screen Rate for the longest period for which a Screen Rate is available for such Loan of such Type in the applicable currency, which period is less than the Interest Period of such Loan; and

(b) the applicable Screen Rate for the shortest period for which a Screen Rate is available for such Loan of such Type in the applicable currency, which period exceeds the Interest Period of such Loan.

“Investment” means (a) any purchase or other acquisition by any Borrower or any of its Restricted Subsidiaries of any of the Securities of any other Person (other than any Loan Party), (b) the acquisition by purchase or otherwise (other than any purchase or other acquisition of inventory, materials, supplies and/or equipment in the ordinary course of business) of all or substantially all the business, property or fixed assets of any other Person or any division or line of business or other business unit of any other Person and (c) any loan, advance (other than any advance to any current or former employee, officer, director, member of management, manager, consultant or independent contractor of any Borrower, any Restricted Subsidiary or any Parent Company for moving, entertainment and travel expenses, drawing accounts and similar expenditures in the ordinary course of business) or capital contribution by any Borrower or any of its Restricted Subsidiaries to any other Person. The amount, as of any date of determination, of (i) any Investment in the form of a loan or an advance shall be the principal amount thereof outstanding on such date, minus any cash payments actually received by such investor as a repayment of principal or a return of capital, and any cash payments actually received by such investor representing interest in respect of such Investment (to the extent any such payments to be deducted do not, in the aggregate, exceed the remaining principal amount of such Investment and without duplication of amounts increasing the Available Amount), but without any adjustment for write-downs or write-offs (including as a result of forgiveness of any portion thereof) with respect to such loan or advance after the date thereof, (ii) any Investment in the form of a Guarantee shall be equal to the stated or determinable amount of the related primary obligation, or portion thereof, in respect of which such Guarantee is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof, as determined in good faith by the Parent Borrower, (iii) any Investment in the form of a transfer of Capital Stock or other non-cash property by the investor to the investee, including any such transfer in the form of a capital contribution, shall be the fair market value (as reasonably determined in good faith by the Parent Borrower) of such Capital Stock or other property as of the time of the transfer, minus any payments actually received by such investor representing a return of capital of, or dividends or other distributions in respect of, such Investment (to the extent such payments do not exceed, in the aggregate, the original amount of such Investment and without duplication of amounts increasing the Available Amount), but without any other adjustment for increases or decreases in value of, or write-ups, write-downs or write-offs with respect to, such Investment after the date of such Investment, and (iv) any Investment (other than any Investment referred to in clause (i), (ii) or (iii) above) by the specified Person in the form of a purchase or other acquisition for value of any Capital Stock, evidences of Indebtedness or other securities of any other Person shall be the original cost of such Investment (including any Indebtedness assumed in connection therewith), plus (A) the cost of all additions thereto and minus (B) the amount of any portion of such Investment that has been repaid to the investor in cash as a repayment of principal or a return of capital, and of any cash payments actually received by such investor representing interest, dividends or other distributions in respect of such Investment (to the extent the amounts referred to in this clause (B) do not, in the aggregate, exceed the original cost of such Investment plus the costs of additions thereto and without duplication of amounts increasing the Available Amount), but without any other adjustment for increases or decreases in value of, or write-ups, write-downs or write-offs with respect to, such Investment after the date of such Investment.

“Investors” means (a) the Sponsor, (b) the Management Investors and (c) Santo Holding AG and any Affiliate thereof (excluding any operating portfolio company).

“IP Rights” has the meaning assigned to such term in Section 3.05(c).

“IRS” means the US Internal Revenue Service.

“Issuing Bank” means, as the context may require, (a) Jefferies, (b) Golub Capital LLC (“Golub”) and (c) any other Revolving Lender that is appointed as an Issuing Bank in accordance with Section 2.05(i). Each Issuing Bank may, in its discretion, arrange for one or more Letters of Credit to be issued by any Affiliate of such Issuing Bank, in which case the term “Issuing Bank” shall include any such Affiliate with respect to Letters of Credit issued by such Affiliate. Jefferies and Golub will cause Letters of Credit to be issued by unaffiliated financial institutions and such Letters of Credit shall be treated as issued by Jefferies or Golub, as applicable, for all purposes under the Loan Documents.

“Jefferies” has the meaning assigned to such term in the preamble to this Agreement.

“Junior Indebtedness” means the Holdco Facility (or any Holdco Refinancing Debt) and any other Indebtedness (other than Indebtedness among Holdings, any Borrower and/or its subsidiaries) of any Borrower or any of its Restricted Subsidiaries with an individual outstanding principal amount in excess of the Threshold Amount that is either (a) expressly subordinated in right of payment to the Obligations or (b) secured by a security interest on the Collateral that is expressly junior or subordinated to any First Priority Lien securing any Credit Facility.

“Latest Maturity Date” means, as of any date of determination, the latest maturity or expiration date applicable to any Loan or commitment hereunder at such time, including the latest maturity or expiration date of any Term Loan, Term Commitment, Revolving Loan or Revolving Credit Commitment.

“Latest Revolving Credit Maturity Date” means, as of any date of determination, the latest maturity or expiration date applicable to any Revolving Loan or Revolving Credit Commitment hereunder at such time.

“Latest Term Loan Maturity Date” means, as of any date of determination, the latest maturity or expiration date applicable to any term loan or term commitment hereunder at such time, including the latest maturity or expiration date of any Term Loan or any Additional Term Loan Commitment.

“LC Collateral Account” has the meaning assigned to such term in Section 2.05(j).

“LC Commitment” means, with respect to each Issuing Bank, the commitment of such Issuing Bank to issue Letters of Credit hereunder. The initial amount of each Issuing Bank’s LC Commitment is set forth on Schedule 2.01, or if an Issuing Bank has entered into an Assignment and Assumption or became an Issuing Bank pursuant to an agreement designating it as contemplated by Section 2.05(i), the amount set forth for such Issuing Bank as its LC Commitment in the Register maintained by the Administrative Agent or in such agreement.

“LC Disbursement” means a payment or disbursement made by an Issuing Bank pursuant to a Letter of Credit.

“LC Exposure” means, at any time, the sum of (a) the Outstanding Amount of all outstanding Letters of Credit at such time plus (b) the Outstanding Amount of all LC Disbursements that have not yet been reimbursed at such time. The LC Exposure of any Revolving Lender at any time shall equal its Applicable Revolving Credit Percentage of the aggregate LC Exposure at such time.

“LC Obligations” means, at any time, the sum of (a) the Outstanding Amount under Letters of Credit then outstanding, assuming compliance with all requirements for drawings referenced therein, plus (b) the Outstanding Amount of all unreimbursed LC Disbursements.

“LCA Election” has the meaning provided in Section 1.11.

“LCA Test Date” has the meaning provided in Section 1.11.

“Legal Reservations” means the application of relevant Debtor Relief Laws, general principles of equity and/or principles of good faith and fair dealing.

“Lenders” means the Term Lenders, the Revolving Lenders, any lender with an Additional Commitment or an outstanding Additional Loan and any other Person that becomes a party hereto pursuant to an Assignment and Assumption, other than any such Person that ceases to be a party hereto pursuant to an Assignment and Assumption.

“Letter of Credit” means any letter of credit issued pursuant to this Agreement; provided that, for the avoidance of doubt, no Issuing Bank shall be required to issue a Commercial Letter of Credit, bank guarantees or a Letter of Credit denominated in any currency other than Dollars.

“Letter of Credit Reimbursement Loan” has the meaning assigned to such term in Section 2.05(e).

“Letter of Credit Request” means any request by the applicable Borrower for a Letter of Credit in accordance with Section 2.05 and substantially in the form attached hereto as Exhibit K or such other form that is reasonably acceptable to the relevant Issuing Bank and the applicable Borrower.

“Letter of Credit Sublimit” means an amount equal to the lesser of (a) \$10,000,000 and (b) the aggregate amount of the Revolving Credit Commitments, which amount is subject to increase in accordance with Section 2.22.

“Lien” means any mortgage, pledge, hypothecation, assignment, encumbrance, lien (statutory or other), charge, or other security interest of any kind or nature whatsoever (including any conditional sale or other title retention agreement, any easement, right of way or other encumbrance on title to real property, and any Capital Lease having substantially the same economic effect as any of the foregoing), in each case, in the nature of security; provided that in no event shall an operating lease be deemed to constitute a Lien.

“Limited Condition Transaction” means any acquisition or Investment permitted by this Agreement, in each case whose consummation is not conditioned on the availability of, or on obtaining, third party financing.

“Loan Documents” means this Agreement, any Promissory Note, each Loan Guaranty, the Collateral Documents, any Acceptable Intercreditor Agreement, each Refinancing Amendment, each Incremental Facility Agreement, each Extension Amendment and any other document or instrument designated by the Parent Borrower and the Administrative Agent as a “Loan Document.” Any reference in this Agreement or any other Loan Document to any Loan Document shall include all appendices, exhibits or schedules thereto.

“Loan Guaranty” means the Guaranty Agreement, substantially in the form of Exhibit I, executed by each Loan Party thereto and the Administrative Agent for the benefit of the Secured Parties, as supplemented in accordance with the terms of Section 5.12.

“Loan Installment Date” has the meaning assigned to such term in Section 2.10(a).

“Loan Parties” means the Borrowers and each Loan Guarantor.

“Loan Guarantor” means (a) Holdings and any Subsidiary Guarantor, (b) upon the effectiveness of the Closing Date Assumption, the Initial Borrower and (c) with respect to any Secured Hedging Obligation and/or Banking Services Obligation of Holdings or any Subsidiary of any Borrower, the Borrowers.

“Loans” means any Initial Term Loan, any Additional Term Loan, any Revolving Loan and/or any Additional Revolving Loan.

“London Banking Day” means any day on which dealings in Dollar deposits are conducted by and between banks in the London interbank market.

“Management Investors” means the officers, directors, managers, employees and members of management of any Borrower, any Parent Company and/or any subsidiary of any Borrower (including, on the Closing Date, those of the Target and its subsidiaries).

“Margin Stock” has the meaning assigned to such term in Regulation U.

“Material Adverse Effect” means a circumstance or condition that has or would materially and adversely effect (a) the business, results of operations or financial condition, in each case, of any Borrower and of its Restricted Subsidiaries, taken as a whole, (b) the rights and remedies of the Administrative Agent and the Lenders under the applicable Loan Documents or (c) the ability of the Loan Parties (taken as a whole) to perform their payment obligations under the Loan Documents.

“Material Debt Instrument” means any physical instrument evidencing any Indebtedness for borrowed money with an individual outstanding principal amount in excess of \$5,000,000 and which is required to be pledged and delivered to the Administrative Agent (or its bailee) pursuant to any Security Agreement.

“Material Real Estate Asset” means any “fee-owned” Real Estate Asset acquired by any Loan Party after the Closing Date (or owned by any Person at the time such Person becomes a Loan Party), in each case, having a fair market value (as reasonably determined in good faith by the Parent Borrower) in excess of \$5,000,000 as of the date of acquisition thereof (or the date of substantial completion of any material improvement thereon or new construction thereof) or if the owning entity becomes a Loan Party after the Closing Date, as of the date such Person becomes a Loan Party.

“Maturity/Weighted Average Life Excluded Amount” means \$20,000,000.

“Maturity Date” means (a) with respect to the Initial Revolving Facility, the Initial Revolving Credit Maturity Date, (b) with respect to the Initial Term Loans, the Initial Term Loan Maturity Date, (c) with respect to any Replacement Term Loans or Replacement Revolving Facility, the final maturity date for such Replacement Term Loans or Replacement Revolving Facility, as the case may be, as set forth in the applicable Refinancing Amendment, (d) with respect to any Incremental Facility, the final maturity date set forth in the applicable Incremental Facility Agreement and (e) with respect to any Extended Revolving Credit Commitment or Extended Term Loans, the final maturity date set forth in the applicable Extension Amendment.

“Maximum Rate” has the meaning assigned to such term in Section 9.19.

“Minimum Extension Condition” has the meaning assigned to such term in Section 2.23(b).

“Moody’s” means Moody’s Investors Service, Inc.

“Mortgage” means any mortgage, deed of trust or other agreement or conveyance which conveys or evidences a Lien in favor of the Administrative Agent, for the benefit of the Administrative Agent and the relevant Secured Parties, on any Material Real Estate Asset constituting Collateral, which shall be in form reasonably satisfactory to the Administrative Agent and contain such terms as may be necessary under applicable local Requirements of Law to perfect a first-priority Lien on the applicable Material Real Estate Asset; provided, however, that in no event shall any Mortgage granted in a jurisdiction which imposes a mortgage tax, intangibles tax or documentary stamps tax or other similar charges secure an amount in excess of the fair market value (as reasonably determined in good faith by the Parent Borrower) of the Material Real Estate Asset subject to such Mortgage.

“Multiemployer Plan” means any employee benefit plan which is a “multiemployer plan” as defined in Section 3(37) of ERISA that is subject to the provisions of Title IV of ERISA, and in respect of which any Borrower or any of its Restricted Subsidiaries, or any of their respective ERISA Affiliates, makes or is obligated to make contributions or with respect to which any of them has any ongoing obligation or liability, contingent or otherwise.

“Net Insurance/Condemnation Proceeds” means an amount equal to: (a) any Cash payment or proceeds (including Cash Equivalents) received by any Borrower or any of its Restricted Subsidiaries (i) under any casualty insurance policy in respect of a covered loss thereunder of any assets of any Borrower or any of its Restricted Subsidiaries or (ii) as a result of the taking of any assets of any Borrower or any of its Restricted Subsidiaries by any Person pursuant to the power of eminent domain, condemnation, expropriation or otherwise, or pursuant to a sale of any such assets to a purchaser with such power under threat of such a taking, minus (b) (i) any actual out-of-pocket costs incurred by any Borrower or any of its Restricted Subsidiaries in connection with the adjustment, settlement or collection of any claims of any Borrower or the relevant Restricted Subsidiary in respect thereof, (ii) payment of the outstanding principal amount of, premium or penalty, if any, and interest and other amounts on any Indebtedness (other than the Loans, Indebtedness under the Holdco Facility and any Indebtedness secured by a Lien on the Collateral that is pari passu with or expressly subordinated to the Lien on the Collateral securing any Secured Obligation) that is secured by a Lien on the assets in question and that is required to be repaid or otherwise comes due under the terms thereof as a result of such loss, taking or sale, (iii) in the case of a taking, the reasonable out-of-pocket costs of putting any affected property in a safe and secure position, (iv) any selling costs and out-of-pocket expenses (including reasonable broker’s fees or commissions, legal fees, transfer and similar Taxes and the Parent Borrower’s good faith estimate of income or other Taxes paid or payable (including pursuant to Tax sharing arrangements or any Tax distribution or any withholding taxes estimated to be payable in connection with the repatriation of such Net Insurance/Condemnation Proceeds)) in connection with any sale or taking of such assets as described in clause (a) of this definition, (v) any amounts provided as a reserve in accordance with GAAP against any liabilities under any indemnification obligation or purchase price adjustments associated with any sale or taking of such assets as referred to in clause (a) of this definition (provided that to the extent and at the time any such amounts are released from such reserve (other than in connection with a payment in respect of such liability), such amounts shall constitute Net Insurance/Condemnation Proceeds) and (vi) the pro rata portion of such Net Insurance/Condemnation Proceeds (calculated without regard to this clause (vi)) attributable to minority interests and not available for distribution to or for the account of any Borrower and the Restricted Subsidiaries as a result thereof.

“Net Proceeds” means (a) with respect to any Disposition (including any Prepayment Asset Sale), the Cash proceeds (including Cash Equivalents and Cash proceeds subsequently received (as and when received) in respect of non-cash consideration initially received), net of (i) all fees and out-of-pocket expenses paid by (or on behalf of) any Borrower and the Restricted Subsidiaries in connection with such event (including attorney’s fees, investment banking fees, survey costs, title insurance premiums, and related search and recording charges, transfer taxes, deed or mortgage recording taxes, underwriting discounts and commissions, other customary expenses and brokerage, consultant, accountant and other customary fees and the amount of all transfer and similar Taxes and the Parent Borrower’s good faith estimate of income or other Taxes paid or payable (including pursuant to Tax sharing arrangements or any Tax distributions and including any withholding taxes estimated to be payable in connection with the repatriation of such Net Proceeds) in connection with such Disposition), (ii) amounts provided as a reserve in accordance with GAAP against any liabilities under any indemnification obligation or purchase price adjustment associated with such Disposition (provided that to the extent and at the time any such amounts are released from such reserve (other than in connection with a payment in respect of such liability), such amounts shall constitute Net Proceeds), (iii) the principal amount, premium or penalty, if any, interest and other amounts on any Indebtedness (other than the Loans, Indebtedness the Holdco Facility and any other Indebtedness secured by a Lien on the Collateral that is pari passu with or expressly subordinated to the Lien on the Collateral securing any Secured Obligation) which is secured by the asset sold in such Disposition and which is required to be repaid or otherwise comes due and is repaid (other than any such Indebtedness that is assumed by the purchaser of such asset), (iv) Cash escrows (until released from escrow to any Borrower or any of its Restricted Subsidiaries) from the sale price for such Disposition, (v) the pro rata portion of such Net Proceeds (calculated without regard to this clause (v)) attributable to minority interests and not available for distribution to or for the account of any Borrower and the Restricted Subsidiaries as a result thereof and (vi) the amount of any liabilities directly associated with such asset and retained by any Borrower or any Restricted Subsidiary; and (b) with respect to any issuance or incurrence of Indebtedness or Capital Stock, the Cash proceeds thereof, net of all Taxes and customary fees, commissions, costs, underwriting discounts and other fees and expenses incurred in connection therewith.

“New Incremental Term Facility” means any Incremental Term Facility which provides for a new tranche or Class of Term Loans hereunder in accordance with Section 2.22.

“New Incremental Revolving Facility” has the meaning assigned to such term in Section 2.22(a).

“Non-Consenting Lender” has the meaning assigned to such term in Section 2.19(b).

“Non-Debt Fund Affiliate” means any Affiliate of any Borrower other than (a) a natural person, (b) Holdings, the Borrowers and their respective subsidiaries and/or (c) any Debt Fund Affiliate.

“Non-Loan Party Cap” means the greater of \$22,500,000 and 45.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period.

“Notice of Intent to Cure” has the meaning assigned to such term in Section 6.12(b).

“Obligations” means all unpaid principal of and accrued and unpaid interest (including interest accruing during the pendency of any bankruptcy, insolvency, receivership or other similar proceeding, regardless of whether allowed or allowable in such proceeding) on the Loans, all LC Exposure, all accrued and unpaid fees (including fees accruing during the pendency of any bankruptcy, insolvency, receivership or other similar proceeding, regardless of whether allowed or allowable in such proceeding) and all expenses, reimbursements, indemnities and all other advances to, debts, liabilities and obligations of any Loan Party to the Lenders or to any Lender, the Administrative Agent, any Issuing Bank or any indemnified party arising under the Loan Documents or otherwise in respect of any Loan or Letter of Credit, whether direct or indirect (including those acquired by assumption), absolute, contingent, due or to become due, now existing or hereafter arising.

“Obligations Derivative Instrument” has the meaning assigned to such term in Section 9.05(d)(ii).

“OFAC” has the meaning assigned to such term in Section 3.17(a).

“Organizational Documents” means (a) with respect to any corporation, its certificate or articles of incorporation and its by-laws, (b) with respect to any limited partnership, its certificate of limited partnership and its partnership agreement, (c) with respect to any general partnership, its partnership agreement, (d) with respect to any limited liability company, its articles of organization or certificate of formation, and its operating agreement, and (e) with respect to any other form of entity, such other organizational documents required by local Requirements of Law or customary under such jurisdiction to document the formation and governance principles of such type of entity. In the event that any term or condition of this Agreement or any other Loan Document requires any Organizational Document to be certified by a secretary of state or similar governmental official, the reference to any such “Organizational Document” shall only be to a document of a type customarily certified by such governmental official.

“Other Applicable Indebtedness” has the meaning assigned to such term in Section 2.11(b)(ii).

“Other Connection Taxes” means, with respect to any Recipient, Taxes imposed as a result of a present or former connection between such recipient and the jurisdiction imposing such Tax (other than connections arising solely from such recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, or engaged in any other transaction pursuant to or enforced any Loan Document, or sold or assigned an interest in any Loan or Loan Document).

“Other Taxes” means all present or future stamp, court or documentary Taxes or any intangible, recording, filing or other excise or property Taxes arising from any payment made under any Loan Document or from the execution, delivery or enforcement of, or otherwise with respect to, any Loan Document, but excluding, for the avoidance of doubt, any Excluded Taxes.

“Outstanding Amount” means (a) with respect to any Term Loan, the amount of the aggregate outstanding principal amount thereof after giving effect to any borrowing and/or prepayment or repayment of such Term Loan occurring on such date, (b) with respect to any Revolving Loan on any date, the aggregate outstanding principal amount thereof after giving effect to any borrowing and/or prepayment or repayment of such Revolving Loan occurring on such date, (c) with respect to any Letter of Credit, the aggregate amount available to be drawn under such Letter of Credit after giving effect to any change in the aggregate amount available to be drawn under such Letter of Credit or the issuance or expiry of such Letter of Credit, including as a result of any LC Disbursement and (d) with respect to any LC Disbursement on any date, the aggregate outstanding amount of such LC Disbursement on such date after giving effect to any disbursement with respect to any Letter of Credit occurring on such date and any other change in the aggregate amount of such LC Disbursement as of such date, including as a result of any reimbursement by the applicable Borrower of such LC Disbursement.

“Parent Borrower” has the meaning assigned to such term in the preamble to this Agreement.

“Parent Company” means (a) Holdings, (b) any other Person of which Holdings is or becomes a subsidiary or after the Closing Date, (c) any holding company established by any Permitted Holder for purposes of holding its investment in any other Parent Company and (d) any Wholly-Owned Subsidiary of Holdings of which the Initial Borrower and, on and after the consummation of the Closing Date Assumption, each other Borrower is a Wholly-Owned Subsidiary (provided that any such intermediate holding company shall be subject to the terms and conditions of this Agreement applicable to Holdings, including, for the avoidance of doubt, the requirement to execute and deliver a joinder to the Loan Guaranty and a supplement to the Security Agreement, in substantially the forms attached thereto and comply with the covenant set forth in Section 6.11 and the other covenants and representations applicable to Holdings and shall be considered a Loan Guarantor on the same terms as Holdings).

“Participant” has the meaning assigned to such term in Section 9.05(c).

“Participant Register” has the meaning assigned to such term in Section 9.05(c).

“Patent” means the following: (a) any and all patents and patent applications; (b) all inventions described and claimed therein; (c) all reissues, divisions, continuations, renewals, extensions and continuations-in-part thereof; (d) all income, royalties, damages, claims, and payments now or hereafter due or payable under and with respect thereto, including, without limitation, damages and payments for past and future infringements thereof; (e) all rights to sue for past, present, and future infringements thereof; and (f) all rights corresponding to any of the foregoing anywhere in the world.

“PBGC” means the Pension Benefit Guaranty Corporation.

“Pension Plan” means any employee pension benefit plan, as defined in Section 3(2) of ERISA (other than a Multiemployer Plan), that is subject to the provisions of Title IV of ERISA or Section 412 of the Code or Section 302 of ERISA, which any Borrower or any of its Restricted Subsidiaries, or any of their respective ERISA Affiliates, maintains or contributes to or has an obligation to contribute to, or otherwise has any liability, contingent or otherwise.

“Perfection Certificate” means a certificate substantially in the form of Exhibit E.

“Perfection Certificate Supplement” means a supplement to the Perfection Certificate substantially in the form of Exhibit E.

“Perfection Requirements” means (a) the filing of appropriate financing statements with the office of the Secretary of State or other appropriate office in the state of organization of such Loan Party, (b) the filing of appropriate assignments or notices with the US Patent and Trademark Office and/or the US Copyright Office, as applicable, with respect to registered (and applied for) Patents, Trademarks, Copyrights and exclusive Copyright Licenses (except to the extent any of the foregoing are included in the definition of Excluded Assets), (c) the proper recording or filing, as applicable, of Mortgages and fixture filings with respect to any Material Real Estate Asset (except to the extent expressly not required to be Collateral pursuant to the terms thereof), in each case in favor of the Administrative Agent for the benefit of the Secured Parties and (d) the delivery to the Administrative Agent of any stock certificate or promissory note required to be delivered pursuant to the applicable Loan Documents, together with instruments of transfer executed in blank.

“Permitted Acquisition” means any acquisition made by any Borrower or any of its Restricted Subsidiaries, whether by purchase, merger or otherwise, of all or substantially all of the assets of, or any business line, unit or division of, any Person or the Capital Stock of any Person who is engaged in a Similar Business and becomes a Restricted Subsidiary (and, in any event, including any Investment in (a) any Restricted Subsidiary the effect of which is to increase any Borrower’s or any Restricted Subsidiary’s equity ownership in such Restricted Subsidiary or (b) any joint venture for the purpose of increasing any Borrower’s or its relevant Restricted Subsidiary’s ownership interest in such joint venture); provided that no Event of Default under Section 7.01(a) or Sections 7.01(f) and/or (g) has occurred and is continuing; provided further that all actions required to be taken with respect to any such newly acquired Subsidiary (including each subsidiary thereof) or assets in order to satisfy the requirements set forth in the term “Collateral and Guarantee Requirement”, the Collateral Documents, Section 5.12(b) and Section 5.13 to the extent applicable shall have been taken (or arrangements for the taking of such actions after the consummation of the Permitted Acquisition shall have been made that are reasonably satisfactory to the Administrative Agent) (unless such newly created or acquired Subsidiary is designated as an Unrestricted Subsidiary or is otherwise an Excluded Subsidiary).

“Permitted Holders” means (a) the Investors (and, with respect to any Investor that is a natural person, his or her Immediate Family Members) and (b) any group of which the Investors are members and any other member of such group; provided that the Investors, without giving effect to the existence of such group or any other group, collectively own, directly or indirectly, Capital Stock representing a majority of the aggregate votes entitled to vote for the election of directors of Holdings owned by such group.

“Permitted Liens” means Liens permitted pursuant to Section 6.02.

“Permitted Receivables Financing” means, collectively, any receivables securitizations or other receivables financing (including any factoring program) in an aggregate outstanding amount not to exceed the greater of \$7,500,000 and 15.0% of Consolidated Adjusted EBITDA for the last Test Period (provided that with respect to Permitted Receivables Financings incurred in the form of a factoring program, the outstanding amount of such Permitted Receivables Financing for the purposes of this definition shall be deemed to be equal to the Permitted Receivables Net Investment for the last Test Period) so long as such financings are non-recourse to Holdings, any Borrower and any of its Restricted Subsidiaries (except for (a) recourse to any Foreign Subsidiaries, (b) any customary limited recourse obligations, (c) any performance undertaking or Guarantee that is no more extensive in any material respect than customary performance undertakings or (d) an unsecured parent Guarantee by a Restricted Subsidiary that is a parent company of the Foreign Subsidiary referred to in the foregoing clause (a) of obligations of Foreign Subsidiaries, and in each case, reasonable extensions thereof).

“Permitted Receivables Net Investment” means the aggregate cash amount paid by the purchasers under any Permitted Receivables Financing in the form of a factoring program in connection with their purchase of accounts receivable and customary related assets or interests therein, as the same may be reduced from time to time by collections with respect to such accounts receivable and related assets or otherwise in accordance with the terms of such Permitted Receivables Financing (but excluding any such collections used to make payments of commissions, discounts, yield and other fees and charges incurred in connection with any Permitted Receivables Financing in the form of a factoring program which are payable to any Person other than any Borrower or its Restricted Subsidiaries).

“Person” means any natural person, corporation, limited liability company, trust, joint venture, association, company, partnership, Governmental Authority or any other entity.

“Plan” means any “employee benefit plan” (as such term is defined in Section 3(3) of ERISA) maintained by any Borrower and/or any Restricted Subsidiary or, with respect to any such plan that is subject to Section 412 of the Code or Title IV of ERISA, any of its ERISA Affiliates, other than any Multiemployer Plan.

“Platform” has the meaning assigned to such term in Section 9.01.

“Prepayment Asset Sale” means any Disposition by any Borrower or its Restricted Subsidiaries made pursuant to Section 6.07(g)(z) and Section 6.07(h).

“Primary Obligor” has the meaning assigned to such term in the definition of “Guarantee”.

“Prime Rate” means (a) the rate of interest determined, from time to time, by the Administrative Agent at its principal office in New York City as its “prime rate” and notified to the Parent Borrower with the understanding that the “prime rate” is one of the Administrative Agent’s base rates (not necessarily the lowest of such rates) and serves as the basis upon which effective rates of interest are calculated for those loans making reference thereto and is evidenced by the recording thereof after its announcement in such internal publications as the Administrative Agent may designate or (b) if the Administrative Agent has no “prime rate,” the rate of interest last quoted by *The Wall Street Journal* as the “Prime Rate” in the US or, if *The Wall Street Journal* ceases to quote such rate, the highest per annum interest rate published by the Federal Reserve Board in Federal Reserve Statistical Release H.15 (519) (Selected Interest Rates) as the “bank prime loan” rate or, if such rate is no longer quoted therein, any similar rate quoted therein (as reasonably determined by the Administrative Agent) or any similar release by the Federal Reserve Board (as reasonably determined by the Administrative Agent).

“Private Lender Information” has the meaning assigned to such term in Section 9.01.

“Pro Forma Basis” or “pro forma effect” means, with respect to any determination of the Total Leverage Ratio, the First Lien Leverage Ratio, the Interest Coverage Ratio, Consolidated Adjusted EBITDA or Consolidated Total Assets (including component definitions thereof), that each Subject Transaction required to be calculated on a Pro Forma Basis in accordance with Section 1.10 shall be deemed to have occurred as of the first day of the applicable Test Period (or, in the case of Consolidated Total Assets, as of the last day of such Test Period) with respect to any test or covenant for which such calculation is being made and that:

(a) (i) in the case of (A) any Disposition of all or substantially all of the Capital Stock of any Restricted Subsidiary or any division, facility, business line and/or product line of any Borrower or any Restricted Subsidiary and (B) any designation of a Restricted Subsidiary as an Unrestricted Subsidiary, income statement items (whether positive or negative and including any Expected Cost Savings related thereto) attributable to the property or Person subject to such Subject Transaction shall be excluded as of the first day of the applicable Test Period with respect to any test or covenant for which the relevant determination is being made and (ii) in the case of any Permitted Acquisition, Investment and/or designation of an Unrestricted Subsidiary as a Restricted Subsidiary described in the definition of the term “Subject Transaction”, income statement items (whether positive or negative and including any Expected Cost Savings related thereto) attributable to the property or Person subject to such Subject Transaction shall be included as of the first day of the applicable Test Period with respect to any test or covenant for which the relevant determination is being made; it being understood that any pro forma adjustment described in the definition of “Consolidated Adjusted EBITDA” may be applied to any such test or covenant solely to the extent that such adjustment is consistent with the definition of “Consolidated Adjusted EBITDA”;

(b) any retirement or repayment of Indebtedness (other than normal fluctuations in revolving Indebtedness incurred for working capital purposes) shall be deemed to have occurred as of the first day of the applicable Test Period with respect to any test or covenant for which the relevant determination is being made,

(c) any Indebtedness incurred by any Borrower or any of its Restricted Subsidiaries in connection therewith shall be deemed to have occurred as of the first day of the applicable Test Period with respect to any test or covenant for which the relevant determination is being made; provided that, (i) if such Indebtedness has a floating or formula rate, such Indebtedness shall have an implied rate of interest for the applicable Test Period for purposes of this definition determined by utilizing the rate that is or would be in effect with respect to such Indebtedness at the relevant date of determination (taking into account any interest hedging arrangements applicable to such Indebtedness), (ii) interest on any obligation with respect to any Capital Lease shall be deemed to accrue at an interest rate reasonably determined by a Responsible Officer of the Parent Borrower to be the rate of interest implicit in such obligation in accordance with GAAP and (iii) interest on any Indebtedness that may optionally be determined at an interest rate based upon a factor of a prime or similar rate, a Eurocurrency interbank offered rate or other rate shall be determined to have been based upon the rate actually chosen, or if none, then based upon such optional rate chosen by the Parent Borrower,

(d) the acquisition of any asset included in calculating Consolidated Total Assets, whether pursuant to any Subject Transaction or any Person becoming a subsidiary or merging, amalgamating or consolidating with or into any Borrower or any of its subsidiaries, or the Disposition of any asset included in calculating Consolidated Total Assets described in the definition of "Subject Transaction" shall be deemed to have occurred as of the last day of the applicable Test Period with respect to any test or covenant for which such calculation is being made, and

(e) Unrestricted Cash shall be calculated as of the date of the consummation of such Specified Transaction after giving pro forma effect thereto (other than, for the avoidance of doubt, the cash proceeds of any Indebtedness that is the Subject Transaction for which such a calculation is being made or is incurred to finance such Subject Transaction).

It is hereby agreed that for purposes of determining pro forma compliance with Section 6.12(a) prior to the last day of the first Fiscal Quarter after the Closing Date, the applicable level shall be the level cited in Section 6.12(a). Notwithstanding anything to the contrary set forth in the immediately preceding paragraph, for the avoidance of doubt, when calculating the First Lien Leverage Ratio for purposes of the definitions of "Applicable Rate" and "Commitment Fee Rate" and for purposes of Section 6.12(a) (other than for the purpose of determining pro forma compliance with Section 6.12(a) as a condition to taking any action under this Agreement), the events described in the immediately preceding paragraph that occurred subsequent to the end of the applicable Test Period shall not be given pro forma effect.

“Projections” means the financial projections and pro forma financial statements of the Parent Borrower and its subsidiaries included in the Information Memorandum (or a supplement thereto).

“Promissory Note” means a promissory note of the Borrowers payable to any Lender or its registered assigns, in substantially the form of Exhibit G, evidencing the aggregate outstanding principal amount of Loans of the Borrowers to such Lender resulting from the Loans made by such Lender.

“Public Company Costs” means Charges associated with, or in anticipation of, or preparation for, compliance with the requirements of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated in connection therewith, and Charges relating to compliance with the provisions of the Securities Act and the Exchange Act (and any similar Requirement of Law under any other applicable jurisdiction), as applicable to companies with equity or debt securities held by the public, the rules of national securities exchanges applicable to companies with listed equity or debt securities, directors’, managers’ and/or employees’ compensation or other costs to the extent attributable to being a public company, officer and director fee and expense reimbursement to the extent attributable to being a public company, Charges relating to investor relations, shareholder meetings and reports to shareholders or debtholders associated with being a public company, directors’ and officers’ insurance and other legal and other professional fees, listing fees and other costs and/or expenses associated with being a public company.

“Public Lender” has the meaning assigned to such term in Section 9.01.

“Public Lender Information” has the meaning assigned to such term in Section 9.01.

“Qualified Capital Stock” of any Person means any Capital Stock of such Person that is not Disqualified Capital Stock.

“Qualifying IPO” means the issuance and sale by the Initial Borrower, Parent Borrower or any Parent Company of which the Initial Borrower is a direct or indirect Subsidiary of its common Capital Stock in an underwritten primary public offering (other than a public offering pursuant to a registration statement on Form S-8) pursuant to an effective registration statement filed with the SEC in accordance with the Securities Act or any analogous filing under the securities laws of any jurisdiction other than the US (whether alone or in connection with a secondary public offering).

“Quarterly Financial Statements” has the meaning assigned to such term in Section 4.01(c).

“Ratio Debt” has the meaning assigned to such term in Section 6.01(w).

“Real Estate Asset” means, at any time of determination, all right, title and interest (fee, leasehold or otherwise) of any Loan Party in and to real property (including, but not limited to, land, improvements and fixtures thereon).

“Receivables Subsidiary” means any special purpose entity established in connection with a Permitted Receivables Financing.

“Recipient” has the meaning assigned to such term in the definition of “Excluded Taxes”.

“Recurring Contracts” means, as of any date of determination, any commercial contract of the Parent Borrower or any Restricted Subsidiary for any services that are continuous and not project based.

“Refinancing” has the meaning assigned to such term in Section 4.01(g).

“Refinancing Amendment” means an amendment to this Agreement that is reasonably satisfactory to the Administrative Agent and the Parent Borrower executed by (a) the applicable Borrower, (b) the Administrative Agent and (c) each Lender that agrees to provide all or any portion of the Replacement Term Loans or the Replacement Revolving Facility, as applicable, being incurred pursuant thereto and in accordance with Section 9.02(c).

“Refinancing Indebtedness” has the meaning assigned to such term in Section 6.01(p).

“Refunding Capital Stock” has the meaning assigned to such term in Section 6.04(a)(viii).

“Register” has the meaning assigned to such term in Section 9.05(b)(iv).

“Regulation D” means Regulation D of the Board as from time to time in effect and all official rulings and interpretations thereunder or thereof.

“Regulation H” means Regulation H of the Board as from time to time in effect and all official rulings and interpretations thereunder or thereof.

“Regulation U” means Regulation U of the Board as from time to time in effect and all official rulings and interpretations thereunder or thereof.

“Regulation X” means Regulation X of the Board as from time to time in effect and all official rulings and interpretations thereunder or thereof.

“Related Funds” means with respect to any Lender that is an Approved Fund, any other Approved Fund that is managed by the same investment advisor as such Lender or by an Affiliate of such investment advisor.

“Related Parties” means, with respect to any Person, such Person’s Affiliates and the respective officers, directors, employees, agents, advisors and other representatives of such Person and such Person’s Affiliates.

“Release” means any release, spill, emission, leaking, pumping, pouring, injection, escaping, deposit, disposal, discharge, dispersal, dumping, leaching or migration of any Hazardous Material into the Environment (including the abandonment or disposal of any barrels, containers or other closed receptacles containing any Hazardous Material), including the movement of any Hazardous Material through the air, soil, surface water or groundwater.

“Replaced Revolving Facility” has the meaning assigned to such term in Section 9.02(c)(ii).

“Replaced Term Loans” has the meaning assigned to such term in Section 9.02(c)(i).

“Replacement Revolving Facility” has the meaning assigned to such term in Section 9.02(c)(ii).

“Replacement Term Loans” has the meaning assigned to such term in Section 9.02(c)(i).

“Reportable Event” means, with respect to any Pension Plan or Multiemployer Plan, any of the events described in Section 4043(c) of ERISA, other than those events as to which the 30-day notice period is waived under PBGC Reg. Section 4043.

“Representative” has the meaning assigned to such term in Section 9.13.

“Repricing Transaction” means each of (a) the prepayment, repayment, refinancing, substitution or replacement of all or a portion of the Initial Term Loans with the incurrence by any Loan Party of any senior secured term loans (including any Replacement Term Loans) having an Effective Yield that is less than the Effective Yield applicable to the Initial Term Loans so prepaid, repaid, refinanced, substituted or replaced and (b) any amendment, waiver or other modification to this Agreement that would reduce the Effective Yield applicable to the Initial Term Loans; provided that the primary purpose of such prepayment, repayment, refinancing, substitution, replacement, amendment, waiver or other modification was to reduce the Effective Yield applicable to the Initial Term Loans; provided, further, that in no event shall any such prepayment, repayment, refinancing, substitution, replacement, amendment, waiver or other modification in connection with a Change of Control, Qualifying IPO or Transformative Acquisition constitute a Repricing Transaction. Any determination by the Administrative Agent in consultation with the Parent Borrower of the Effective Yield for purposes of this definition shall be conclusive and binding on all Lenders, and the Administrative Agent shall have no liability to any Person with respect to such determination absent bad faith, gross negligence or willful misconduct.

“Required Asset Sale Percentage” means, as of the date on which any Borrower or any Restricted Subsidiary receives (a) Net Proceeds in respect of any Prepayment Asset Sale or (b) Net Insurance/Condemnation Proceeds, (i) if the First Lien Leverage Ratio is greater than 4.50:1.00, 100%, (ii) if the First Lien Leverage Ratio is less than or equal to 4.50:1.00 but greater than 4.00:1.00, 50% and (iii) if the First Lien Leverage Ratio is less than or equal to 4.00:1.00, 0%.

“Required Excess Cash Flow Percentage” means, as of any date of determination, (a) if the First Lien Leverage Ratio is greater than 4.50:1.00, 50%, (b) if the First Lien Leverage Ratio is less than or equal to 4.50:1.00 and greater than 4.00:1.00, 25% and (c) if the First Lien Leverage Ratio is less than or equal to 4.00:1.00 (the First Lien Leverage Ratio levels set forth in clauses (a), (b) and (c), the “Stepdown Levels”), 0% (the percentages set forth in clauses (a), (b) and (c), the “Stepdown Percentages”); it being understood and agreed that, for purposes of this definition as it applies to the determination of the amount of Excess Cash Flow that is required to be applied to prepay the Term Loans under Section 2.11(b)(i) for any Excess Cash Flow Period, the Required Excess Cash Flow Percentage shall be determined on (and as of) the scheduled date of prepayment by first, determining the applicable Stepdown Level by calculating the First Lien Leverage Ratio on a pro forma basis without giving effect to any Excess Cash Flow payment required to be made on such date (the “Base Level”, and the Stepdown Level one level below the Base Level, the “Lower Level”) and second, calculating the First Lien Leverage Ratio on a pro forma basis after giving effect to such Excess Cash Flow payment based on the Lower Level on such date (the “Assumed Payment”). If after calculating the First Lien Leverage Ratio on a pro forma basis giving effect to the Assumed Payment at the Lower Level the Parent Borrower would be entitled to a stepdown to the Lower Level from the Base Level, then the Required Excess Cash Flow Percentage applicable to such Excess Cash Flow payment required to be made shall be the Stepdown Percentage for the Lower Level; otherwise, the Stepdown Percentage for the Base Level shall apply.

“Required Lenders” means, at any time, Lenders having Loans or unused Commitments representing more than 50% of the sum of the total Loans and such unused commitments at such time.

“Required Revolving Lenders” means, at any time, Lenders having Revolving Loans, Additional Revolving Loans, unused Revolving Credit Commitments and/or unused Additional Revolving Credit Commitments representing more than 50% of the sum of the total Revolving Loan and Additional Revolving Loans and such unused Revolving Credit Commitments and/or Additional Revolving Credit Commitments at such time.

“Requirements of Law” means, with respect to any Person, collectively, the common law and all federal, state, provincial, territorial, municipal, local, foreign, multinational or international laws, statutes, codes, treaties, standards, rules and regulations, guidelines, ordinances, orders, judgments, writs, injunctions, decrees (including administrative or judicial precedents or authorities) and the interpretation or administration thereof by, and other determinations, directives, requirements or requests of any Governmental Authority, in each case whether or not having the force of law and that are applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

“Responsible Officer” means, with respect to any Person, the chief executive officer, the president, the chief financial officer, the treasurer, manager of treasury activities, any assistant treasurer, any executive vice president, any senior vice president, any senior vice president (finance), any vice president or the chief operating officer of such Person and any other individual or similar official thereof responsible for the administration of the obligations of such Person in respect of this Agreement, and, as to any document delivered on the Closing Date, shall include any secretary or assistant secretary or any other individual or similar official thereof with substantially equivalent responsibilities of a Loan Party. Any document delivered hereunder that is signed by a Responsible Officer of any Loan Party shall be conclusively presumed to have been authorized by all necessary corporate, partnership and/or other action on the part of such Loan Party, and such Responsible Officer shall be conclusively presumed to have acted on behalf of such Loan Party. Unless otherwise specified, all references herein to a “Responsible Officer” shall refer to a Responsible Officer of the Parent Borrower.

“Responsible Officer Certification” means, with respect to the financial statements for which such certification is required, the certification of a Responsible Officer of the Parent Borrower that such financial statements fairly present, in all material respects, in accordance with GAAP, the consolidated financial condition of the Parent Borrower as at the dates indicated and its consolidated income and cash flows for the periods indicated, subject (in the case of unaudited interim financial statements) to changes resulting from audit and normal year-end adjustments.

“Restricted Amount” has the meaning set forth in Section 2.11(b)(iv).

“Restricted Cash Award” means the cash award received upon exchange of Restricted Stock Units in the Restricted Stock Unit Exchange Offer that will pay an amount equal to the per share merger consideration set forth in the Acquisition Agreement upon vesting.

“Restricted Debt Payment” has the meaning set forth in Section 6.04(b).

“Restricted Payment” means (a) any dividend or other distribution on account of any shares of any class of the Capital Stock of the Initial Borrower, except a dividend payable solely in shares of Qualified Capital Stock to the holders of such class; (b) any redemption, retirement, sinking fund or similar payment, purchase or other acquisition for value of any shares of any class of the Capital Stock of the Initial Borrower; and (c) any payment made to retire, or to obtain the surrender of, any outstanding warrants, options or other rights to acquire shares of any class of the Capital Stock of the Initial Borrower now or hereafter outstanding.

“Restricted Stock Unit” means any restricted stock unit or performance based unit of the Target awarded pursuant to a stock plan that is outstanding immediately prior to the consummation of the Acquisition.

“Restricted Stock Unit Exchange Offer” means the exchange offer by the Target pursuant to Schedule TO under the Exchange Act to exchange for Restricted Stock Units granted and outstanding under stock plans for (a) Restricted Cash Awards that will pay an amount equal to the per share merger consideration set forth in the Acquisition Agreement upon vesting and (b) options to purchase common stock of Holdings.

“Restricted Subsidiary” means, as to any Person, any subsidiary of such Person that is not an Unrestricted Subsidiary. Unless otherwise specified, “Restricted Subsidiary” shall mean any Restricted Subsidiary of Holdings other than any Borrower.

“Retained Asset Sale Proceeds” means that portion of Net Proceeds of a Prepayment Asset Sale not required to be applied to prepay the Loans pursuant to Section 2.11(b)(ii) due to the Required Asset Sale Percentage being less than 100%.

“Revolving Commitment Increase” has the meaning set forth in Section 2.22(a).

“Revolving Credit Commitment” means any Initial Revolving Credit Commitment and any Additional Revolving Credit Commitment.

“Revolving Credit Exposure” means, with respect to any Lender at any time, the aggregate Outstanding Amount at such time of such Lender’s Initial Revolving Credit Exposure and Additional Revolving Credit Exposure.

“Revolving Facility” means the Initial Revolving Facility, any Incremental Revolving Facility, any Extended Revolving Facility and any Replacement Revolving Facility.

“Revolving Facility Test Condition” means, as of any date of determination, without duplication, that the Outstanding Amount of the sum of (a) all Revolving Loans (other than, for any such determination made during the first four full Fiscal Quarters ending after the Closing Date, Revolving Loans made on the Closing Date applied to fund the Acquisition in an aggregate principal amount not to exceed \$10,000,000), (b) LC Disbursements that have not been reimbursed within three Business Days and (c) undrawn Letters of Credit (other than (i) undrawn Letters of Credit that have been cash collateralized or backstopped (in the case of any such non-cash collateral backstop, in a manner reasonably satisfactory to the applicable Issuing Bank) in an amount equal to 100% of the then-available face amount thereof and (ii) undrawn Letters of Credit that have not been cash collateralized or backstopped in an aggregate amount of up to \$5,000,000 at any time outstanding) exceeds an amount equal to 35% of the Total Revolving Credit Commitment).

“Revolving Lender” means any Initial Revolving Lender and any Additional Revolving Lender.

“Revolving Loans” means any Initial Revolving Loans and any Additional Revolving Loans.

“S&P” means Standard & Poor’s Financial Services LLC, a subsidiary of the McGraw-Hill Companies, Inc.

“Sale and Lease-Back Transaction” has the meaning assigned to such term in Section 6.08.

“Same Day Funds” means disbursements and payments in immediately available funds.

“Scheduled Consideration” has the meaning assigned to such term in the definition of “Excess Cash Flow”.

“Screen Rate” means the rate per annum equal to the London interbank offered rate as administered by ICE Benchmark Administration Limited (or any other Person that takes over the administration of such rate) that appears on the Reuters Screen LIBOR01 Page (or, in the event such rate does not appear on a Reuters page or screen, on any successor or substitute page that displays such rate, or on the appropriate page of such other information service that publishes such rate from time to time as selected by the Administrative Agent in its reasonable discretion) for deposits in Dollars (for delivery on the first day of such Interest Period) with a term equivalent to such Interest Period.

“SEC” means the Securities and Exchange Commission, or any Governmental Authority succeeding to any or all of its functions.

“Secured Hedging Obligations” means all Hedging Obligations (other than any Excluded Swap Obligation) under each Hedge Agreement that (a) is in effect on the Closing Date between Holdings, any Borrower or any Restricted Subsidiary and a counterparty that is (or is an Affiliate of) the Administrative Agent, any Lender or any Arranger as of the Closing Date or (b) is entered into after the Closing Date between Holdings, any Borrower or any Restricted Subsidiary and any counterparty that is (or is an Affiliate of) the Administrative Agent, any Lender or any Arranger at the time such Hedge Agreement is entered into, for which such Person agrees to provide security and in each case that has been designated to the Administrative Agent in writing by the Parent Borrower as being a “Secured Hedging Obligation” for purposes of the Loan Documents; it being understood that each counterparty thereto shall be deemed (A) to appoint the Administrative Agent as its agent under the applicable Loan Documents and (B) to agree to be bound by the provisions of Article 8, Section 9.03 and Section 9.10 and each Acceptable Intercreditor Agreement as if it were a Lender.

“Secured Obligations” means all Obligations, together with (a) all Banking Services Obligations and (b) all Secured Hedging Obligations; provided that Banking Services Obligations and Secured Hedging Obligations shall cease to constitute Secured Obligations on and after the Termination Date.

“Secured Parties” means (a) the Lenders and the Issuing Banks, (b) the Administrative Agent, (c) each counterparty to a Hedge Agreement the obligations under which constitute Secured Hedging Obligations, (d) each provider of Banking Services the obligations under which constitute Banking Services Obligations, (e) the Arrangers and (f) the beneficiaries of each indemnification obligation undertaken by any Loan Party under any Loan Document.

“Securities” means any stock, shares, units, partnership interests, voting trust certificates, certificates of interest or participation in any profit-sharing agreement or arrangement, options, warrants, bonds, debentures, notes, or other evidences of indebtedness, secured or unsecured, convertible, subordinated or otherwise, or in general any instruments commonly known as “securities” or any certificates of interest, shares or participations in temporary or interim certificates for the purchase or acquisition of, or any right to subscribe to, purchase or acquire, any of the foregoing; provided that the term “Securities” shall not include any earn-out agreement or obligation or any employee bonus or other incentive compensation plan or agreement.

“Securities Act” means the Securities Act of 1933 and the rules and regulations of the SEC promulgated thereunder.

“Security Agreement” means the Pledge and Security Agreement, substantially in the form of Exhibit H, among the Loan Parties and the Administrative Agent for the benefit of the Secured Parties.

“Significant Subsidiary” means any Restricted Subsidiary that, or any group of Restricted Subsidiaries taken together that, as of the last day of the fiscal quarter of the Parent Borrower most recently ended for which financial statements are available, had revenues or total assets for such quarter in excess of 10% of the consolidated revenues or total assets, as applicable, of the Parent Borrower for such quarter; provided that solely for purposes of Section 7.01(f) and Section 7.01(g), each Restricted Subsidiary forming part of such group is subject to an Event of Default under one or more of such Sections.

“Similar Business” means any Person the majority of the revenues of which are derived from a business that would be permitted by Section 5.18 if the references to “Restricted Subsidiaries” in Section 5.18 were read to refer to such Person.

“Software” means computer programs, object code, source code and supporting documentation, including, without limitation, “software” as such term is defined in the UCC as in effect on the date hereof in the State of New York and computer programs that may be construed as included in the definition of “goods” in the UCC as in effect on the date hereof in the State of New York.

“Solvent” shall mean, at the time of determination:

- (a) each of the Fair Value and the Present Fair Saleable Value of the assets of a Person and its Subsidiaries taken as a whole exceed their Stated Liabilities and Identified Contingent Liabilities; and
- (b) such Person and its Subsidiaries taken as a whole do not have Unreasonably Small Capital; and
- (c) such Person and its Subsidiaries taken as a whole can pay their Stated Liabilities and Identified Contingent Liabilities as they mature.

Defined terms used in the foregoing definition shall have the meanings set forth in the Solvency Certificate delivered on the Closing Date pursuant to Section 4.01(i).

“SPC” has the meaning assigned to such term in Section 9.05(e).

“Specified Acquisition Agreement Representations” means the representations and warranties made by, or with respect to, the Target and its subsidiaries in the Acquisition Agreement that are material to the interests of the Lenders, but only to the extent that the Initial Borrower (or its applicable affiliate) has the right (taking into account applicable cure provisions) to terminate its obligations under the Acquisition Agreement or to decline to consummate the Acquisition (in each case, in accordance with the terms thereof) as a result of a breach of any such representations and warranties.

“Specified Representations” means the representations and warranties of the Loan Parties set forth in Section 3.01(a)(i) (solely as it relates to the Loan Parties), Section 3.01(b), Section 3.02 (with respect to the entering into, borrowing under, guaranteeing under, performance of, and granting of Liens in the Collateral pursuant to the Loan Documents), Section 3.03(b)(i) (with respect to the entering into, borrowing under, guaranteeing under, performance of, and granting of Liens in the Collateral pursuant to the Loan Documents), Section 3.08, Section 3.12, Section 3.14 (subject to the last sentence of Section 4.01, as it relates to the creation, validity and perfection of the security interests in the Collateral), Section 3.16, Section 3.17(e) (with respect to the use of the proceeds of the Initial Term Loans on the Closing Date) and Section 3.18.

“Sponsor” means, collectively, EQT Services (UK) Limited (or any successor or replacement thereof, which is an affiliate of EQT Services (UK) Limited) in its capacity as manager of each of EQT VII (No. 1) Limited Partnership and EQT VII (No. 2) Limited Partnership, together with its Affiliates and its funds, partnerships or other co-investment vehicles managed, advised or controlled by the foregoing (but excluding any operating portfolio company of the foregoing).

“Stated Amount” means, with respect to any Letter of Credit, at any time, the maximum amount available to be drawn thereunder, in each case determined (a) as if any future automatic increases in the maximum available amount provided for in any such Letter of Credit had in fact occurred at such time and (b) without regard to whether any conditions to drawing could then be met but after giving effect to all previous drawings made thereunder.

“Statutory Reserve Rate” means a fraction (expressed as a decimal), the numerator of which is the number one and the denominator of which is the number one minus the aggregate of the maximum reserve percentages (including any marginal, special, emergency or supplemental reserves) expressed as a decimal established by the Board to which the Administrative Agent is subject with respect to the Adjusted Eurocurrency Rate, for Eurocurrency funding (currently referred to as “Eurocurrency Liabilities” in Regulation D). Such reserve percentages shall include those imposed pursuant to such Regulation D. Adjusted Eurocurrency Rate Loans shall be deemed to constitute Eurocurrency funding and to be subject to such reserve requirements without benefit of or credit for proration, exemptions or offsets that may be available from time to time to any Lender under such Regulation D or any comparable regulation. The Statutory Reserve Rate shall be adjusted automatically on and as of the effective date of any change in any reserve percentage.

“Stepdown Level” has the meaning assigned to such term in the definition of “Required Excess Cash Flow Percentage”.

“Stepdown Percentage” has the meaning assigned to such term in the definition of “Required Excess Cash Flow Percentage”.

“Subject Loans” means, as of any date of determination, the Initial Term Loans and any Additional Term Loans subject to ratable prepayment requirements in accordance with Section 2.11(b)(vi) on such date of determination.

“Subject Person” has the meaning assigned to such term in the definition of “Consolidated Net Income”.

“Subject Proceeds” has the meaning assigned to such term in Section 2.11(b)(ii).

“Subject Transaction” means, with respect to any Test Period, (a) the Transactions, (b) any Permitted Acquisition or any other acquisition, whether by purchase, merger or otherwise, of all or substantially all of the assets of, or any business line, unit or division of, any Person or the Capital Stock of any Person (and, in any event, including any Investment in (i) any Restricted Subsidiary the effect of which is to increase the Initial Borrower’s or any Restricted Subsidiary’s respective equity ownership in such Restricted Subsidiary or (ii) any joint venture for the purpose of increasing the Initial Borrower’s or its relevant Restricted Subsidiary’s ownership interest in such joint venture), in each case that is permitted by this Agreement, (c) any Disposition of all or substantially all of the assets or Capital Stock of any subsidiary (or any facility, business unit, line of business, product line or division of any Borrower or a Restricted Subsidiary) not prohibited by this Agreement, (d) the designation of a Restricted Subsidiary as an Unrestricted Subsidiary or an Unrestricted Subsidiary as a Restricted Subsidiary in accordance with Section 5.10 hereof, (e) any incurrence or repayment of Indebtedness, (f) the implementation of any Cost Savings Initiative, and/or (g) any other event that by the terms of the Loan Documents requires pro forma compliance with a test or covenant hereunder or requires such test or covenant to be calculated on a pro forma basis.

“subsidiary” means, with respect to any Person, any corporation, partnership, limited liability company, association, joint venture or other business entity of which more than 50% of the total voting power of stock or other ownership interests entitled (without regard to the occurrence of any contingency) to vote in the election of the Person or Persons (whether directors, trustees or other Persons performing similar functions) having the power to direct or cause the direction of the management and policies thereof is at the time owned or controlled, directly or indirectly, by such Person or one or more of the other subsidiaries of such Person or a combination thereof; provided that in determining the percentage of ownership interests of any Person controlled by another Person, no ownership interests in the nature of a “qualifying share” of the former Person shall be deemed to be outstanding. Unless otherwise specified, “subsidiary” shall mean any subsidiary of the Initial Borrower.

“Subsidiary Guarantor” means (a) on the Closing Date, each subsidiary of the Parent Borrower (other than any such subsidiary that is an Excluded Subsidiary on the Closing Date) and (b) thereafter each subsidiary of the Parent Borrower that becomes a guarantor of the Secured Obligations pursuant to the terms of this Agreement or otherwise, in each case, until such time as the relevant subsidiary is released from its obligations under the Loan Guaranty in accordance with the terms and provisions hereof.

“Successor Borrower” has the meaning assigned to such term in Section 6.07(a).

“Successor Holdings” has the meaning assigned to such term in Section 6.11(c).

“Successor Initial Borrower” has the meaning assigned to such term in Section 6.11(c).

“Swap Obligations” means, with respect to any Loan Guarantor, any obligation to pay or perform under any agreement, contract or transaction that constitutes a “swap” within the meaning of Section 1a(47) of the Commodity Exchange Act.

“Target” has the meaning assigned to such term in the preamble to this Agreement.

“Target Credit Agreement” means that certain Credit Agreement, dated as of December 19, 2013 (as amended, supplemented or otherwise modified from time to time prior to the date hereof), by and among Arsenal MBDD Holding, Inc., the Co-Borrower and Certara L.P. as co-borrowers thereunder, the lenders from time to time party thereto, Golub Capital LLC, as administrative agent and collateral agent and each other party thereto.

“Taxes” means all present and future taxes, levies, imposts, duties, deductions, withholdings (including backup withholding), assessments, fees or other charges imposed by any Governmental Authority, including any interest, additions to tax or penalties applicable thereto.

“Termination Date” has the meaning assigned to such term in the lead-in to Article 5.

“Term Commitment” means any Initial Term Commitment and any Additional Term Loan Commitment.

“Term Facility” means the Term Loans provided to or for the benefit of the Borrowers pursuant to the terms of this Agreement.

“Term Lender” means any Initial Term Lender and any Additional Term Lender.

“Term Loan” means the Initial Term Loans and, if applicable, any Additional Term Loans.

“Test Period” means, as of any date, the period of four consecutive Fiscal Quarters then most recently ended for which financial statements under Section 5.01(a) or (b), as applicable, have been delivered (or are required to have been delivered); it being understood and agreed that prior to the first delivery (or required delivery) of financial statements of Section 5.01(a), “Test Period” means the period of four consecutive Fiscal Quarters most recently ended for which consolidated financial statements of the Target have been delivered pursuant to Section 4.01(c).

“Threshold Amount” means (a) solely for the purposes of Section 7.01, \$20,000,000 and (b) otherwise, \$25,000,000.

“Total Leverage Ratio” means the ratio, as of any date, of (a) Consolidated Total Debt outstanding as of the last day of the Test Period then most recently ended to (b) Consolidated Adjusted EBITDA for the Test Period then most recently ended, in each case of the Parent Borrower and its Restricted Subsidiaries on a consolidated basis.

“Total Revolving Credit Commitment” means, at any time, the aggregate amount of the Revolving Credit Commitments, in effect at such time.

“Trade Secrets” means any trade secrets or other proprietary and confidential information, including unpatented inventions, invention disclosures, engineering or other technical data, financial data, procedures, know-how, designs, personal information, supplier lists, customer lists, business, production or marketing plans, formulae, methods (whether or not patentable), processes, compositions, schematics, ideas, algorithms, techniques, analyses, proposals, Software (to the extent not a Copyright) and data collections.

“Trademark” means the following: (a) all trademarks (including service marks), common law marks, trade names, trade dress, and logos, slogans and other indicia of origin under the Requirements of Law of any jurisdiction in the world, and the registrations and applications for registration thereof and the goodwill of the business symbolized by the foregoing; (b) all renewals of the foregoing; (c) all income, royalties, damages, and payments now or hereafter due or payable with respect thereto, including, without limitation, damages, claims, and payments for past and future infringements thereof; (d) all rights to sue for past, present, and future infringements of the foregoing, including the right to settle suits involving claims and demands for royalties owing; and (e) all rights corresponding to any of the foregoing anywhere in the world.

“Transaction Costs” means fees, premiums, expenses, closing payments and other similar transaction costs (including original issue discount or upfront fees) payable or otherwise borne by Holdings and/or its subsidiaries in connection with the Transactions and the transactions contemplated thereby.

“Transactions” means, collectively, (a) the execution, delivery and performance by the Loan Parties of the Loan Documents to which they are a party and the Borrowing of Loans hereunder on the Closing Date, (b) the Acquisition and the other transactions contemplated by the Acquisition Agreement, (c) the Equity Contribution, (d) the Refinancing, (e) the execution, delivery and performance of the Holdco Loan Agreement and the incurrence of Indebtedness under the Holdco Facility on the Closing Date, (f) the Closing Date Assumption and (g) the payment of the Transaction Costs.

“Transformative Acquisition” means any acquisition, restructuring, merger or other similar transaction consummated by any Borrower or any Restricted Subsidiary that is either (a) not permitted by the terms of this Agreement immediately prior to the consummation of such transaction or (b) if permitted by the terms of this Agreement immediately prior to the consummation of such transaction, would not provide the applicable Borrower and its relevant subsidiaries with adequate flexibility under this Agreement for the continuation and/or expansion of their combined operations following the consummation thereof, as determined by the Parent Borrower acting in good faith.

“Treasury Capital Stock” has the meaning assigned to such term in Section 6.04(a)(viii).

“Treasury Regulations” means the US federal income tax regulations promulgated under the Code.

“Type”, when used in reference to any Loan or Borrowing, refers to whether the rate of interest on such Loan, or on the Loans comprising such Borrowing, is determined by reference to the Adjusted Eurocurrency Rate or the Alternate Base Rate.

“UCC” means the Uniform Commercial Code as in effect from time to time in the State of New York or any other state the laws of which are required to be applied in connection with the creation or perfection of security interests.

“Unfunded Advances/Participations” means (a) with respect to the Administrative Agent, the aggregate amount, if any, (i) (A) made available to the applicable Borrower on the assumption that each Lender has made available to the Administrative Agent such Lender’s share of the applicable Borrowing as contemplated by Section 2.07(b) and (B) made available to the Lenders on the assumption that the applicable Borrower has made any payment as contemplated by Section 2.18(d) and (ii) with respect to which a corresponding amount has not in fact been returned or paid to the Administrative Agent by the applicable Borrower or made available to the Administrative Agent by any such Lender and (b) with respect to any Issuing Bank, the aggregate amount, if any, of LC Disbursements in respect of which a Revolving Lender shall have failed to make Revolving Loans or Participations to reimburse such Issuing Bank pursuant to Section 2.05(e).

“Unfunded Pension Liability” of any Pension Plan means the excess of a Pension Plan’s benefit liabilities (as defined in Section 4001(a)(16) of ERISA) over the current value of such Pension Plan’s assets, determined in accordance with the assumptions used for funding the Plan pursuant to Section 412 of the Code for the applicable plan year.

“Unrestricted Cash Amount” means, as to any Person on any date of determination, the amount of Cash and Cash Equivalents of such Person the use thereof for the application to the payment of Indebtedness is not prohibited by any Requirement of Law or any contract binding on any Borrower or any of its Restricted Subsidiaries.

“Unrestricted Subsidiary” means any subsidiary of the Parent Borrower that is listed on Schedule 5.10 hereto or designated by the Parent Borrower as an Unrestricted Subsidiary after the Closing Date pursuant to Section 5.10.

“US” means the United States of America.

“US Person” means any Person that is incorporated or organized under the laws of the US, any state thereof or the District of Columbia.

“USA PATRIOT Act” means The Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (Title III of Pub. L. No. 107-56 (signed into law October 26, 2001)).

“U.S. Tax Compliance Certificate” has the meaning assigned to such term in Section 2.17(e).

“Weighted Average Life to Maturity” means, when applied to any Indebtedness at any date, the number of years obtained by dividing: (a) the sum of the products obtained by multiplying (i) the amount of each then remaining installment, sinking fund, serial maturity or other required payments of principal, including payment at final maturity, in respect thereof, by (ii) the number of years (calculated to the nearest one-twelfth) that will elapse between such date and the making of such payment; by (b) the then outstanding principal amount of such Indebtedness.

“Wholly-Owned Subsidiary” of any Person means a subsidiary of such Person, 100% of the Capital Stock of which (other than directors’ qualifying shares or shares required by Requirements of Law to be owned by a resident of the relevant jurisdiction) shall be owned by such Person or by one or more Wholly-Owned Subsidiaries of such Person.

“Withdrawal Liability” means the liability to any Multiemployer Plan as the result of a “complete” or “partial” withdrawal by any Borrower or any Restricted Subsidiary (or any ERISA Affiliate of any Borrower) from such Multiemployer Plan, as such terms are defined in Part I of Subtitle E of Title IV of ERISA.

“Withholding Agent” means the Administrative Agent or the Parent Borrower.

“Write-Down and Conversion Powers” means, with respect to any EEA Resolution Authority, the write-down and conversion powers of such EEA Resolution Authority from time to time under the Bail-In Legislation for the applicable EEA Member Country, which write-down and conversion powers are described in the EU Bail-In Legislation Schedule.

Section 1.02. Classification of Loans and Borrowings. For purposes of this Agreement, Loans may be classified and referred to by Class (e.g., a “Term Loan”) or by Type (e.g., an “Adjusted Eurocurrency Rate Loan”) or by Class and Type (e.g., an “Adjusted Eurocurrency Rate Term Loan”). Borrowings also may be classified and referred to by Class (e.g., a “Term Borrowing”) or by Type (e.g., an “Adjusted Eurocurrency Rate Borrowing”) or by Class and Type (e.g., an “Adjusted Eurocurrency Rate Term Borrowing”).

Section 1.03. Terms Generally. The definitions of terms herein shall apply equally to the singular and plural forms of the terms defined. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. The words “include,” “includes” and “including” shall be deemed to be followed by the phrase “without limitation.” The word “will” shall be construed to have the same meaning and effect as the word “shall.” Unless the context requires otherwise (a) any definition of or reference to any agreement, instrument or other document herein or in any Loan Document (including any Loan Document and the Holdco Loan Agreement) shall be construed as referring to such agreement, instrument or other document as from time to time amended, restated, amended and restated, supplemented or otherwise modified or extended, replaced or refinanced (subject to any restrictions or qualifications on such amendments, restatements, amendment and restatements, supplements or modifications or extensions, replacements or refinancings set forth herein), (b) any reference to any Requirement of Law in any Loan Document shall include all statutory and regulatory provisions consolidating, amending, replacing, supplementing, superseding or interpreting such Requirement of Law, (c) any reference herein or in any Loan Document to any Person shall be construed to include such Person’s successors and permitted assigns, (d) the words “herein,” “hereof” and “hereunder,” and words of similar import, when used in any Loan Document, shall be construed to refer to such Loan Document in its entirety and not to any particular provision hereof, (e) all references herein or in any Loan Document to Articles, Sections, clauses, paragraphs, Exhibits and Schedules shall be construed to refer to Articles, Sections, clauses and paragraphs of, and Exhibits and Schedules to, such Loan Document, (f) in the computation of periods of time in any Loan Document from a specified date to a later specified date, the word “from” means “from and including”, the words “to” and “until” mean “to but excluding” and the word “through” means “to and including” and (g) the words “asset” and “property”, when used in any Loan Document, shall be construed to have the same meaning and effect and to refer to any and all tangible and intangible assets and properties, including Cash, securities, accounts and contract rights. For purposes of determining compliance at any time with Sections 6.01, 6.02, 6.04, 6.05, 6.06, 6.07 and 6.09, in the event that any Indebtedness, Lien, Restricted Payment, Restricted Debt Payment, Investment, Disposition or Affiliate transaction, as applicable, meets the criteria of more than one of the categories of transactions or items permitted pursuant to any clause of such Sections 6.01 (other than Sections 6.01(a), (x) and (z)), 6.02 (other than Sections 6.02(a) and (t)), 6.04, 6.05, 6.06, 6.07 and 6.09, the Parent Borrower, in its sole discretion, may, from time to time, classify or reclassify such transaction or item (or portion thereof) and will only be required to include the amount and type of such transaction (or portion thereof) in any one category. It is understood and agreed that any Indebtedness, Lien, Restricted Payment, Restricted Debt Payment, Investment, Disposition and/or Affiliate transaction need not be permitted solely by reference to one category of permitted Indebtedness, Lien, Restricted Payment, Restricted Debt Payment, Investment, Disposition and/or Affiliate transaction under Sections 6.01, 6.02, 6.04, 6.05, 6.06, 6.07 or 6.09, respectively, but may instead be permitted in part under any combination thereof.

Section 1.04. Accounting Terms.

(a) (i) All financial statements to be delivered pursuant to this Agreement shall be prepared in accordance with GAAP as in effect from time to time and, except as otherwise expressly provided herein, all terms of an accounting or financial nature that are used in calculating the Total Leverage Ratio, the First Lien Leverage Ratio, the Interest Coverage Ratio, Consolidated Adjusted EBITDA or Consolidated Total Assets shall be construed and interpreted in accordance with GAAP as in effect from time to time; provided that (A) if any change to GAAP or in the application thereof is implemented after the date of delivery of the financial statements described in Section 3.04(a) and/or there is any change in the functional currency reflected in the financial statements or (B) if the Parent Borrower elects or is required to report under IFRS, the Parent Borrower or the Required Lenders may request to amend the relevant affected provisions hereof (whether or not the request for such amendment is delivered before or after the relevant change or election) to eliminate the effect of such change or election, as the case may be, on the operation of such provisions and (x) the Parent Borrower and the Administrative Agent shall negotiate in good faith to enter into an amendment of the relevant affected provisions (it being understood that no amendment or similar fee shall be payable to the Administrative Agent or any Lender in connection therewith) to preserve the original intent thereof in light of the applicable change or election, as the case may be, (y) the relevant affected provisions shall be interpreted on the basis of GAAP as in effect and applied immediately prior to the applicable change or election, as the case may be, until the request for amendment has been withdrawn by the Parent Borrower or the Required Lenders, as applicable, or this Agreement has been amended as contemplated hereby and (z) after giving effect to any such amendment, the term “GAAP” as used herein shall be deemed to be a reference to IFRS (as in effect in the US); it being understood and agreed that the Parent Borrower may not convert to GAAP after exercising its right or complying with any requirement to report under IFRS in accordance with clause (B) above.

(ii) All terms of an accounting or financial nature used herein shall be construed, and all computations of amounts and ratios referred to herein shall be made without giving effect to (A) any election under Accounting Standards Codification 825-10-25 (previously referred to as Statement of Financial Accounting Standards 159) (or any other Accounting Standards Codification, International Accounting Standard or Financial Accounting Standard having a similar result or effect) to value any Indebtedness or other liabilities of the Parent Borrower or any subsidiary at “fair value,” as defined therein and (B) any treatment of Indebtedness in respect of convertible debt instruments under Accounting Standards Codification 470-20 (or any other Accounting Standards Codification, International Accounting Standard or Financial Accounting Standard having a similar result or effect) to value any such Indebtedness in a reduced or bifurcated manner as described therein, and such Indebtedness shall at all times be valued at the full stated principal amount thereof.

(b) Notwithstanding anything to the contrary contained in paragraph (a) above or in the definition of “Capital Lease,” in the event of an accounting change requiring all leases to be capitalized, only those leases (assuming for purposes hereof that such leases were in existence on the date hereof) that would constitute Capital Leases in conformity with GAAP on the date hereof shall be considered Capital Leases, and all calculations and deliverables under this Agreement or any other Loan Document shall be made or delivered, as applicable, in accordance therewith.

Section 1.05. Effectuation of Transactions. Each of the representations and warranties contained in this Agreement (and all corresponding definitions) is made after giving effect to the Transactions, unless the context otherwise requires.

Section 1.06. Timing of Payment of Performance. When payment of any obligation or the performance of any covenant, duty or obligation is stated to be due or performance required on a day which is not a Business Day, the date of such payment (other than as described in the definition of “Interest Period”) or performance shall extend to the immediately succeeding Business Day, and, in the case of any payment accruing interest, interest thereon shall be payable for the period of such extension.

Section 1.07. Times of Day. Unless otherwise specified herein, all references herein to times of day shall be references to New York City time (daylight or standard, as applicable).

Section 1.08. Currency Equivalents Generally; Exchange Rate.

(a) For purposes of any determination under Article 5, Article 6 (other than Section 6.12(a) and the calculation of compliance with any financial ratio for purposes of taking any action hereunder) or Article 7 with respect to the amount of any Indebtedness, Lien, Restricted Payment, Restricted Debt Payment, Investment, Disposition, Sale and Lease-Back Transaction, Affiliate transaction or other transaction, event or circumstance, or any determination under any other provision of this Agreement (any of the foregoing, a “specified transaction”) in a currency other than Dollars, (i) the equivalent amount in Dollars of a specified transaction in a currency other than Dollars shall be calculated based on the rate of exchange quoted by the Bloomberg Foreign Exchange Rates & World Currencies Page (or any successor page thereto, or in the event such rate does not appear on any Bloomberg Page, by reference to such other publicly available service for displaying exchange rates as may be agreed upon by the Administrative Agent and the Parent Borrower) for such foreign currency, as in effect at 11:00 a.m. (London time) on the date of such specified transaction (which, in the case of any Restricted Payment, shall be deemed to be the date of the declaration thereof and, in the case of the incurrence of Indebtedness, shall be deemed to be on the date first committed); provided, that if any Indebtedness is incurred (and, if applicable, associated Lien granted) to refinance or replace other Indebtedness denominated in a currency other than Dollars, and the relevant refinancing or replacement would cause the applicable Dollar-denominated restriction to be exceeded if calculated at the relevant currency exchange rate in effect on the date of such refinancing or replacement, such Dollar-denominated restriction shall be deemed not to have been exceeded so long as the principal amount of such refinancing or replacement Indebtedness (and, if applicable, associated Lien granted) does not exceed an amount sufficient to repay the principal amount of such Indebtedness being refinanced or replaced, except by an amount equal to (x) unpaid accrued interest and premiums (including premiums) thereon plus other reasonable and customary fees and expenses (including upfront fees and original issue discount) incurred in connection with such refinancing or replacement, (y) any existing commitments unutilized thereunder and (z) additional amounts permitted to be incurred under Section 6.01 and (i) for the avoidance of doubt, no Default or Event of Default shall be deemed to have occurred solely as a result of a change in the rate of currency exchange occurring after the time of any specified transaction so long as such specified transaction was permitted at the time incurred, made, acquired, committed, entered or declared as set forth in clause (i). For purposes of Section 6.12(a) and the calculation of compliance with any financial ratio for purposes of taking any action hereunder (including for purposes of calculating compliance with the Incremental Cap), on any relevant date of determination, amounts denominated in currencies other than Dollars shall be translated into Dollars at the applicable currency exchange rate used in preparing the financial statements delivered pursuant to Section 5.01(a) or (b) (or, prior to the first such delivery, the financial statements referred to in Section 3.04), as applicable, for the relevant Test Period and will, with respect to any Indebtedness, reflect the currency translation effects, determined in accordance with GAAP, of any Hedge Agreement permitted hereunder in respect of currency exchange risks with respect to the applicable currency in effect on the date of determination for the Dollar equivalent amount of such Indebtedness.

(b) Each provision of this Agreement shall be subject to such reasonable changes of construction as the Administrative Agent may from time to time specify with the Parent Borrower's consent to appropriately reflect a change in currency of any country and any relevant market convention or practice relating to such change in currency.

Section 1.09. Cashless Rollovers. Notwithstanding anything to the contrary contained in this Agreement or in any other Loan Document, to the extent that any Lender extends the maturity date of, or replaces, renews or refinances, any of its then-existing Loans with Incremental Loans, Replacement Term Loans, Loans in connection with any Replacement Revolving Facility, Extended Term Loans, Extended Revolving Loans or loans incurred under a new credit facility, in each case, to the extent such extension, replacement, renewal or refinancing is effected by means of a "cashless roll" by such Lender pursuant to settlement mechanisms approved by the Parent Borrower, the Administrative Agent and such Lender, such extension, replacement, renewal or refinancing shall be deemed to comply with any requirement hereunder or any other Loan Document that such payment be made "in Dollars", "in immediately available funds", "in Cash" or any other similar requirement.

Section 1.10. Certain Calculations and Tests.

(a) Notwithstanding anything to the contrary herein, but subject to Sections 1.10(b) and (c) and Section 1.11, all financial ratios and tests (including the Total Leverage Ratio, the First Lien Leverage Ratio, the Interest Coverage Ratio and the amount of Consolidated Total Assets and Consolidated Adjusted EBITDA) contained in this Agreement that are calculated with respect to any Test Period during which the Transaction or any Subject Transaction occurs shall be calculated with respect to such Test Period and the Transaction and each such Subject Transaction on a Pro Forma Basis. Further, if since the beginning of any such Test Period and on or prior to the date of any required calculation of any financial ratio or test (i) any Subject Transaction has occurred or (ii) any Person that subsequently became a Restricted Subsidiary or was merged, amalgamated or consolidated with or into any Borrower or any of its Restricted Subsidiaries or any joint venture since the beginning of such Test Period has consummated any Subject Transaction, then, in each case, any applicable financial ratio or test shall be calculated on a Pro Forma Basis for such Test Period as if such Subject Transaction had occurred at the beginning of the applicable Test Period (it being understood, for the avoidance of doubt, that solely for purposes of (x) calculating compliance with Section 6.12(a) and (y) calculating the First Lien Leverage Ratio for purposes of the definitions of "Applicable Rate" and "Commitment Fee Rate", in each case, no Subject Transaction occurring after the end of the relevant Test Period shall be taken into account).

(b) For purposes of determining the permissibility of any action, change, transaction or event that requires a calculation of any financial ratio or test (including, without limitation, Section 6.12(a), any First Lien Leverage Ratio test, any Total Leverage Ratio test and/or any Interest Coverage Ratio test, the amount of Consolidated Adjusted EBITDA and/or Consolidated Total Assets), such financial ratio or test shall be calculated at the time such action is taken (subject to Section 1.11), such change is made, such transaction is consummated or such event occurs, as the case may be, and no Default or Event of Default shall be deemed to have occurred solely as a result of a change in such financial ratio or test occurring after the time such action is taken, such change is made, such transaction is consummated or such event occurs, as the case may be.

(c) Notwithstanding anything to the contrary herein, with respect to any amounts incurred or transactions entered into (or consummated) in reliance on a provision of this Agreement (including, without limitation, Section 6.01(x)) that does not require compliance with a financial ratio or test (including, without limitation, Section 6.12(a), any First Lien Leverage Ratio test, any Total Leverage Ratio test and/or any Interest Coverage Ratio test) (any such amounts, the “Fixed Amounts”) substantially concurrently with any amounts incurred or transactions entered into (or consummated) in reliance on a provision of this Agreement that requires compliance with a financial ratio or test (including, without limitation, Section 6.12(a), any First Lien Leverage Ratio test, any Total Leverage Ratio test and/or any Interest Coverage Ratio test) (any such amounts, the “Incurrence-Based Amounts”), it is understood and agreed that the Fixed Amounts shall be disregarded in the calculation of the financial ratio or test applicable to the Incurrence-Based Amounts.

Section 1.11. Limited Condition Transactions.

In connection with any action being taken solely in connection with a Limited Condition Transaction (including any contemplated incurrence or assumption of Indebtedness in connection therewith), for purposes of:

(a) determining compliance with any provision of this Agreement (other than Section 6.12(a)) that requires the calculation of the Interest Coverage Ratio, Total Leverage Ratio or the First Lien Leverage Ratio;

(b) determining the accuracy of representations and warranties and/or whether a Default or Event of Default shall have occurred and be continuing (or any subset of Defaults or Events of Default); or

(c) testing availability under baskets set forth in this Agreement (including baskets measured as a percentage of Consolidated Adjusted EBITDA or by reference to the Available Amount or the Available Excluded Contribution Amount);

in each case, at the option of the Parent Borrower (the Parent Borrower’s election to exercise such option in connection with any Limited Condition Transaction, an “LCA Election”), with such option to be exercised on or prior to the date of execution of the definitive agreements with respect to such Limited Condition Transaction, the date of determination of whether any such action is permitted hereunder, shall be deemed to be the date the definitive agreements with respect to such Limited Condition Transaction are entered into (the “LCA Test Date”), and if, after giving Pro Forma Effect to the Limited Condition Transaction and the other transactions to be entered into in connection therewith (including any incurrence of Indebtedness or Liens and the use of proceeds thereof) as if they had occurred at the beginning of the most recent Test Period ending prior to the LCA Test Date, the Parent Borrower could have taken such action on the relevant LCA Test Date in compliance with such ratio or basket, such ratio or basket shall be deemed to have been complied with.

For the avoidance of doubt, if the Parent Borrower has made an LCA Election and any of the ratios or baskets for which compliance was determined or tested as of the LCA Test Date are exceeded as a result of fluctuations in any such ratio or basket, including due to fluctuations in Consolidated Adjusted EBITDA of the Parent Borrower or the Person subject to such Limited Condition Transaction, at or prior to the consummation of the relevant transaction or action, such baskets or ratios will not be deemed to have been exceeded as a result of such fluctuations; provided however, if any ratios improve or baskets increase as a result of such fluctuations, such improved ratios or baskets may be utilized. If the Parent Borrower has made an LCA Election for any Limited Condition Transaction, then, in connection with any subsequent calculation of the ratios or baskets on or following the relevant LCA Test Date and prior to the earlier of (i) the date on which such Limited Condition Transaction is consummated or (ii) the date that the definitive agreement for such Limited Condition Transaction is terminated or expires without consummation of such Limited Condition Transaction, any such ratio or basket shall be calculated on a Pro Forma Basis assuming such Limited Condition Transaction and other transactions in connection therewith (including any incurrence of Indebtedness or Liens and the use of proceeds thereof) have been consummated.

ARTICLE 2 THE CREDITS

Section 2.01. Commitments.

(a) Subject to the terms and conditions set forth herein, (i) each Initial Term Lender severally, and not jointly, agrees to make Initial Term Loans to the Initial Borrower on the Closing Date in Dollars in a principal amount not to exceed its Initial Term Loan Commitment and (ii) each Revolving Lender severally, and not jointly, agrees to make Revolving Loans to any Borrower in Dollars at any time and from time to time on and after the Closing Date, and until the earlier of the Initial Revolving Credit Maturity Date and the termination of the Initial Revolving Credit Commitment of such Initial Revolving Lender in accordance with the terms hereof; provided that, after giving effect to any Borrowing of Initial Revolving Loans, the Outstanding Amount of such Initial Revolving Lender's Initial Revolving Credit Exposure shall not exceed such Initial Revolving Lender's Initial Revolving Credit Commitment. Within the foregoing limits and subject to the terms, conditions and limitations set forth herein, the Borrowers may borrow, pay or prepay and reborrow Revolving Loans. Amounts paid or prepaid in respect of the Initial Term Loans may not be reborrowed.

(b) Subject to the terms and conditions of this Agreement and any applicable Refinancing Amendment, Extension Amendment or Incremental Facility Agreement, each Lender with an Additional Commitment of a given Class, severally and not jointly, agrees to make Additional Loans of such Class to the Borrowers, which Loans shall not exceed for any such Lender at the time of any incurrence thereof the Additional Commitment of such Class of such Lender as set forth in the applicable Refinancing Amendment, Extension Amendment or Incremental Facility Agreement.

Section 2.02. Loans and Borrowings.

(a) Each Loan shall be made as part of a Borrowing consisting of Loans of the same Class and Type made by the Lenders ratably in accordance with their respective Applicable Percentages of the applicable Class.

(b) Subject to Section 2.01 and Section 2.14, each Borrowing shall be comprised entirely of ABR Loans or Adjusted Eurocurrency Rate Loans. Each Lender at its option may make any Adjusted Eurocurrency Rate Loan by causing any domestic or foreign branch or Affiliate of such Lender to make such Loan; provided that (i) any exercise of such option shall not affect the obligation of the Borrowers to repay such Loan in accordance with the terms of this Agreement, (ii) such Adjusted Eurocurrency Rate Loan shall be deemed to have been made and held by such Lender, and the obligation of the Borrowers to repay such Adjusted Eurocurrency Rate Loan shall nevertheless be to such Lender for the account of such domestic or foreign branch or Affiliate of such Lender and (iii) in exercising such option, such Lender shall use reasonable efforts to minimize increased costs to the Borrowers resulting therefrom (which obligation of such Lender shall not require it to take, or refrain from taking, actions that it determines would result in increased costs for which it will not be compensated hereunder or that it otherwise determines would be disadvantageous to it and in the event of such request for costs for which compensation is provided under this Agreement, the provisions of Section 2.15 shall apply); provided, further, that no such domestic or foreign branch or Affiliate of such Lender shall be entitled to any greater indemnification under Section 2.17 in respect of any withholding tax with respect to such Adjusted Eurocurrency Rate Loan than that to which the applicable Lender was entitled on the date on which such Loan was made (except in connection with any indemnification entitlement arising as a result of any Change in Law after the date on which such Loan was made).

(c) At the commencement of each Interest Period for any Adjusted Eurocurrency Rate Borrowing, such Adjusted Eurocurrency Rate Borrowing shall comprise an aggregate principal amount that is an integral multiple of \$100,000 and not less than \$1,000,000. Each ABR Borrowing when made shall be in a minimum principal amount of \$100,000; provided that an ABR Revolving Borrowing may be made in a lesser aggregate principal amount that is (i) equal to the entire aggregate unused Revolving Credit Commitments or (ii) required to finance the reimbursement of an LC Disbursement as contemplated by Section 2.05(e). Borrowings of more than one Type and Class may be outstanding at the same time; provided that there shall not at any time be more than a total of ten (10) different Interest Periods in effect for Adjusted Eurocurrency Rate Borrowings at any time outstanding (or such greater number of different Interest Periods as the Administrative Agent may agree from time to time).

(d) Notwithstanding any other provision of this Agreement, the Borrowers shall not, nor shall any Borrower be entitled to, request, or to elect to convert or continue, any Borrowing if the Interest Period requested with respect thereto would end after the Maturity Date applicable to the relevant Loans.

Section 2.03. Requests for Borrowings. (a) Each Term Borrowing, each Revolving Borrowing, each conversion of Term Loans or Revolving Loans from one Type to the other and each continuation of Adjusted Eurocurrency Rate Loans shall be made upon notice by the applicable Borrower to the Administrative Agent. Each such notice is irrevocable and must be in the form of a written Borrowing Request or Interest Election Request, as the case may be, appropriately completed and signed by a Responsible Officer of the Parent Borrower or by telephone (and promptly confirmed by delivery of a written Borrowing Request or Interest Election Request, appropriately completed and signed by a Responsible Officer of the Parent Borrower) and must be received by the Administrative Agent (by hand delivery, fax or other electronic transmission (including “.pdf” or “.tif”)) not later than (i) 1:00 p.m. three Business Days prior to the requested day of any Borrowing or continuation of Adjusted Eurocurrency Rate Loans (or one Business Day in the case of any Adjusted Eurocurrency Rate Borrowing to be made on the Closing Date) or any conversion of ABR Loans to Adjusted Eurocurrency Rate Loans and (ii) 12:00 p.m. on the requested date of any Borrowing or conversion to ABR Loans (or, in each case, such later time as is acceptable to the Administrative Agent); provided, however, that if the applicable Borrower wishes to request Adjusted Eurocurrency Rate Loans having an Interest Period of other than one, two, three or six months in duration as provided in the definition of “Interest Period,” (A) the applicable notice from the Parent Borrower must be received by the Administrative Agent not later than 1:00 p.m. four Business Days prior to the requested date of the relevant Borrowing, conversion or continuation (or such later time as is acceptable to the Administrative Agent), whereupon the Administrative Agent shall give prompt notice to the appropriate Lenders of such request and determine whether the requested Interest Period is available to them and (B) not later than 12:00 p.m. three Business Days before the requested date of the relevant Borrowing, conversion or continuation, the Administrative Agent shall notify the Parent Borrower whether or not the requested Interest Period is available to the appropriate Lenders.

(b) If no election as to the Type of Borrowing is specified, then the requested Borrowing shall be an ABR Borrowing. If no Interest Period is specified with respect to any requested Adjusted Eurocurrency Rate Borrowing then the applicable Borrower shall be deemed to have selected an Interest Period of one month's duration. The Administrative Agent shall advise each Lender of the details and amount of any Loan to be made as part of the requested Borrowing (i) in the case of any ABR Borrowing, on the same Business Day of receipt of a Borrowing Request in accordance with this Section or (ii) in the case of any Adjusted Eurocurrency Rate Borrowing, no later than one Business Day following receipt of a Borrowing Request in accordance with this Section.

Section 2.04. [Reserved].

Section 2.05. Letters of Credit.

(a) General. Subject to the terms and conditions set forth herein, (i) each Issuing Bank agrees, in each case in reliance upon the agreements of the other Revolving Lenders set forth in this Section 2.05, (A) from time to time on any Business Day during the period from the Closing Date to the earlier of (x) the third Business Day prior to the Latest Revolving Credit Maturity Date and (y) the termination of 100% of the Revolving Credit Commitments in accordance with this Agreement, upon the request of the applicable Borrower, to issue Letters of Credit denominated in Dollars issued on sight basis only for the account of the applicable Borrower and/or any Restricted Subsidiary (provided that a Borrower will be the applicant) and to amend or renew Letters of Credit previously issued by it, in accordance with Section 2.05(b), and (B) to honor drafts under the Letters of Credit, and (ii) the Revolving Lenders severally agree to participate in the Letters of Credit issued under this Section 2.05(a) in accordance with the terms of Section 2.05(d).

(b) Notice of Issuance, Amendment, Renewal, Extension; Certain Conditions. To request the issuance of any Letter of Credit, the applicable Borrower shall deliver to the applicable Issuing Bank and the Administrative Agent, at least three Business Days in advance of the requested date of issuance (or such shorter period as is acceptable to the applicable Issuing Bank or, in the case of any issuance to be made on the Closing Date, one Business Day prior to the Closing Date), a Letter of Credit Request. To request an amendment, extension or renewal of an outstanding Letter of Credit (other than any automatic extension of a Letter of Credit permitted under Section 2.05(c)), the applicable Borrower shall submit a Letter of Credit Request to the applicable Issuing Bank (with a copy to the Administrative Agent) at least three Business Days in advance of the requested date of amendment, extension or renewal (or such shorter period as is acceptable to the applicable Issuing Bank). If requested by the applicable Issuing Bank in connection with any request for any Letter of Credit, the applicable Borrower shall also submit a letter of credit application on such Issuing Bank's standard form. In the event of any inconsistency between the terms and conditions of this Agreement and the terms and conditions of any form of letter of credit application or other agreement submitted by the applicable Borrower to, or entered into by the applicable Borrower with, the applicable Issuing Bank relating to any Letter of Credit, the terms and conditions of this Agreement shall control. No Letter of Credit, letter of credit application or other document entered into by the applicable Borrower with any Issuing Bank relating to any Letter of Credit shall contain any representation or warranty, covenant or event of default that is in direct conflict with this Agreement, and all representations and warranties, covenants and events of default set forth therein shall contain standards, qualifications, thresholds and exceptions for materiality or otherwise consistent with those set forth in this Agreement. No Letter of Credit may be issued, amended, extended or renewed unless (and on the issuance, amendment, extension or renewal of each Letter of Credit, the applicable Borrower shall be deemed to represent and warrant that), after giving effect to such issuance, amendment, extension, or renewal, (i) the LC Exposure does not exceed the Letter of Credit Sublimit, (ii) the portion of the L/C Exposure attributable to Letters of Credit issued by any Issuing Bank does not exceed the L/C Commitment of such Issuing Bank (unless otherwise agreed by such Issuing Bank) and (iii) (A) the Revolving Credit Exposure of any Lender does not exceed such Lender's Revolving Credit Commitment, (B) the aggregate amount of the Revolving Credit Exposure does not exceed the aggregate amount of the Revolving Credit Commitments then in effect and (C) if such Letter of Credit has a term that extends beyond the Maturity Date applicable to the Revolving Credit Commitments of any Class, the aggregate amount of the LC Exposure attributable to Letters of Credit expiring after such Maturity Date does not exceed the aggregate amount of the Revolving Credit Commitments then in effect that are scheduled to remain in effect after such Maturity Date.

(c) Expiration Date. No Letter of Credit shall expire later than the earlier of (i) the date that is one year after the date of the issuance of such Letter of Credit and (ii) the date that is three Business Days prior to the Latest Revolving Credit Maturity Date; provided that, any Letter of Credit may provide for the automatic extension thereof for any number of additional periods of up to one year in duration (which additional periods shall not extend beyond the date referred to in the preceding clause (ii)) unless 100% of the then-available face amount thereof is Cash collateralized or backstopped on or before the date on which such Letter of Credit is extended beyond the date referred to in clause (ii), above pursuant to arrangements reasonably satisfactory to the relevant Issuing Bank).

(d) Participations. By the issuance of any Letter of Credit (or an amendment to any Letter of Credit increasing the amount thereof) and without any further action on the part of the applicable Issuing Bank or the Revolving Lenders, the applicable Issuing Bank hereby grants to each Revolving Lender, and each Revolving Lender hereby acquires from such Issuing Bank, a participation in such Letter of Credit equal to such Revolving Lender's Applicable Revolving Credit Percentage of the aggregate amount available to be drawn under such Letter of Credit. In consideration and in furtherance of the foregoing, each Revolving Lender hereby absolutely and unconditionally agrees to pay to the Administrative Agent, for the account of the applicable Issuing Bank, such Lender's Applicable Revolving Credit Percentage of each LC Disbursement made by such Issuing Bank and not reimbursed by the applicable Borrower on the date due as provided in paragraph (e) of this Section 2.05, or of any reimbursement payment that is required to be refunded to the applicable Borrower for any reason. Each Revolving Lender acknowledges and agrees that its obligation to acquire participations pursuant to this paragraph in respect of Letters of Credit is absolute and unconditional and shall not be affected by any circumstance whatsoever, including any amendment, renewal or extension of any Letter of Credit or the occurrence and continuance of any Default or Event of Default or reduction or termination of the Revolving Credit Commitments, and that each such payment shall be made without any offset, abatement, withholding or reduction whatsoever.

(e) Reimbursement.

(i) If the applicable Issuing Bank makes any LC Disbursement in respect of a Letter of Credit, the applicable Borrower shall reimburse such LC Disbursement by paying to such Issuing Bank an amount equal to the amount of such LC Disbursement not later than 1:00 p.m. two Business Days immediately following the date on which the applicable Borrower receives notice of such LC Disbursement under paragraph (g) of this Section 2.05; provided, that the applicable Borrower may, without satisfying the conditions to Borrowing set forth herein, request in accordance with Section 2.03 that such payment be financed with an ABR Revolving Loan (a "Letter of Credit Reimbursement Loan") in an equivalent amount and, to the extent so financed, the obligation of the applicable Borrower to make such payment shall be discharged and replaced by the resulting Revolving Loan. The relevant Issuing Bank shall immediately notify the Administrative Agent of any payment made by the applicable Borrower in accordance with the terms of the preceding sentence (without giving effect to the proviso therein). If the applicable Borrower fails to make such payment when due, the Administrative Agent shall notify each Revolving Lender of the applicable LC Disbursement, the payment then due from the applicable Borrower in respect thereof and such Revolving Lender's Applicable Revolving Credit Percentage thereof. No later than the date set forth in such notice, each Revolving Lender shall pay to the Administrative Agent its Applicable Revolving Credit Percentage of the payment then due from the applicable Borrower, in the same manner as provided in Section 2.07 with respect to Loans made by such Revolving Lender (and Section 2.07 shall apply, *mutatis mutandis*, to the payment obligations of the Revolving Lenders), and the Administrative Agent shall promptly pay to the applicable Issuing Bank the amounts so received by it from the Revolving Lenders. In the event that the Revolving Lenders have made payments to the Administrative Agent pursuant to this paragraph to reimburse any Issuing Bank for the amount of any LC Disbursement, if the Administrative Agent receives any payment in respect of any LC Disbursement (or interest thereon) (whether directly from the applicable Borrower or otherwise (including proceeds of cash collateral applied thereto) the Administrative Agent shall promptly distribute such payment to the Revolving Lenders as their interests may appear.

(ii) If any Revolving Lender fails to make available to the Administrative Agent for the account of the applicable Issuing Bank any amount required to be paid by such Revolving Lender pursuant to the foregoing provisions of this Section 2.05(e) by the time specified therein, such Issuing Bank shall be entitled to recover from such Revolving Lender (acting through the Administrative Agent), on demand, such amount with interest thereon for the period from the date such payment is required to the date on which such payment is immediately available to such Issuing Bank at a rate per annum equal to the greater of Federal Funds Effective Rate from time to time in effect and a rate determined by the Administrative Agent in accordance with banking industry rules on interbank compensation. A certificate of the applicable Issuing Bank submitted to any Revolving Lender (through the Administrative Agent) with respect to any amounts owing under this clause (ii) shall be conclusive absent manifest error.

(f) Obligations Absolute. The obligation of the applicable Borrower to reimburse LC Disbursements as provided in paragraph (e) of this Section 2.05 shall be absolute and unconditional and irrespective of (i) any lack of validity or enforceability of any Letter of Credit or this Agreement, or any term or provision herein or therein, (ii) any draft or other document presented under any Letter of Credit proving to be forged, fraudulent or invalid in any respect or any statement therein being untrue or inaccurate in any respect, (iii) payment by the applicable Issuing Bank under any Letter of Credit against presentation of a draft or other document that does not comply with the terms of such Letter of Credit or (iv) any other event or circumstance whatsoever, whether or not similar to any of the foregoing, that might, but for the provisions of this Section, constitute a legal or equitable discharge of, or provide a right of setoff against, the obligations of the applicable Borrower hereunder. Neither the Administrative Agent, the Revolving Lenders nor any Issuing Bank, nor any of their respective Related Parties, shall have any liability or responsibility by reason of or in connection with the issuance, amendment or transfer of any Letter of Credit or any payment or failure to make any payment thereunder (irrespective of any of the circumstances referred to in the preceding sentence), or any error, omission, interruption, loss or delay in transmission or delivery of any draft, notice or other communication under or relating to any Letter of Credit (including any document required to make a drawing thereunder), any error in interpretation of technical terms or any consequence arising from causes beyond the control of such Issuing Bank; provided that the foregoing shall not be construed to excuse such Issuing Bank from liability to the applicable Borrower to the extent of any direct damages suffered by the applicable Borrower that are caused by such Issuing Bank's failure to exercise care when determining whether drafts and other documents presented under a Letter of Credit comply with the terms thereof. The parties hereto expressly agree that, in the absence of gross negligence, bad faith or willful misconduct on the part of applicable Issuing Bank (as finally determined by a court of competent jurisdiction), such Issuing Bank shall be deemed to have exercised care in each such determination. In furtherance of the foregoing and without limiting the generality thereof, the parties agree that, with respect to documents presented which appear on their face to be in substantial compliance with the terms of any Letter of Credit, the applicable Issuing Bank may, in its sole discretion, either accept and make payment upon such documents without responsibility for further investigation, regardless of any notice or information to the contrary, or refuse to accept and make payment upon such documents if such documents are not in strict compliance with the terms of such Letter of Credit.

(g) Disbursement Procedures. The applicable Issuing Bank shall, promptly following its receipt thereof, examine all documents purporting to represent a demand for payment under a Letter of Credit. Such Issuing Bank shall promptly notify the Administrative Agent and the applicable Borrower by telephone (confirmed by electronic means) upon any LC Disbursement thereunder; provided that no delay in giving such notice shall relieve the applicable Borrower of its obligation to reimburse such Issuing Bank and the Revolving Lenders with respect to any such LC Disbursement within the time period prescribed in Section 2.05(e).

(h) Interim Interest. If any Issuing Bank makes any LC Disbursement, unless the applicable Borrower reimburses such LC Disbursement in full on the date such LC Disbursement has been made, the unpaid amount thereof shall bear interest, for each day from and including the date such LC Disbursement is made to but excluding the date that the applicable Borrower reimburses such LC Disbursement (or the date on which such LC Disbursement is reimbursed with the proceeds of Loans, as applicable), at the rate per annum then applicable to Initial Revolving Loans that are ABR Loans (or, to the extent of the participation in such LC Disbursement by any Revolving Lender of another Class, the rate per annum then applicable to the Revolving Loans that are ABR Loans of such other Class); provided that if the applicable Borrower fails to reimburse such LC Disbursement when due pursuant to paragraph (e) of this Section 2.05, Section 2.13(c) shall apply. Interest accrued pursuant to this paragraph shall be for the account of the applicable Issuing Bank, except that interest accrued on and after the date of payment by any Revolving Lender pursuant to paragraph (e) of this Section 2.05 to reimburse such Issuing Bank shall be for the account of such Revolving Lender to the extent of such payment and shall be payable on the date on which the applicable Borrower is required to reimburse the applicable LC Disbursement in full (and, thereafter, on demand).

(i) Replacement or Resignation of an Issuing Bank or Designation of New Issuing Banks.

(i) Any Issuing Bank may be replaced with the consent of the Administrative Agent (not to be unreasonably withheld or delayed) and the applicable Borrower at any time by written agreement among the applicable Borrower, the Administrative Agent and the successor Issuing Bank. The Administrative Agent shall notify the Revolving Lenders of any such replacement of an Issuing Bank. At the time any such replacement becomes effective, the applicable Borrower shall pay all unpaid fees accrued for the account of the replaced Issuing Bank pursuant to Section 2.12(b)(ii). From and after the effective date of any such replacement, (i) the successor Issuing Bank shall have all the rights and obligations of the replaced Issuing Bank under this Agreement with respect to Letters of Credit to be issued thereafter and (ii) references herein to the term "Issuing Bank" shall be deemed to refer to such successor or to any previous Issuing Bank, or to such successor and all previous Issuing Banks, as the context shall require. After the replacement of any Issuing Bank hereunder, the replaced Issuing Bank shall remain a party hereto and shall continue to have all the rights and obligations of an Issuing Bank under this Agreement with respect to Letters of Credit issued by it prior to such replacement, but shall not be required to issue additional Letters of Credit.

(ii) The Parent Borrower may, at any time and from time to time with the consent of the Administrative Agent (which consent shall not be unreasonably withheld or delayed) and the relevant Revolving Lender, designate one or more additional Revolving Lenders to act as an issuing bank under the terms of this Agreement. Any Revolving Lender designated as an issuing bank pursuant to this paragraph (ii) who agrees in writing to such designation shall be deemed to be an “Issuing Bank” (in addition to being a Revolving Lender) in respect of Letters of Credit issued or to be issued by such Revolving Lender, and, with respect to such Letters of Credit, such term shall thereafter apply to the other Issuing Bank and such Revolving Lender.

(iii) Notwithstanding anything to the contrary contained herein, any Issuing Bank may, upon 15 days’ prior written notice to the Parent Borrower, each other Issuing Bank and the Lenders, resign as Issuing Bank, which resignation shall be effective as of the date referenced in such notice (but in no event less than 15 days after the delivery of such written notice); it being understood that in the event of any such resignation, any Letter of Credit then outstanding shall remain outstanding (irrespective of whether any amount has been drawn at such time). In the event of any such resignation as an Issuing Bank, the Parent Borrower shall be entitled to appoint any Revolving Lender that accepts such appointment in writing as successor Issuing Bank. Upon the acceptance of any appointment as Issuing Bank hereunder, the successor Issuing Bank shall thereupon succeed to and become vested with all the rights, powers, privileges and duties of the retiring Issuing Bank, and the retiring Issuing Bank shall be discharged from its duties and obligations in such capacity hereunder. After the resignation of any Issuing Bank hereunder, the resigning Issuing Bank shall remain a party hereto and shall continue to have all rights (including all rights to payments pursuant to Section 2.12(b)) and obligations of an Issuing Bank under this Agreement with respect to Letters of Credit issued by it prior to such resignation, but shall not be required to issue additional Letters of Credit.

(j) Cash Collateralization.

(i) If any Event of Default exists and the Loans have been declared due and payable in accordance with Article 7, then on the Business Day on which the Parent Borrower receives notice from the Administrative Agent at the direction of the Required Revolving Lenders demanding the deposit of Cash collateral pursuant to this paragraph (j), the applicable Borrower shall deposit, in an interest-bearing account with the Administrative Agent, in the name of the Administrative Agent and for the benefit of the Revolving Lenders (the “LC Collateral Account”), an amount in Cash equal to 100% of the LC Exposure as of such date (minus the amount then on deposit in the LC Collateral Account); provided that the obligation to deposit such Cash collateral shall become effective immediately, and such deposit shall become immediately due and payable, without demand or other notice of any kind, upon the occurrence of any Event of Default with respect to the applicable Borrower described in Section 7.01(f) or (g).

(ii) Any such deposit under clause (i) above shall be held by the Administrative Agent as collateral for the payment and performance of the Secured Obligations in accordance with the provisions of this paragraph (j). The Administrative Agent shall have exclusive dominion and control, including the exclusive right of withdrawal, over the LC Collateral Account, and the Parent Borrower hereby grants the Administrative Agent, for the benefit of the Secured Parties, a First Priority security interest in the LC Collateral Account. Interest or profits, if any, on such investments shall accumulate in the LC Collateral Account. Moneys in the LC Collateral Account shall be applied by the Administrative Agent to reimburse the applicable Issuing Bank for LC Disbursements for which it has not been reimbursed and, to the extent not so applied, shall be held for the satisfaction of the reimbursement obligations of the applicable Borrower for the LC Exposure at such time or, subject to the consent of the Required Revolving Lenders, applied to satisfy other Secured Obligations. The amount of any Cash Collateral posted in accordance with the terms of this Section 2.05(j) (together with all interest and other earnings with respect thereto, to the extent not applied as aforesaid) shall be returned to the applicable Borrower promptly but in no event later than three Business Days after the Event of Default giving rise to the obligation to do so has been cured or waived (so long as no other Event of Default has occurred and is continuing).

Section 2.06. [Reserved].

Section 2.07. Funding of Borrowings.

(a) Each Lender shall make each Loan to be made by it hereunder not later than (i) 1:00 p.m., in the case of Adjusted Eurocurrency Rate Loans and (ii) 2:00 p.m., in the case of ABR Loans, in each case on the Business Day specified in the applicable Borrowing Request by wire transfer of immediately available funds to the account of the Administrative Agent most recently designated by it for such purpose by notice to the Lenders in an amount equal to such Lender's respective Applicable Percentage. The Administrative Agent will make such Loans available to the applicable Borrower by promptly crediting the amounts so received, in like funds, to the account designated in the relevant Borrowing Request or as otherwise directed by the applicable Borrower; provided that Revolving Loans made to finance the reimbursement of any LC Disbursement as provided in Section 2.05(e) shall be remitted by the Administrative Agent to the applicable Issuing Bank.

(b) Unless the Administrative Agent has received notice from any Lender that such Lender will not make available to the Administrative Agent such Lender's share of any Borrowing prior to the proposed date of such Borrowing, the Administrative Agent may assume that such Lender has made such share available on such date in accordance with paragraph (a) of this Section and may, in reliance upon such assumption, make a corresponding amount available to the applicable Borrower. In such event, if any Lender has not in fact made its share of the applicable Borrowing available to the Administrative Agent, then the applicable Lender and the applicable Borrower severally agree to pay to the Administrative Agent (without duplication) such corresponding amount with interest thereon forthwith on demand for each day from and including the date such amount is made available to the applicable Borrower to but excluding the date of payment to the Administrative Agent, at (i) in the case of such Lender, the greater of the Federal Funds Effective Rate from time to time in effect and a rate determined by the Administrative Agent in accordance with banking industry rules on interbank compensation or (ii) in the case of the applicable Borrower, the interest rate applicable to the Loans comprising such Borrowing at such time. If such Lender pays such amount to the Administrative Agent, then such amount shall constitute such Lender's Loan included in such Borrowing, and the obligation of the applicable Borrower to repay the Administrative Agent the corresponding amount pursuant to this Section 2.07(b) shall cease. If the applicable Borrower pays such amount to the Administrative Agent, the amount so paid shall constitute a repayment of such Borrowing by such amount. Nothing herein shall be deemed to relieve any Lender from its obligation to fulfill its Commitment or to prejudice any rights which the Administrative Agent or the applicable Borrower or any other Loan Party may have against any Lender as a result of any default by such Lender hereunder.

Section 2.08. Type; Interest Elections.

(a) Each Borrowing shall initially be of the Type specified in the applicable Borrowing Request and, in the case of any Adjusted Eurocurrency Rate Borrowing, shall have the initial Interest Period specified in such Borrowing Request. Thereafter, the applicable Borrower may elect to convert any Borrowing to a Borrowing of a different Type or to continue such Borrowing and, in the case of an Adjusted Eurocurrency Rate Borrowing, may elect Interest Periods therefor, all as provided in this Section. The applicable Borrower may elect different options with respect to different portions of the affected Borrowing, in which case each such portion shall be allocated ratably among the Lenders based upon their respective Applicable Percentages, and the Loans comprising each such portion shall be considered a separate Borrowing.

(b) To make an election pursuant to this Section 2.08, the applicable Borrower shall deliver an Interest Election Request, in accordance with the terms of Section 2.03(a).

(c) Promptly following receipt of each Interest Election Request, the Administrative Agent shall advise each applicable Lender of the details thereof and of such Lender's portion of each resulting Borrowing.

(d) If the applicable Borrower fails to deliver a timely Interest Election Request with respect to any Adjusted Eurocurrency Rate Borrowing prior to the end of the Interest Period applicable thereto, then, unless such Borrowing is repaid as provided herein, such Borrowing shall be continued at the end of such Interest Period to an Adjusted Eurocurrency Rate Borrowing with an Interest Period of one month. Notwithstanding anything to the contrary herein, if an Event of Default exists and the Administrative Agent, at the request of the Required Lenders, so notifies the applicable Borrower, then, so long as such Event of Default exists (i) no outstanding Borrowing may be converted to or continued as an Adjusted Eurocurrency Rate Borrowing and (ii) unless repaid, each Adjusted Eurocurrency Rate Borrowing shall be converted to an ABR Borrowing at the end of the then-current Interest Period applicable thereto.

Section 2.09. Termination and Reduction of Commitments.

(a) Unless previously terminated, (i) the Initial Term Commitments on the Closing Date shall automatically terminate upon the making of the Initial Term Loans on the Closing Date, (ii) the Initial Revolving Credit Commitments shall automatically terminate on the Initial Revolving Credit Maturity Date, (iii) the Additional Term Loan Commitments of any Class shall automatically terminate upon the making of the Additional Term Loans of such Class and, if any such Additional Term Loan Commitment is not drawn on the date that such Additional Term Loan Commitment is required to be drawn pursuant to the applicable Incremental Facility Agreement, Extension Amendment or Refinancing Amendment, as applicable, the undrawn amount thereof shall automatically terminate, and (iv) the Additional Revolving Credit Commitments of any Class shall automatically terminate on the Maturity Date specified therefor in the applicable Incremental Facility Agreement, Extension Amendment or Refinancing Amendment, as applicable.

(b) Upon delivery of the notice required by Section 2.09(c), the applicable Borrower may at any time terminate or from time to time reduce the Revolving Credit Commitments of any Class; provided that (i) each reduction of the Revolving Credit Commitments of any Class shall be in an amount that is an integral multiple of \$1,000,000 and not less than \$1,000,000 and (ii) the applicable Borrower shall not terminate or reduce the Revolving Credit Commitments of any Class if, after giving effect to any concurrent prepayment of Revolving Loans, the aggregate amount of the Revolving Credit Exposure attributable to the Revolving Credit Commitments of such Class would exceed the aggregate amount Revolving Credit Commitments of such Class; provided that, after the establishment of any Additional Revolving Credit Commitment, any such termination or reduction of the Revolving Credit Commitments of any Class shall be subject to the provisions set forth in Section 2.22, 2.23 and/or 9.02(c), as applicable.

(c) The applicable Borrower shall notify the Administrative Agent of any election to terminate or reduce any Revolving Credit Commitment under paragraph (b) of this Section 2.09 in writing on or prior to the effective date of such termination or reduction (or such later date to which the Administrative Agent may agree), specifying such election and the effective date thereof. Promptly following receipt of any notice, the Administrative Agent shall advise the Revolving Lenders of each applicable Class of the contents thereof. Each notice delivered by the Parent Borrower pursuant to this Section shall be irrevocable; provided that any such notice may state that it is conditioned upon the effectiveness of other transactions, in which case such notice may be revoked by the Parent Borrower (by notice to the Administrative Agent on or prior to the specified effective date) if such condition is not satisfied. Any termination or reduction of any Revolving Credit Commitment pursuant to this Section 2.09 shall be permanent. Upon any reduction of any Revolving Credit Commitment, the Revolving Credit Commitment of each Revolving Lender of the relevant Class shall be reduced by such Revolving Lender's Applicable Percentage of the amount of such reduction.

Section 2.10. Repayment of Loans; Evidence of Debt.

(a) (i) The Parent Borrower hereby unconditionally promises to repay the outstanding principal amount of the Initial Term Loans to the Administrative Agent for the account of each Term Lender (A) commencing December 2017, on the last Business Day of each March, June, September and December prior to the Initial Term Loan Maturity Date (each such date being referred to as a "Loan Installment Date"), in each case in an amount equal to 0.25% of the original principal amount of the Initial Term Loans (as such payments may be reduced from time to time as a result of the application of prepayments in accordance with Section 2.11 and purchases or assignments in accordance with Section 9.05(g) or increased as a result of any increase in the amount of such Initial Term Loans pursuant to Section 2.22(a)), and (B) on the Initial Term Loan Maturity Date, in an amount equal to the remainder of the principal amount of the Initial Term Loans outstanding on such date, together in each case with accrued and unpaid interest on the principal amount to be paid to but excluding the date of such payment.

(ii) The Parent Borrower shall repay the Additional Term Loans of any Class in such scheduled amortization installments and on such date or dates as shall be specified therefor in the applicable Incremental Facility Agreement, Extension Amendment or Refinancing Amendment (as such payments may be reduced from time to time as a result of the application of prepayments in accordance with Section 2.11 or purchases or assignments in accordance with Section 9.05(g)).

(b) (i) The Borrowers hereby promise to pay in Dollars (A) to the Administrative Agent for the account of each Initial Revolving Lender, the then-unpaid principal amount of the Initial Revolving Loans of such Lender on the Initial Revolving Credit Maturity Date owing by the applicable Borrower and (B) to the Administrative Agent for the account of each Additional Revolving Lender, the then-unpaid principal amount of each Additional Revolving Loan of such Additional Revolving Lender on the Maturity Date applicable thereto.

(ii) On the Maturity Date applicable to the Revolving Credit Commitments of any Class, the applicable Borrowers shall (A) cancel and return outstanding Letters of Credit (or alternatively, with respect to each outstanding Letter of Credit, furnish to the Administrative Agent a Cash deposit (or otherwise provide a "backstop" letter of credit or such other credit support or other arrangements as are reasonably satisfactory to the relevant Issuing Bank(s) pursuant to which such Letters of Credit are no longer subject to this Agreement) equal to 100% of the LC Exposure (minus any amount then on deposit in any Cash collateral account established for the benefit of the relevant Issuing Bank in respect of its LC Exposure) as of such date, in each case to the extent necessary so that, after giving effect thereto, the aggregate amount of the Revolving Credit Exposure attributable to the Revolving Credit Commitments of any other Class shall not exceed the Revolving Credit Commitments of such other Class then in effect and (B) make payment in full in Cash of all accrued and unpaid fees and all reimbursable expenses and other Obligations with respect to the Revolving Facility of the applicable Class then due, together with accrued and unpaid interest (if any) thereon.

(c) Each Lender shall maintain in accordance with its usual practice an account or accounts evidencing the indebtedness of the Borrowers to such Lender resulting from each Loan made by such Lender, including the amounts of principal and interest payable and paid to such Lender from time to time hereunder.

(d) The Administrative Agent shall maintain accounts in which it shall record (i) the amount of each Loan made hereunder, the Class and Type thereof and the Interest Period applicable thereto, (ii) the amount of any principal or interest due and payable or to become due and payable from the Borrowers to each Lender hereunder and (iii) the amount of any sum received by the Administrative Agent hereunder for the accounts of the Lenders or the Issuing Banks and each Lender's or Issuing Bank's share thereof.

(e) The entries made in the accounts maintained pursuant to paragraphs (c) and (d) of this Section shall be prima facie evidence of the existence and amounts of the obligations recorded therein (absent manifest error); provided that the failure of any Lender or the Administrative Agent to maintain such accounts or any manifest error therein shall not in any manner affect the obligation of the Borrowers to repay the Loans in accordance with the terms of this Agreement; provided, further, that in the event of any inconsistency between the accounts maintained by the Administrative Agent pursuant to paragraph (d) of this Section and any Lender's records, the accounts of the Administrative Agent shall govern.

(f) Any Lender may request (through the Administrative Agent) that any Loan made by it be evidenced by a Promissory Note. In such event, the applicable Borrower shall prepare, execute and deliver to such Lender a Promissory Note that is payable to such Lender and its registered assigns; it being understood and agreed that such Lender (and/or its applicable assign) shall be required to return such Promissory Note to the applicable Borrower in accordance with Section 9.05(b)(iii) and upon the occurrence of the Termination Date (or as promptly thereafter as practicable). If any Lender (and/or its applicable assign) loses the original copy of its Promissory Note, it shall execute an affidavit of loss containing an indemnification provision that is reasonably satisfactory to the Parent Borrower. The obligation of each Lender to execute an affidavit of loss containing an indemnification provision that is reasonably satisfactory to the Parent Borrower shall survive the Termination Date.

Section 2.11. Prepayment of Loans.

(a) Optional Prepayments.

(i) Upon prior notice in accordance with paragraph (a)(iii) of this Section 2.11, the Borrowers shall have the right at any time and from time to time to prepay any Borrowing of the Term Loans of any Class in whole or in part without premium or penalty (but subject (A) in the case of Borrowings of Initial Term Loans only, to Section 2.12(e) and (B) if applicable, to Section 2.16). Each such prepayment shall be paid to the Lenders in accordance with their respective Applicable Percentages of the relevant Class.

(ii) Upon prior notice in accordance with paragraph (a)(iii) of this Section 2.11, the Borrowers shall have the right at any time and from time to time to prepay any Borrowing of Revolving Loans of any Class in whole or in part without premium or penalty (but subject to Section 2.16); provided that after the establishment of any Additional Revolving Credit Commitment, any such prepayment of any Borrowing of Revolving Loans of any Class shall be subject to the provisions set forth in Section 2.22, 2.23 and/or 9.02(c), as applicable. Each such prepayment shall be paid to the Revolving Lenders in accordance with their respective Applicable Percentages of the relevant Class.

(iii) The Parent Borrower shall notify the Administrative Agent in writing of any prepayment under this Section 2.11(a) in the case of any prepayment of (i) an Adjusted Eurocurrency Rate Borrowing, not later than 1:00 p.m. three Business Days before the date of prepayment or (ii) an ABR Borrowing, not later than 11:00 a.m. on the date of prepayment (or, in the case of clauses (i) and (ii), such later time as to which the Administrative Agent may agree). Each such notice shall be irrevocable (except as set forth in the proviso to this sentence) and shall specify the prepayment date and the principal amount of each Borrowing or portion thereof to be prepaid; provided that any notice of prepayment delivered by the Parent Borrower may be conditioned upon the effectiveness of other transactions, in which case such notice may be revoked by the Parent Borrower (by notice to the Administrative Agent on or prior to the specified effective date) if such condition is not satisfied. Promptly following receipt of any such notice relating to any Borrowing, the Administrative Agent shall advise the applicable Lenders of the contents thereof. Each partial prepayment of any Borrowing shall be in an amount at least equal to the amount that would be permitted in the case of a Borrowing of the same Type and Class as provided in Section 2.02(c), or such lesser amount that is then outstanding with respect to such Borrowing being repaid (and in increments of \$100,000 in excess thereof or such lesser incremental amount that is then outstanding with respect to such Borrowing being repaid). Each prepayment of Term Loans shall be applied to the Class of Term Loans specified in the applicable prepayment notice, and each prepayment of Term Loans of such Class made pursuant to this Section 2.11(a) shall be applied against the remaining scheduled installments of principal due in respect of the Term Loans of such Class in the manner specified by the Parent Borrower or, in the absence of any such specification on or prior to the date of the relevant optional prepayment, in direct order of maturity.

(b) Mandatory Prepayments.

(i) No later than the tenth Business Day after the date on which the financial statements with respect to each Fiscal Year of the Parent Borrower are required to be delivered pursuant to Section 5.01(b), commencing with the Fiscal Year ending December 31, 2018, the Parent Borrower shall prepay the outstanding principal amount of Subject Loans in an aggregate principal amount equal to (A) the Required Excess Cash Flow Percentage of Excess Cash Flow of the Parent Borrower and its Restricted Subsidiaries for the Excess Cash Flow Period then ended, minus (B) at the option of the Parent Borrower, the sum of (x) the aggregate principal amount of any Term Loans and/or Revolving Loans prepaid pursuant to Section 2.11(a) prior to such date (in the case of any prepayment of Revolving Loans, to the extent accompanied by a permanent reduction in the relevant commitment), (y) the aggregate principal amount of any loans under the Holdco Facility prepaid prior to such date (to the extent the relevant voluntary prepayment is permitted by the terms of this Agreement) and (z) the amount of any reduction in the outstanding amount of any Term Loans resulting from any assignment to or purchase by Holdings, any Borrower or any Restricted Subsidiary in accordance with Section 9.05(g) of this Agreement in connection with any Dutch Auction and based upon the actual amount of cash paid in connection with the relevant assignment or purchase, in each case (I) excluding any such optional prepayment made during such Fiscal Year that reduced the amount required to be prepaid pursuant to this Section 2.11(b)(i) in the prior Fiscal Year and (II) to the extent that the relevant prepayments were not financed with the proceeds of other Indebtedness (other than revolving Indebtedness) of the Parent Borrower or its Restricted Subsidiaries); provided that no prepayment under this Section 2.11(b)(i) shall be required unless and to the extent the amount thereof would exceed \$10,000,000 after giving effect to the calculations and adjustments described in clauses (A) and (B) above.

(ii) No later than the tenth Business Day following the receipt of Net Proceeds in respect of any Prepayment Asset Sale or Net Insurance/Condemnation Proceeds, the Parent Borrower shall apply an amount equal to the Required Asset Sale Percentage of the Net Proceeds or Net Insurance/Condemnation Proceeds received with respect thereto in excess of such threshold (collectively, the “Subject Proceeds”) to prepay the outstanding principal amount of Subject Loans; provided that (A) if prior to the date any such prepayment is required to be made, the Parent Borrower notifies the Administrative Agent of its intention to reinvest the Subject Proceeds in the business of the Parent Borrower or any of its subsidiaries (including any acquisition or other Investment permitted hereunder but not in Cash or Cash Equivalents), then the Parent Borrower shall not be required to make a mandatory prepayment under this clause (ii) in respect of the Subject Proceeds to the extent (x) the Subject Proceeds are so reinvested within 450 days following receipt thereof, or (y) the Parent Borrower or any of its subsidiaries has committed to so reinvest the Subject Proceeds during such 450-day period and the Subject Proceeds are so reinvested within 180 days after the expiration of such 450-day period; it being understood that if the Subject Proceeds have not been so reinvested prior to the expiration of the applicable period, the Parent Borrower shall promptly prepay the Subject Loans with the amount of Subject Proceeds not so reinvested as set forth above (without regard to the immediately preceding proviso) and (B) the obligation to make a prepayment under this Section 2.11(b)(ii) shall only apply if and to the extent the aggregate amount of (I) Net Proceeds resulting from Prepayment Asset Sales and (II) Net Insurance/Condemnation Proceeds, in each case received by the Parent Borrower and/or any Restricted Subsidiaries in any Fiscal Year exceeds \$10,000,000 (with only the amount of Net Proceeds exceeding such amount in such Fiscal Year to be applied to make a prepayment under this Section 2.11(b)(ii)).

(iii) In the event that the Parent Borrower or any of its Restricted Subsidiaries receives Net Proceeds from the issuance or incurrence of Indebtedness by the Parent Borrower or any of its Restricted Subsidiaries (other than Indebtedness that is permitted to be incurred under Section 6.01, except to the extent the relevant Indebtedness constitutes (A) Refinancing Indebtedness incurred to refinance all or a portion of the Term Loans pursuant to Section 6.01(p), (B) Incremental Loans incurred to refinance all or a portion of the Term Loans pursuant to Section 2.22, (C) Replacement Term Loans incurred to refinance all or any portion of the Term Loans in accordance with the requirements of Section 9.02(c) and/or (D) Incremental Equivalent Debt incurred to refinance all or a portion of the Loans in accordance with the requirements of Section 6.01(z)), the Parent Borrower or the relevant Restricted Subsidiary shall, substantially simultaneously with the receipt of such Net Proceeds by the relevant Person (and in any event not later than the next succeeding Business Day), apply an amount equal to 100% of such Net Proceeds to prepay the outstanding principal amount of the relevant Term Loans in accordance with clause (vi) below.

(iv) Notwithstanding anything in this Section 2.11(b), to the contrary:

(A) the Parent Borrower shall not be required to prepay any amount that would otherwise be required to be paid pursuant to Sections 2.11(b)(i) or (ii) above to the extent that the relevant affected Excess Cash Flow is generated by any Foreign Subsidiary or the relevant Subject Proceeds are received by any Foreign Subsidiary, as the case may be, for so long as the repatriation to the Parent Borrower of any such amount would be prohibited, delayed or restricted under any Requirement of Law or conflict with the fiduciary duties of such Foreign Subsidiary's directors, or result in, or could reasonably be expected to result in, a material risk of personal or criminal liability for any officer, director, employee, manager, member of management or consultant of such Foreign Subsidiary (the Parent Borrower hereby agreeing to cause the applicable Foreign Subsidiary to promptly take all commercially reasonable actions available under applicable Requirements of Law to permit such repatriation or to remove such prohibition); it being understood and agreed that if the repatriation of the relevant affected Excess Cash Flow or Subject Proceeds, as the case may be, is permitted under the applicable Requirement of Law and, to the extent applicable, would no longer conflict with the fiduciary duties of such director, or result in, or be reasonably expected to result in, a material risk of personal or criminal liability for the Persons described above, in either case, within 450 days following the end of the applicable Excess Cash Flow Period or the event giving rise to the relevant Subject Proceeds, the relevant Foreign Subsidiary will promptly repatriate the relevant Excess Cash Flow or Subject Proceeds, as the case may be, and the repatriated Excess Cash Flow or Subject Proceeds, as the case may be, will be promptly (and in any event not later than two Business Days after such repatriation) applied (net of additional Taxes payable or reserved against as a result thereof) to the repayment of the Term Loans pursuant to this Section 2.11(b) to the extent required herein (without regard to this clause (iv)),

(B) the Parent Borrower shall not be required to prepay any amount that would otherwise be required to be paid pursuant to Sections 2.11(b)(i) or (ii) to the extent that the relevant Excess Cash Flow is generated by any joint venture or the relevant Subject Proceeds are received by any joint venture, in each case, for so long as the distribution to the Parent Borrower of such Excess Cash Flow or Subject Proceeds would be prohibited, delayed or restricted under the Organizational Documents governing such joint venture; it being understood and agreed that if the relevant prohibition ceases to exist within the 450-day period following the end of the applicable Excess Cash Flow Period or the event giving rise to the relevant Subject Proceeds, the relevant joint venture will promptly distribute the relevant Excess Cash Flow or the relevant Subject Proceeds, as the case may be, and the distributed Excess Cash Flow or Subject Proceeds, as the case may be, will be promptly (and in any event not later than two Business Days after such distribution) applied to the repayment of the Term Loans pursuant to this Section 2.11(b) to the extent required herein (without regard to this clause (iv)), and

(C) if the Parent Borrower determines in good faith that the repatriation to the Parent Borrower as a distribution or dividend of any amounts required to mandatorily prepay the Term Loans pursuant to Sections 2.11(b)(i) or (ii) above that are attributable to any Foreign Subsidiary would result in a material and adverse Tax liability (including any withholding Tax) (such amount, a "Restricted Amount"), the amount that the Parent Borrower shall be required to mandatorily prepay pursuant to Sections 2.11(b)(i) or (ii) above, as applicable, shall be reduced by the Restricted Amount; provided that to the extent that the repatriation of the relevant Subject Proceeds or Excess Cash Flow from the relevant Foreign Subsidiary would no longer have a material and adverse tax consequence within the 450-day period following the event giving rise to the relevant Subject Proceeds or the end of the applicable Excess Cash Flow Period, as the case may be, an amount equal to the Subject Proceeds or Excess Cash Flow, as applicable and to the extent available, not previously applied pursuant to this clause (C), shall be promptly applied to the repayment of the Term Loans pursuant to Section 2.11(b) as otherwise required above.

(v) Any Term Lender may elect, by notice to the Administrative Agent at or prior to the time and in the manner specified by the Administrative Agent, prior to any prepayment of Term Loans required to be made by the Parent Borrower pursuant to this Section 2.11(b), to decline all (but not a portion) of its Applicable Percentage of such prepayment (such declined amounts, the “Declined Proceeds”) in which case such Declined Proceeds may be retained by the Parent Borrower; provided that for the avoidance of doubt, no Lender may reject any prepayment made under Section 2.11(b)(iii) above to the extent that such prepayment is made with the Net Proceeds of (w) Refinancing Indebtedness incurred to refinance all or a portion of the Term Loans pursuant to Section 6.01(p), (x) Incremental Loans incurred to refinance all or a portion of the Term Loans pursuant to Section 2.22, (y) Replacement Term Loans incurred to refinance all or any portion of the Term Loans in accordance with the requirements of Section 9.02(c) and/or (z) Incremental Equivalent Debt incurred to finance all or a portion of the Loans in accordance with the requirements of Section 6.01(z). If any Lender fails to deliver a notice to the Administrative Agent of its election to decline receipt of its Applicable Percentage of any mandatory prepayment within the time frame specified by the Administrative Agent, such failure will be deemed to constitute an acceptance of such Lender’s Applicable Percentage of the total amount of such mandatory prepayment of Term Loans.

(vi) Except as otherwise provided in any Refinancing Amendment, any Incremental Facility Agreement or any Extension Amendment, and subject to the last sentence of this Section 2.11(b)(vi), each prepayment of Term Loans pursuant to this Section 2.11(b) shall be applied ratably to each Class of Term Loans then outstanding irrespective of whether such Term Loan is an ABR Loan or an Adjusted Eurocurrency Rate Loan (provided that any prepayment of Term Loans with the Net Proceeds of any Refinancing Indebtedness and/or any Incremental Term Facility or Replacement Term Loans incurred for the purpose of refinancing or replacing such Term Loans shall be applied to the applicable Class of Term Loans being refinanced or replaced) other than with respect to Lenders holding a Class of Term Loans that have agreed to receive less than a pro rata share of such prepayments. With respect to each Class of Term Loans, all prepayments accepted under this Section 2.11(b) shall be applied against the remaining scheduled installments of principal due in respect of such Class of Term Loans as directed by the Parent Borrower (or, in the absence of direction from the Parent Borrower, to the remaining scheduled amortization payments in respect of such Class of Term Loans in direct order of maturity), and each such prepayment shall be paid to the Term Lenders of such Class in accordance with their respective Applicable Percentages of the applicable Class. If no Lender exercises its right to decline its Applicable Percentage of a given mandatory prepayment made pursuant to Section 2.11(b)(v), then with respect to such prepayment, the amount of such prepayment shall be applied first to the then outstanding Term Loans that are ABR Loans to the full extent thereof before application to the outstanding Term Loans that are Adjusted Eurocurrency Rate Loans in a manner that minimizes the amount of any payments required to be made by the Parent Borrower pursuant to Section 2.16.

(vii) Prepayments made under this Section 2.11(b) shall be (A) accompanied by accrued interest as required by Section 2.13, (B) subject to Section 2.16 and (C) in the case of prepayments of Initial Term Loans under clause (iii) above as part of a Repricing Transaction, subject to Section 2.12(e), but shall otherwise be without premium or penalty.

(viii) Notwithstanding anything herein to the contrary, if, at the time that any prepayment would be required under Section 2.11(b)(i) or (ii), the Parent Borrower or any of its Restricted Subsidiaries is required to repay or repurchase any other Indebtedness (or offer to repay or repurchase such Indebtedness) that is secured on a pari passu basis with any Secured Obligation pursuant to the terms of the documentation governing such Indebtedness with the Subject Proceeds (such Indebtedness required to be so repaid or repurchased (or offered to be repaid or repurchased), the “Other Applicable Indebtedness”), then the relevant Person may apply the Subject Proceeds on a pro rata basis to the prepayment of the Subject Loans and to the repurchase or repayment of the Other Applicable Indebtedness (determined on the basis of the aggregate outstanding principal amount of the Subject Loans and the Other Applicable Indebtedness (or accreted amount if such Other Applicable Indebtedness is issued with original issue discount) at such time); it being understood that (1) the portion of the Subject Proceeds allocated to the Other Applicable Indebtedness shall not exceed the amount of the Subject Proceeds required to be allocated to the Other Applicable Indebtedness pursuant to the terms thereof (and the remaining amount, if any, of the Subject Proceeds shall be allocated to the Subject Loans in accordance with the terms hereof), and the amount of the prepayment of the Subject Loans that would have otherwise been required pursuant to Section 2.11(b) (i) or (ii) shall be reduced accordingly and (2) to the extent the holders of the Other Applicable Indebtedness decline to have such Indebtedness prepaid or repurchased, the declined amount shall promptly (and in any event within ten Business Days after the date of such rejection) be applied to prepay the Subject Loans in accordance with the terms hereof (without giving effect to this Section 2.11(b)(viii)).

Section 2.12. Fees and Premium.

(a) The Parent Borrower agrees to pay to the Administrative Agent for the account of each Initial Revolving Lender (other than any Defaulting Lender) a commitment fee, which shall accrue at a rate equal to the Commitment Fee Rate per annum applicable to the Initial Revolving Credit Commitments on the average daily amount of the unused Initial Revolving Credit Commitment of such Revolving Lender during the period from and including the Closing Date to the date on which such Initial Revolving Lender’s Initial Revolving Credit Commitment terminates. Accrued commitment fees shall be payable in arrears on the last Business Day of each March, June, September and December (commencing with December 2017 for the quarterly period then ended (or, in the case of the payment to be made in December 2017, for the period from the Closing Date to December 31, 2017), and on the date on which the Initial Revolving Credit Commitment terminates. For purposes of calculating the commitment fee only, the Initial Revolving Credit Commitment of any Initial Revolving Lender shall be deemed to be used to the extent of Initial Revolving Loans of such Class of such Initial Revolving Lender and the LC Exposure of such Initial Revolving Lender attributable to its Initial Revolving Credit Commitment of such Class.

(b) The Parent Borrower agrees to pay (i) to the Administrative Agent for the account of each Revolving Lender of any Class a participation fee with respect to its participations in Letters of Credit issued at the request of the Parent Borrower, which shall accrue at the Applicable Rate used to determine the interest rate applicable to Revolving Loans of such Class that are Adjusted Eurocurrency Rate Loans on the daily face amount of such Lender’s LC Exposure that is attributable to its Revolving Credit Commitment of such Class (excluding any portion thereof that is attributable to unreimbursed LC Disbursements), during the period from and including the Closing Date to the earlier of (A) the later of the date on which such Revolving Lender’s Revolving Credit Commitment of such Class terminates and the date on which such Revolving Lender ceases to have any LC Exposure that is attributable to its Revolving Credit Commitment of such Class and (B) the Termination Date, and (ii) to each Issuing Bank, for its own account, a fronting fee, in respect of each Letter of Credit issued by such Issuing Bank for the period from the date of issuance of such Letter of Credit to the earliest of (A) the expiration date of such Letter of Credit, (B) the date on which such Letter of Credit terminates and (C) the Termination Date, computed at a rate equal to the rate agreed by such Issuing Bank and the Parent Borrower (but in any event not to exceed 0.125% per annum) of the daily face amount of such Letter of Credit, as well as such Issuing Bank’s standard fees with respect to the issuance, amendment, renewal or extension of any Letter of Credit or processing of drawings thereunder. Participation fees and fronting fees shall accrue to but excluding the last Business Day of each March, June, September and December and be payable in arrears for the quarterly period then ended on the last Business Day of each March, June, September and December (commencing, if applicable, December 2017 (it being understood that such payment shall be with respect to the period from the Closing Date to December 31, 2017)); provided that all such fees shall be payable on the date on which the Revolving Credit Commitments of the applicable Class terminate. Any fee other than the participation fee and the fronting fee described above that is payable to any Issuing Bank pursuant to this paragraph shall be payable within 30 days after receipt of a written demand (accompanied by reasonable back-up documentation) therefor.

(c) The Parent Borrower agrees to pay to the Administrative Agent, for its own account, the annual administration fee described in the fee letter described in clause (ii) of the definition of “Fee Letters”.

(d) All fees payable hereunder shall be paid on the dates due and in immediately available funds to the Administrative Agent (or to the applicable Issuing Bank, in the case of any fee payable to any Issuing Bank). Fees paid shall not be refundable under any circumstances except as otherwise provided in the Fee Letters. Fees payable hereunder shall accrue through and including the last day of the month immediately preceding the applicable fee payment date.

(e) In the event that, on or prior to the date that is six months after the Closing Date, any Borrower (A) prepays, repays, refinances, substitutes or replaces any Initial Term Loans in connection with a Repricing Transaction (including, for the avoidance of doubt, any prepayment made pursuant to Section 2.11(b)(iii), that constitutes a Repricing Transaction) or (B) effects any amendment, modification or waiver of, or consent under, this Agreement resulting in a Repricing Transaction, the applicable Borrower shall pay to the Administrative Agent, for the ratable account of each applicable Initial Term Lender, (I) in the case of clause (A), a premium of 1.00% of the aggregate principal amount of the Initial Term Loans so prepaid, repaid, refinanced, substituted or replaced and (II) in the case of clause (B), a fee equal to 1.00% of the aggregate principal amount of the Initial Term Loans that are the subject of such Repricing Transaction outstanding immediately prior to such amendment. If, on or prior to the date that is six months after the Closing Date, all or any portion of the Initial Term Loans held by any Term Lender are prepaid, repaid, refinanced, substituted or replaced pursuant to Section 2.19(b)(iv) as a result of, or in connection with, such Term Lender not agreeing or otherwise consenting to any waiver, consent, modification or amendment in connection with a Repricing Transaction, such prepayment, repayment, refinancing, substitution or replacement will be made at 101% of the principal amount so prepaid, repaid, refinanced, substituted or replaced. All such amounts shall be due and payable on the date of effectiveness of such Repricing Transaction in Dollars and in immediately available funds.

(f) Unless otherwise indicated herein, all computations of fees shall be made on the basis of a 360-day year and shall be payable for the actual days elapsed (including the first day but excluding the last day). The determination by the Administrative Agent of the amount of any fee hereunder shall be conclusive and binding for all purposes, absent manifest error.

Section 2.13. Interest.

(a) The Term Loans and Revolving Loans that comprise each ABR Borrowing shall bear interest at the Alternate Base Rate plus the Applicable Rate.

(b) The Term Loans and Revolving Loans that comprise each Adjusted Eurocurrency Rate Borrowing shall bear interest at the Adjusted Eurocurrency Rate for the Interest Period in effect for such Borrowing plus the Applicable Rate.

(c) Notwithstanding the foregoing, upon the occurrence of an Event of Default under Section 7.01(a), for so long as any principal of or interest on any Term Loan, Revolving Loan or any LC Disbursement or any fee payable by the applicable Borrower hereunder is not, in each case, paid or reimbursed, whether at stated maturity, upon acceleration or otherwise, the relevant overdue amount shall bear interest, to the fullest extent permitted by applicable Requirements of Law, after as well as before judgment, at a rate per annum equal to (i) in the case of overdue principal of any Term Loan, Revolving Loan or unreimbursed LC Disbursement, 2.00% plus the rate otherwise applicable to such Term Loan, Revolving Loan or LC Disbursement as provided in the preceding paragraphs of this Section 2.13 or (ii) in the case of any other amount (including overdue interest), 2.00% plus the rate applicable to Revolving Loans that are ABR Loans as provided in paragraph (a) of this Section 2.13; provided that no amount shall accrue pursuant to this Section 2.13(c) on any overdue amount, reimbursement obligation in respect of any LC Disbursement or other amount that is payable to any Defaulting Lender so long as such Lender is a Defaulting Lender.

(d) Accrued interest on each Term Loan or Revolving Loan borrowed by any Borrower shall be payable by the applicable Borrower in arrears on each Interest Payment Date for such Term Loan or Revolving Loan and (i) on the Maturity Date applicable to such Loan and (ii) in the case of a Revolving Loan of any Class, upon termination of the Revolving Credit Commitments of such Class; provided that (A) interest accrued pursuant to paragraph (c) of this Section 2.13 shall be payable on demand, (B) in the event of any repayment or prepayment of any Term Loan or Revolving Loan (other than an ABR Revolving Loan of any Class prior to the termination of the Revolving Credit Commitments of such Class), accrued interest on the principal amount repaid or prepaid shall be payable on the date of such repayment or prepayment and (C) in the event of any conversion of any Adjusted Eurocurrency Rate Loan prior to the end of the current Interest Period therefor, accrued interest on such Loan shall be payable on the effective date of such conversion.

(e) All interest hereunder shall be computed on the basis of a year of 360 days (except that interest computed by reference to the Alternate Base Rate when based on the Prime Rate shall be on the basis of a year of 365 or 366 days, as applicable) and actual number of days elapsed (including the first day but excluding the last day). The applicable Alternate Base Rate and Adjusted Eurocurrency Rate shall be determined by the Administrative Agent, and such determination shall be conclusive absent manifest error. Interest shall accrue on each Loan for the day on which the Loan is made and shall not accrue on a Loan, or any portion thereof, for the day on which the Loan or such portion is paid; provided that any Loan that is repaid on the same day on which it is made shall bear interest for one day.

Section 2.14. Alternate Rate of Interest. If at least two Business Days prior to the commencement of any Interest Period for an Adjusted Eurocurrency Rate Borrowing:

(a) the Administrative Agent determines (which determination shall be conclusive absent manifest error) that adequate and reasonable means do not exist for ascertaining the Adjusted Eurocurrency Rate for such Interest Period or that the London interbank offered rate will not be available during such Interest Period (the Loans impacted by this clause (a), "Impacted Loans"); or

(b) the Administrative Agent is advised by the Required Lenders that the Adjusted Eurocurrency Rate for such Interest Period will not adequately and fairly reflect the cost to such Lenders of making or maintaining their Loans included in such Borrowing for such Interest Period;

then the Administrative Agent shall promptly give notice thereof to the Parent Borrower and the Lenders by telephone or facsimile as promptly as practicable thereafter and, until the Administrative Agent notifies the Parent Borrower and the Lenders that the circumstances giving rise to such notice no longer exist, which the Administrative Agent agrees promptly to do, (i) any Interest Election Request that requests the conversion of any Borrowing to, or continuation of any Borrowing as, an Adjusted Eurocurrency Rate Borrowing shall be ineffective and such Borrowing shall be converted to an ABR Borrowing on the last day of the Interest Period applicable thereto, and (ii) if any Borrowing Request requests an Adjusted Eurocurrency Rate Borrowing, such Borrowing shall be made as an ABR Borrowing.

Notwithstanding the foregoing, if the Administrative Agent has made the determination described in clause (a) of this Section 2.14 and the Borrowers shall so request, the Administrative Agent, the Required Lenders and the Borrowers shall negotiate in good faith to amend the definition of "Screen Rate" and other applicable provisions to identify an appropriate substitute or successor rate comparable to the London interbank offered rate; provided that, until so amended, such Impacted Loans will be handled as otherwise provided pursuant to the terms of this Section 2.14.

Section 2.15. Increased Costs.

(a) If any Change in Law:

(i) imposes, modifies or deems applicable any reserve, special deposit or similar requirement against assets of, deposits with or for the account of, or credit extended by, any Lender (except any such reserve requirement reflected in the Adjusted Eurocurrency Rate) or Issuing Bank;

(ii) subjects any Lender or Issuing Bank to any Taxes (other than (A) Indemnified Taxes, (B) Other Taxes and (C) Excluded Taxes) on or with respect to its loans, letters of credit, commitments, or other obligations, or its deposits, reserves, other liabilities or capital attributable thereto; or

(iii) imposes on any Lender or Issuing Bank or the London interbank market any other condition (other than Taxes) affecting this Agreement or Adjusted Eurocurrency Rate Loans made by any Lender or any Letter of Credit or participation therein;

and the result of any of the foregoing is to increase the cost to the relevant Lender of making or maintaining any Adjusted Eurocurrency Rate Loan (or of maintaining its obligation to make any such Loan) or to increase the cost to such Lender or Issuing Bank of participating in, issuing or maintaining any Letter of Credit or to reduce the amount of any sum received or receivable by such Lender or Issuing Bank hereunder (whether of principal, interest or otherwise) in respect of any Adjusted Eurocurrency Rate Loan or Letter of Credit in an amount deemed by such Lender or Issuing Bank to be material, then, within 30 days after the Parent Borrower's receipt of the certificate contemplated by paragraph (c) of this Section 2.15, the Parent Borrower will pay to such Lender or Issuing Bank, as applicable, such additional amount or amounts as will compensate such Lender or Issuing Bank, as applicable, for such additional costs incurred or reduction suffered; provided that the Parent Borrower shall not be liable for such compensation if (x) the relevant Change in Law occurs on a date prior to the date such Lender becomes a party hereto, (y) such Lender invokes Section 2.20 or (z) in the case of any request for reimbursement under clause (iii), above resulting from a market disruption, (A) the relevant circumstances do not generally affect the banking market or (B) the applicable request has not been made by Lenders constituting Required Lenders.

(b) If any Lender or Issuing Bank determines that any Change in Law regarding liquidity or capital requirements has or would have the effect of reducing the rate of return on such Lender's or Issuing Bank's capital or on the capital of such Lender's or Issuing Bank's holding company, if any, as a consequence of this Agreement or the Loans made by, or participations in Letters of Credit held by, such Lender, or the Letters of Credit issued by such Issuing Bank, to a level below that which such Lender or such Issuing Bank or such Lender's or such Issuing Bank's holding company could have achieved but for such Change in Law other than due to Taxes (taking into consideration such Lender's or Issuing Bank's policies and the policies of such Lender's or such Issuing Bank's holding company with respect to capital adequacy), then within 30 days of receipt by the Parent Borrower of the certificate contemplated by paragraph (c) of this Section 2.15 the Parent Borrower will pay to such Lender or such Issuing Bank, as applicable, such additional amount or amounts as will compensate such Lender or such Issuing Bank or such Lender's or such Issuing Bank's holding company for any such reduction suffered.

(c) Any Lender or Issuing Bank requesting compensation under this Section 2.15 shall be required to deliver a certificate to the Parent Borrower that (i) sets forth the amount or amounts necessary to compensate such Lender or Issuing Bank or the holding company thereof, as applicable, as specified in paragraph (a) or (b) of this Section 2.15, (ii) sets forth, in reasonable detail, the manner in which such amount or amounts were determined and (iii) certifies that such Lender or Issuing Bank is generally charging such amounts to similarly situated borrowers, which certificate shall be conclusive absent manifest error.

(d) Failure or delay on the part of any Lender or Issuing Bank to demand compensation pursuant to this Section 2.15 shall not constitute a waiver of such Lender's or Issuing Bank's right to demand such compensation; provided, however that the Parent Borrower shall not be required to compensate any Lender or any Issuing Bank pursuant to this Section for any increased costs or reductions incurred more than 180 days prior to the date that such Lender or Issuing Bank notifies the Parent Borrower of the Change in Law giving rise to such increased costs or reductions and of such Lender's or Issuing Bank's intention to claim compensation therefor; provided, further, that if the Change in Law giving rise to such increased costs or reductions is retroactive, then the 180-day period referred to above shall be extended to include the period of retroactive effect thereof.

Section 2.16. Break Funding Payments. In the event of (a) the conversion or prepayment of any principal of any Adjusted Eurocurrency Rate Loan other than on the last day of an Interest Period applicable thereto (whether voluntary, mandatory, automatic, by reason of acceleration or otherwise), (b) the failure to borrow, convert, continue or prepay any Adjusted Eurocurrency Rate Loan on the date or in the amount specified in any notice delivered pursuant hereto or (c) the assignment of any Adjusted Eurocurrency Rate Loan of any Lender other than on the last day of the Interest Period applicable thereto as a result of a request by the Parent Borrower pursuant to Section 2.19, then, in any such event, the Parent Borrower shall compensate each Lender for the loss, cost and expense incurred by such Lender that is attributable to such event (other than loss of profit). In the case of any Adjusted Eurocurrency Rate Loan, the loss, cost or expense of any Lender shall be the amount reasonably determined by such Lender to be the excess, if any, of (i) the amount of interest which would have accrued on the principal amount of such Loan had such event not occurred at the Adjusted Eurocurrency Rate that would have been applicable to such Loan for the period from the date of such event to the last day of the then current Interest Period therefor (or, in the case of a failure to borrow, convert or continue, for the period that would have been the Interest Period for such Loan), over (ii) the amount of interest which would accrue on such principal amount for such period at the interest rate which such Lender would bid were it to bid, at the commencement of such period, for deposits in Dollars of a comparable amount and period from other banks in the Eurodollar market; it being understood that such loss, cost or expense shall in any case exclude any interest rate floor and all administrative, processing or similar fees. Any Lender requesting compensation under this Section 2.16 shall be required to deliver a certificate to the Parent Borrower that (A) sets forth any amount or amounts that such Lender is entitled to receive pursuant to this Section, the basis therefor and, in reasonable detail, the manner in which such amount or amounts were determined and (B) certifies that such Lender is generally charging the relevant amounts to similarly situated borrowers, which certificate shall be conclusive absent manifest error. The Parent Borrower shall pay such Lender the amount shown as due on any such certificate within 30 days after receipt thereof.

Section 2.17. Taxes.

(a) All payments by or on account of any obligation of any Loan Party under any Loan Document shall be made free and clear of and without deduction for any Taxes, except as required by applicable Requirements of Law. If any applicable Requirement of Law (as determined in the good faith discretion of the applicable Withholding Agent) requires the deduction or withholding of any Tax from any such payment by a Withholding Agent, then (i) if such Tax is an Indemnified Tax and/or Other Tax, the amount payable by the applicable Loan Party shall be increased as necessary so that after all required deductions or withholdings have been made (including deductions or withholdings applicable to additional sums payable under this Section 2.17) each Lender (or, in the case of any payment made to the Administrative Agent for its own account, the Administrative Agent) receives an amount equal to the sum it would have received had no such deductions or withholdings been made, (ii) the applicable withholding agent shall make such deductions and (iii) the applicable withholding agent shall timely pay the full amount deducted to the relevant Governmental Authority in accordance with applicable Requirements of Law. In addition, the Loan Parties shall pay any Other Taxes to the relevant Governmental Authority in accordance with applicable Requirements of Law.

(b) The Parent Borrower shall indemnify the Administrative Agent and each Lender within 30 days after receipt of the certificate described in the succeeding sentence, for the full amount of any Indemnified Taxes or Other Taxes payable or paid by the Administrative Agent or such Lender, as applicable (including Indemnified Taxes or Other Taxes imposed or asserted on or attributable to amounts payable under this Section 2.17), other than any penalties determined by a final and non-appealable judgment of a court of competent jurisdiction (or documented in any settlement agreement) to have resulted from the gross negligence, bad faith or willful misconduct of the Administrative Agent or such Lender, and, in each case, any reasonable expenses arising therefrom or with respect thereto (whether or not correctly or legally imposed or asserted); provided that if the Parent Borrower reasonably believes that such Taxes were not correctly or legally asserted, the Administrative Agent or such Lender, as applicable, will use reasonable efforts to cooperate with the Parent Borrower to obtain a refund of such Taxes (which shall be repaid to the Parent Borrower in accordance with Section 2.17(f)) so long as such efforts would not, in the sole determination of the Administrative Agent or such Lender, result in any additional out-of-pocket costs or expenses not reimbursed by the Parent Borrower or be otherwise materially disadvantageous to the Administrative Agent or such Lender, as applicable. In connection with any request for reimbursement under this Section 2.17(b), the relevant Lender or the Administrative Agent, as applicable, shall deliver a certificate to the Parent Borrower setting forth, in reasonable detail, the basis and calculation of the amount of the relevant payment or liability, which shall be conclusive absent manifest error. Notwithstanding anything to the contrary contained in this Section 2.17(b), the Parent Borrower shall not be required to indemnify the Administrative Agent or any Lender pursuant to this Section 2.17(b) for any amount to the extent the Administrative Agent or such Lender fails to notify the Parent Borrower of the relevant possible indemnification claim within 180 days after the Administrative Agent or such Lender receives written notice from the applicable taxing authority of the specific tax assessment giving rise to such indemnification claim.

(c) Each Lender shall severally indemnify the Administrative Agent, within 30 days after demand therefor, for (i) any Indemnified Taxes or Other Taxes imposed on or with respect to any payment under any Loan Document that is attributable to such Lender (but only to the extent that no Loan Party has already indemnified the Administrative Agent for such Indemnified Taxes or Other Taxes and without limiting the obligation of the Loan Parties to do so), (ii) any Taxes attributable to such Lender's failure to comply with the provisions of Section 9.05(c), relating to the maintenance of a Participant Register and (iii) any Taxes not described in clauses (i) or (ii) that are attributable to such Lender, in each case, that are payable or paid by the Administrative Agent in connection with any Loan Document and any reasonable expenses arising therefrom or with respect thereto, whether or not such Taxes were correctly or legally imposed or asserted. A certificate as to the amount of such payment or liability delivered to any Lender by the Administrative Agent shall be conclusive absent manifest error. Each Lender hereby authorizes the Administrative Agent to set off and apply any and all amounts at any time owing to such Lender under any Loan Document or otherwise payable by the Administrative Agent to such Lender under any Loan Document or otherwise payable by the Administrative Agent to any Lender from any other source against any amount due to the Administrative Agent under this clause (c).

(d) As soon as practicable after any payment of Indemnified Taxes or Other Taxes by any Loan Party to a Governmental Authority, the Parent Borrower shall deliver to the Administrative Agent the original or a certified copy of a receipt issued by such Governmental Authority evidencing such payment, a copy of the return reporting such payment or other evidence of such payment that is reasonably satisfactory to the Administrative Agent.

(e) Status of Lenders.

(i) Any Lender that is entitled to an exemption from or reduction of any withholding Tax with respect to any payment made under any Loan Document shall deliver to the Parent Borrower and the Administrative Agent, at the time or times reasonably requested by the Parent Borrower or the Administrative Agent, such properly completed and executed documentation as the Parent Borrower or the Administrative Agent may reasonably request to permit such payments to be made without withholding or at a reduced rate of withholding. In addition, any Lender, if reasonably requested by the Parent Borrower or the Administrative Agent, shall deliver such other documentation prescribed by applicable Requirements of Law or reasonably requested by the Parent Borrower or the Administrative Agent as will enable the Parent Borrower or the Administrative Agent to determine whether or not such Lender is subject to backup withholding or information reporting requirements.

(ii) Without limiting the generality of the foregoing,

(A) each Lender that is not a Foreign Lender shall deliver to the Parent Borrower and the Administrative Agent on or prior to the date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Parent Borrower or the Administrative Agent), two executed original copies of IRS Form W-9 certifying that such Lender is exempt from U.S. federal backup withholding tax;

(B) each Foreign Lender shall deliver to the Parent Borrower and the Administrative Agent on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Parent Borrower or the Administrative Agent), whichever of the following is applicable:

(1) in the case of any Foreign Lender claiming the benefits of an income tax treaty to which the United States is a party, two executed original copies of IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, establishing any available exemption from, or reduction of, U.S. federal withholding Tax;

(2) two executed original copies of IRS Form W-8ECI;

(3) in the case of any Foreign Lender claiming the benefits of the exemption for portfolio interest under Section 871(h) or 881(c) of the Code, (x) two executed original copies of a certificate substantially in the form of Exhibit L-1 to the effect that such Foreign Lender is not a “bank” within the meaning of Section 881(c)(3)(A) of the Code, a “10 percent shareholder” of the Parent Borrower within the meaning of Section 871(h)(3)(B) of the Code, or a “controlled foreign corporation” described in Section 881(c)(3)(C) of the Code, and that no payments payable to such Lender are effectively connected with the conduct of a U.S. trade or business (a “U.S. Tax Compliance Certificate”) and (y) two executed original copies of IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable; or

(4) to the extent any Foreign Lender is not the beneficial owner (e.g., where the Foreign Lender is a partnership or participating Lender), two executed original copies of IRS Form W-8IMY, accompanied by IRS Form W-8ECI, IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, a U.S. Tax Compliance Certificate substantially in the form of Exhibit L-2, Exhibit L-3 or Exhibit L-4, IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable; provided that if such Foreign Lender is a partnership (and not a participating Lender) and one or more direct or indirect partners of such Foreign Lender are claiming the portfolio interest exemption, such Foreign Lender may provide a U.S. Tax Compliance Certificate substantially in the form of Exhibit L-4 on behalf of each such direct or indirect partner;

(C) each Foreign Lender shall deliver to the Parent Borrower and the Administrative Agent on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Parent Borrower or the Administrative Agent), two executed original copies of any other form prescribed by applicable Requirements of Law as a basis for claiming exemption from or a reduction in U.S. federal withholding Tax, duly completed, together with such supplementary documentation as may be prescribed by applicable Requirements of Law to permit the Parent Borrower or the Administrative Agent to determine the withholding or deduction required to be made; and

(D) if a payment made to any Lender under any Loan Document would be subject to U.S. federal withholding Tax imposed by FATCA if such Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Code, as applicable), such Lender shall deliver to the Parent Borrower and the Administrative Agent at the time or times prescribed by applicable Requirements of Law and at such time or times reasonably requested by the Parent Borrower or the Administrative Agent such documentation as is prescribed by applicable Requirements of Law (including as prescribed by Section 1471(b)(3)(C)(i) of the Code) and may be necessary for the Parent Borrower and the Administrative Agent to comply with their obligations under FATCA, to determine whether such Lender has complied with such Lender’s obligations under FATCA or to determine the amount, if any, to deduct and withhold from such payment. Solely for purposes of this clause (D), “FATCA” shall include any amendments made to FATCA after the date of this Agreement.

Each Lender agrees that if any documentation it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall update such documentation or promptly notify the Parent Borrower and the Administrative Agent in writing of its legal ineligibility to do so.

Notwithstanding anything to the contrary in this Section 2.17(e), no Lender shall be required to provide any documentation that such Lender is not legally eligible to deliver.

(f) If the Administrative Agent or any Lender determines, in its sole discretion, that it has received a refund of any Indemnified Taxes or Other Taxes as to which it has been indemnified by the Parent Borrower or with respect to which the Parent Borrower has paid additional amounts pursuant to this Section 2.17, it shall pay over such refund to the Parent Borrower (but only to the extent of indemnity payments made, or additional amounts paid, by the Parent Borrower under this Section 2.17 with respect to the Indemnified Taxes or Other Taxes giving rise to such refund), net of all out-of-pocket expenses of the Administrative Agent or such Lender (including any Taxes imposed with respect to such refund), and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund); provided that the Parent Borrower, upon the request of the Administrative Agent or such Lender, agrees to repay the amount paid over to the Parent Borrower (plus any penalties, interest or other charges imposed by the relevant Governmental Authority) to the Administrative Agent or such Lender in the event the Administrative Agent or such Lender is required to repay such refund to such Governmental Authority. Notwithstanding anything to the contrary in this paragraph (f), in no event will the Administrative Agent or any Lender be required to pay any amount to the Parent Borrower pursuant to this paragraph (f) to the extent that the payment thereof would place the Administrative Agent or such Lender in a less favorable net after-Tax position than the position that the Administrative Agent or such Lender would have been in if the Tax subject to indemnification had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts giving rise to such refund had never been paid. This Section 2.17 shall not be construed to require the Administrative Agent or any Lender to make available its Tax returns (or any other information relating to its Taxes which it deems confidential) to the Parent Borrower or any other Person.

(g) Survival. Each party's obligations under this Section 2.17 shall survive the resignation or replacement of the Administrative Agent or any assignment of rights by, or the replacement of, any Lender, the termination of the Commitments and the repayment, satisfaction or discharge of all obligations under any Loan Document.

(h) Definition of "Lender" for Purposes of Section 2.17. For the avoidance of doubt, the term "Lender" shall, for all purposes of this Section 2.17, include any Issuing Bank.

Section 2.18. Payments Generally; Allocation of Proceeds; Sharing of Payments.

(a) Unless otherwise specified in this Agreement, the Parent Borrower shall make each payment required to be made by it hereunder (whether of principal, interest or fees, reimbursements of LC Disbursements, or of amounts payable under Section 2.15, 2.16 or 2.17, or otherwise) prior to 3:00 p.m. on the date when due, in immediately available funds, without set-off or counterclaim. Any amount received after such time on any date may, in the discretion of the Administrative Agent, be deemed to have been received on the next succeeding Business Day for purposes of calculating interest thereon. All such payments shall be made to the Administrative Agent to the applicable account designated by the Administrative Agent to the Parent Borrower, except that payments pursuant to Sections 2.05(e)(i), 2.12(b)(ii), 2.15, 2.16, 2.17 and 9.03 shall be made directly to the Person or Persons entitled thereto. The Administrative Agent shall distribute any such payments received by it for the account of any other Person to the appropriate recipient promptly following receipt thereof. Except as provided in Sections 2.19(b), 2.20 and 9.05(g), (i) each Borrowing, each payment or prepayment of principal of any Borrowing, each payment of interest on the Loans of a given Class and each conversion of any Borrowing to or continuation of any Borrowing as a Borrowing of any Type (and of the same Class) shall be allocated pro rata among the Lenders in accordance with their respective Applicable Percentages of the applicable Class and (ii) each payment or prepayment of Initial Term Loans shall be allocated pro rata among the Initial Term Lenders in accordance with their respective Initial Term Loan Applicable Percentages of the Initial Term Loans. All payments (including accrued interest) hereunder shall be made in Dollars. Each Lender agrees that in computing such Lender's portion of any Borrowing to be made hereunder, the Administrative Agent may, in its discretion, round each Lender's percentage of such Borrowing to the next higher or lower whole Dollar amount. Any payment required to be made by the Administrative Agent hereunder shall be deemed to have been made by the time required if the Administrative Agent shall, at or before such time, have taken the necessary steps to make such payment in accordance with the regulations or operating procedures of the clearing or settlement system used by the Administrative Agent to make such payment.

(b) All proceeds of Collateral received by the Administrative Agent while an Event of Default exists and all or any portion of the Loans have been accelerated hereunder pursuant to Section 7.01 shall be applied first, to the payment of all costs and expenses then due that have been incurred by the Administrative Agent in connection with any collection, sale or realization on Collateral or otherwise in connection with this Agreement, any other Loan Document or any of the Secured Obligations, including all court costs and the fees and expenses of agents and legal counsel, the repayment of all advances made by the Administrative Agent hereunder or under any other Loan Document on behalf of any Loan Party and any other costs or expenses incurred in connection with the exercise of any right or remedy hereunder or under any other Loan Document, second, to payment in full of any Unfunded Advance/Participation (the amounts so applied to be distributed between or among, as applicable, the Administrative Agent and the Issuing Banks on a pro rata basis in accordance with the amount of such Unfunded Advance/Participation owed to them on the date of the relevant distribution), third, on a pro rata basis, to pay any fees, indemnities or expense reimbursements then due to the Administrative Agent (other than those covered in clause first above) or to any Issuing Bank from the Parent Borrower that constitute Secured Obligations, fourth, on a pro rata basis in accordance with the amounts of the Secured Obligations (other than contingent indemnification obligations for which no claim has yet been made) owed to the Secured Parties on the date of any such distribution, to the payment in full of the Secured Obligations (including, with respect to LC Exposure, an amount to be paid to the Administrative Agent equal to 100% of the LC Exposure (minus the amount then on deposit in the LC Collateral Account) on such date, to be held in the LC Collateral Account as Cash collateral for such Obligations); provided that if any Letter of Credit expires undrawn, then any Cash collateral held to secure the related LC Exposure shall be applied in accordance with this Section 2.18(b), beginning with clause first above, and fifth, to, or at the direction of, the Parent Borrower or as a court of competent jurisdiction may otherwise direct.

(c) If any Lender obtains payment (whether voluntary, involuntary, through the exercise of any right of set-off or otherwise) in respect of any principal of or interest on any of its Loans of any Class or participations in LC Disbursements held by it resulting in such Lender receiving payment of a greater proportion of the aggregate amount of its Loans of such Class and participations in LC Disbursements and accrued interest thereon than the proportion received by any other Lender with Loans of such Class and participations in LC Disbursements, then the Lender receiving such greater proportion shall purchase (for Cash at face value) participations in the Loans of such Class and sub-participations in LC Disbursements of other Lenders of such Class at such time outstanding to the extent necessary so that the benefit of all such payments shall be shared by the Lenders of such Class ratably in accordance with the aggregate amount of principal of and accrued interest on their respective Loans of such Class and participations in LC Disbursements; provided that (i) if any such participations are purchased and all or any portion of the payment giving rise thereto is recovered, such participations shall be rescinded and the purchase price restored to the extent of such recovery, without interest, and (ii) the provisions of this paragraph shall not apply to (A) any payment made by the Parent Borrower pursuant to and in accordance with the express terms of this Agreement or (B) any payment obtained by any Lender as consideration for the assignment of or sale of a participation in any of its Loans to any permitted assignee or participant, including any payment made or deemed made in connection with Sections 2.22, 2.23, 9.02(c) and/or Section 9.05. The Parent Borrower consents to the foregoing and agrees, to the extent it may effectively do so under applicable Requirements of Law, that any Lender acquiring a participation pursuant to the foregoing arrangements may exercise rights of set-off and counterclaim against the Parent Borrower with respect to such participation as fully as if such Lender were a direct creditor of the Parent Borrower in the amount of such participation. The Administrative Agent will keep records (which shall be conclusive and binding in the absence of manifest error) of participations purchased under this Section 2.18(c) and will, in each case, notify the Lenders following any such purchases or repayments. Each Lender that purchases a participation pursuant to this Section 2.18(c) shall, from and after the date of such purchase, have the right to give all notices, requests, demands, directions and other communications under this Agreement with respect to the portion of the Obligations purchased to the same extent as though the purchasing Lender were the original owner of the Obligations purchased.

(d) Unless the Administrative Agent has received notice from the Parent Borrower prior to the date on which any payment is due to the Administrative Agent for the account of any Lender or any Issuing Bank hereunder that the Parent Borrower will not make such payment, the Administrative Agent may assume that the Parent Borrower has made such payment on such date in accordance herewith and may, in reliance upon such assumption, distribute to the applicable Lender or Issuing Bank the amount due. In such event, if the Parent Borrower has not in fact made such payment, then each Lender or the applicable Issuing Bank severally agrees to repay to the Administrative Agent forthwith on demand the amount so distributed to such Lender or Issuing Bank with interest thereon, for each day from and including the date such amount is distributed to it to but excluding the date of payment to the Administrative Agent, at the greater of the Federal Funds Effective Rate in effect from time to time and a rate determined by the Administrative Agent in accordance with banking industry rules on interbank compensation.

(e) If any Lender fails to make any payment required to be made by it pursuant to Section 2.07(b) or Section 2.18(d), then the Administrative Agent may, in its discretion (notwithstanding any contrary provision hereof), apply any amounts thereafter received by the Administrative Agent for the account of such Lender to satisfy such Lender's obligations under such Sections until all such unsatisfied obligations are fully paid.

Section 2.19. Mitigation Obligations; Replacement of Lenders.

(a) If any Lender requests compensation under Section 2.15 or determines that it can no longer make or maintain Adjusted Eurocurrency Rate Loans pursuant to Section 2.20, or any Loan Party is required to pay any additional amount to or indemnify any Lender or any Governmental Authority for the account of any Lender pursuant to Section 2.17, then such Lender shall use reasonable efforts to designate a different lending office for funding or booking its Loans hereunder or its participation in any Letter of Credit affected by such event, or to assign its rights and obligations hereunder to another of its offices, branches or affiliates, if, in the reasonable judgment of such Lender, such designation or assignment (i) would eliminate or reduce amounts payable pursuant to Section 2.15 or 2.17, as applicable, in the future or mitigate the impact of Section 2.20, as the case may be, and (ii) would not subject such Lender to any unreimbursed out-of-pocket cost or expense and would not otherwise be disadvantageous to such Lender in any material respect. The Parent Borrower in respect of the relevant obligations hereby agrees to pay all reasonable costs and expenses incurred by any Lender in connection with any such designation or assignment.

(b) If (i) any Lender requests compensation under Section 2.15 or determines that it can no longer make or maintain Adjusted Eurocurrency Rate Loans pursuant to Section 2.20, (ii) any Loan Party is required to pay any additional amount to or indemnify any Lender or any Governmental Authority for the account of any Lender pursuant to Section 2.17, (iii) any Lender is a Defaulting Lender or (iv) in connection with any proposed amendment, waiver or consent requiring the consent of “each Lender”, “each Revolving Lender” or “each Lender directly affected thereby” (or any other Class or group of Lenders other than the Required Lenders and including, for the avoidance of doubt, in connection with any Extension Offer with respect to which a majority of the applicable Class of Lenders have agreed to extend the applicable Class of Loans) with respect to which Required Lender or Required Revolving Lender consent (or the consent of Lenders holding loans or commitments of such Class or lesser group representing more than 50% of the sum of the total loans and unused commitments of such Class or lesser group at such time) has been obtained, as applicable, any Lender is a non-consenting Lender (each such Lender described in this clause (iv), a “Non-Consenting Lender”), then the Parent Borrower may, at its sole expense and effort, upon notice to such Lender and the Administrative Agent, (x) terminate the applicable Commitments of such Lender and repay all Obligations of the Parent Borrower owing to such Lender relating to the applicable Loans and participations held by such Lender as of such termination date (provided that, if, after giving effect such termination and repayment, the aggregate amount of the Revolving Credit Exposure of any Class exceeds the aggregate amount of the Revolving Credit Commitments of such Class then in effect, then the Parent Borrower shall, not later than the next Business Day, prepay one or more Revolving Borrowings of the applicable Class (and, if no Revolving Borrowings of such Class are outstanding, deposit Cash collateral in the LC Collateral Account) in an amount necessary to eliminate such excess) or (y) replace such Lender by requiring such Lender to assign and delegate (and such Lender shall be obligated to assign and delegate), without recourse (in accordance with and subject to the restrictions contained in Section 9.05), all of its interests, rights and obligations under this Agreement to an Eligible Assignee that assumes such obligations (which Eligible Assignee may be another Lender, if any Lender accepts such assignment); provided that (A) such Lender has received payment of an amount equal to the outstanding principal amount of its Loans and, if applicable, participations in LC Disbursements, in each case of such Class of Loans and/or Commitments, accrued interest thereon, accrued fees and all other amounts payable to it under any Loan Document with respect to such Class of Loans and/or Commitments, (B) in the case of any assignment resulting from a claim for compensation under Section 2.15 or payment required to be made pursuant to Section 2.17, such assignment would result in a reduction in such compensation or payment and (C) such assignment does not conflict with applicable Requirements of Law. No Lender (other than a Defaulting Lender) shall be required to make any such assignment and delegation, and the Parent Borrower may not repay the Obligations of such Lender or terminate its Commitments, in each case if, prior thereto, as a result of a waiver by such Lender or otherwise, the circumstances entitling the Parent Borrower to require such assignment and delegation cease to apply. Each Lender agrees that if it is replaced pursuant to this Section 2.19, it shall execute and deliver to the Administrative Agent an Assignment and Assumption to evidence such sale and purchase and shall deliver to the Administrative Agent any Promissory Note (if the assigning Lender’s Loans are evidenced by one or more Promissory Notes) subject to such Assignment and Assumption (provided that the failure of any Lender replaced pursuant to this Section 2.19 to execute an Assignment and Assumption or deliver any such Promissory Note shall not render such sale and purchase (or the corresponding assignment) invalid), such assignment shall be recorded in the Register and any such Promissory Note shall be deemed cancelled. Each Lender hereby irrevocably appoints the Administrative Agent (such appointment being coupled with an interest) as such Lender’s attorney-in-fact, with full authority in the place and stead of such Lender and in the name of such Lender, from time to time in the Administrative Agent’s discretion, with prior written notice to such Lender, to take any action and to execute any such Assignment and Assumption or other instrument that the Administrative Agent may deem reasonably necessary to carry out the provisions of this clause (b). To the extent that any Lender is replaced pursuant to Section 2.19(b)(iv) in connection with a Repricing Transaction requiring payment of a fee pursuant to Section 2.12(e), the Parent Borrower shall pay the fee set forth in Section 2.12(e) to each Lender being replaced as a result of such Repricing Transaction.

Section 2.20. Illegality. (a) If any Lender reasonably determines that any Change in Law has made it unlawful, or that any Governmental Authority has asserted after the Closing Date that it is unlawful, for such Lender or its applicable lending office to make, maintain or fund Loans whose interest is determined by reference to the Eurocurrency Rate or to determine or charge interest rates based upon the Eurocurrency Rate, or any Governmental Authority has imposed material restrictions on the authority of such Lender to purchase or sell, or to take deposits of, Dollars, then, upon notice thereof by such Lender to the Parent Borrower through the Administrative Agent:

(i) any obligation of such Lender to make or continue Adjusted Eurocurrency Rate Loans in the affected currency or currencies or to convert ABR Loans to Adjusted Eurocurrency Rate Loans shall be suspended,

(ii) if such notice asserts the illegality of such Lender making or maintaining ABR Loans the interest rate on which is determined by reference to the Eurocurrency Rate component of the Alternate Base Rate, the interest rate on such Lender's ABR Loans shall, if necessary to avoid such illegality, be determined by the Administrative Agent without reference to the Eurocurrency Rate component of the Alternate Base Rate in each case until such Lender notifies the Administrative Agent and the Parent Borrower that the circumstances giving rise to such determination no longer exist (which notice such Lender agrees to give promptly),

(iii) the Parent Borrower shall, upon demand from such Lender (with a copy to the Administrative Agent), prepay or convert all of such Lender's Adjusted Eurocurrency Rate Loans to ABR Loans (the interest rate on which ABR Loans of such Lender shall, if necessary to avoid such illegality, be determined by the Administrative Agent without reference to the Eurocurrency Rate component of the Alternate Base Rate), either on the last day of the Interest Period therefor, if such Lender may lawfully continue to maintain such Adjusted Eurocurrency Rate Loans to such day, or immediately, if such Lender may not lawfully continue to maintain such Adjusted Eurocurrency Rate Loans (in which case the Parent Borrower shall not be required to make payments pursuant to Section 2.16 in connection with such payment), and

(iv) if such notice asserts the illegality of such Lender determining or charging interest rates based upon the Eurocurrency Rate, the Administrative Agent shall during the period of such suspension compute the Alternate Base Rate applicable to such Lender without reference to the Eurocurrency Rate component thereof, as applicable, until the Administrative Agent is advised in writing by such Lender that it is no longer illegal for such Lender to determine or charge interest rates based upon the Eurocurrency Rate.

(b) Upon any such prepayment or conversion, the Parent Borrower shall also pay accrued interest on the amount so prepaid or converted.

(c) Each Lender agrees to designate a different lending office if such designation will avoid the need for such notice and will not, in the determination of such Lender, otherwise be materially disadvantageous to such Lender.

Section 2.21. Defaulting Lenders. Notwithstanding any provision of this Agreement to the contrary, if any Lender becomes a Defaulting Lender, then the following provisions shall apply for so long as such Lender is a Defaulting Lender:

(a) Fees shall cease to accrue on the unfunded portion of any Commitment of such Defaulting Lender pursuant to Section 2.12(a) and, subject to clause (d)(iv) below, on the participation of such Defaulting Lender in Letters of Credit pursuant to Section 2.12(b) and pursuant to any other provisions of this Agreement or other Loan Document.

(b) The Commitments and the Revolving Credit Exposure of such Defaulting Lender shall not be included in determining whether all Lenders, each affected Lender, the Required Lenders, the Required Revolving Lenders or such other number of Lenders as may be required hereby or under any other Loan Document have taken or may take any action hereunder (including any consent to any waiver, amendment or modification pursuant to Section 9.02); provided that any waiver, amendment or modification requiring the consent of all Lenders or each affected Lender which affects such Defaulting Lender disproportionately and adversely relative to other affected Lenders shall require the consent of such Defaulting Lender.

(c) Any payment of principal, interest, fees or other amounts received by the Administrative Agent for the account of any Defaulting Lender (whether voluntary or mandatory, at maturity, pursuant to Section 2.11, Section 2.15, Section 2.16, Section 2.17, Section 2.18, Article 7, Section 9.05 or otherwise, and including any amounts made available to the Administrative Agent by such Defaulting Lender pursuant to Section 9.09), shall be applied at such time or times as may be determined by the Administrative Agent and, where relevant, the Parent Borrower as follows: first, to the payment of any amounts owing by such Defaulting Lender to the Administrative Agent hereunder; second, to the payment on a pro rata basis of any amounts owing by such Defaulting Lender to any applicable Issuing Bank hereunder; third, if so reasonably determined by the Administrative Agent or reasonably requested by the applicable Issuing Bank, to be held as Cash collateral for future funding obligations of such Defaulting Lender in respect of any participation in any Letter of Credit; fourth, so long as no Default or Event of Default exists, as the Parent Borrower may request, to the funding of any Loan in respect of which such Defaulting Lender has failed to fund its portion thereof as required by this Agreement; fifth, as the Administrative Agent or the Parent Borrower may elect, to be held in a deposit account and released in order to satisfy obligations of such Defaulting Lender to fund Loans under this Agreement; sixth, to the payment of any amounts owing to the non-Defaulting Lenders or Issuing Banks as a result of any judgment of a court of competent jurisdiction obtained by any non-Defaulting Lender or any Issuing Bank against such Defaulting Lender as a result of such Defaulting Lender's breach of its obligations under this Agreement; seventh, to the payment of any amounts owing to the Parent Borrower as a result of any judgment of a court of competent jurisdiction obtained by the Parent Borrower against such Defaulting Lender as a result of such Defaulting Lender's breach of its obligations under this Agreement; and eighth, to such Defaulting Lender or as otherwise directed by a court of competent jurisdiction; provided that if (x) such payment is a payment of the principal amount of any Loan or LC Exposure in respect of which such Defaulting Lender has not fully funded its appropriate share and (y) such Loan or LC Exposure was made or created, as applicable, at a time when the conditions set forth in Section 4.02 were satisfied or waived, such payment shall be applied solely to pay the Loans of, and LC Exposure owed to, all non-Defaulting Lenders on a pro rata basis prior to being applied to the payment of any Loans of, or LC Exposure owed to, such Defaulting Lender. Any payments, prepayments or other amounts paid or payable to any Defaulting Lender that are applied (or held) to pay amounts owed by any Defaulting Lender or to post Cash collateral pursuant to this Section 2.21(c) shall be deemed paid to and redirected by such Defaulting Lender, and each Lender irrevocably consents hereto.

(d) If any LC Exposure exists at the time any Lender becomes a Defaulting Lender then:

(i) the LC Exposure of such Defaulting Lender shall be reallocated among the non-Defaulting Revolving Lenders in accordance with their respective Applicable Revolving Credit Percentages but only to the extent that (A) the sum of the Revolving Credit Exposures of all non-Defaulting Lenders attributable to the Revolving Credit Commitments of any Class does not exceed the total of the Revolving Credit Commitments of all non-Defaulting Revolving Lenders of such Class and (B) the Revolving Credit Exposure of any non-Defaulting Lender that is attributable to its Revolving Credit Commitment of such Class does not exceed such non-Defaulting Lender's Revolving Credit Commitment of such Class;

(ii) if the reallocation described in clause (i) above cannot, or can only partially, be effected, the Parent Borrower shall, without prejudice to any other right or remedy available to it hereunder or under applicable Requirements of Law, within two Business Days following notice by the Administrative Agent, Cash collateralize 100% of such Defaulting Lender's LC Exposure (after giving effect to any partial reallocation pursuant to paragraph (i) above and any Cash collateral provided by such Defaulting Lender or pursuant to Section 2.21(c) above) or make other arrangements reasonably satisfactory to the Administrative Agent and to the applicable Issuing Bank with respect to such LC Exposure and obligations to fund participations. Cash collateral (or the appropriate portion thereof) provided to reduce LC Exposure or other obligations shall be released promptly following (A) the elimination of the applicable LC Exposure or other obligations giving rise thereto (including by the termination of the Defaulting Lender status of the applicable Lender (or, as appropriate, its assignee following compliance with Section 2.19)) or (B) the Administrative Agent's good faith determination that there exists excess Cash collateral (including as a result of any subsequent reallocation of LC Exposure among non-Defaulting Lenders described in clause (i) above);

(iii) (A) if the LC Exposure of the non-Defaulting Lenders is reallocated pursuant to this Section 2.21(d), then the fees payable to the Revolving Lenders pursuant to Sections 2.12(a) and (b), as the case may be, shall be adjusted to give effect to such reallocation and (B) if the LC Exposure of any Defaulting Lender is Cash collateralized pursuant to this Section 2.21(d), then, without prejudice to any rights or remedies of the applicable Issuing Bank, any Revolving Lender or the Parent Borrower hereunder, no letter of credit fees shall be payable under Section 2.12(b) with respect to such Defaulting Lender's LC Exposure; and

(iv) if any Defaulting Lender's LC Exposure is not Cash collateralized, prepaid or reallocated pursuant to this Section 2.21(d), then, without prejudice to any rights or remedies of the applicable Issuing Bank, any Revolving Lender or the Parent Borrower hereunder, all letter of credit fees payable under Section 2.12(b) with respect to such Defaulting Lender's LC Exposure shall be payable to the applicable Issuing Bank until such Defaulting Lender's LC Exposure is Cash collateralized or reallocated.

(e) So long as any Revolving Lender is a Defaulting Lender, no Issuing Bank shall be required to issue, extend, create, incur, amend or increase any Letter of Credit unless it is reasonably satisfied that the related exposure will be 100% covered by the Revolving Credit Commitments of the non-Defaulting Lenders, Cash collateral provided pursuant to Section 2.21(c), and/or Cash collateral provided in accordance with Section 2.21(d), and participating interests in any such or newly issued, extended or created Letter of Credit shall be allocated among non-Defaulting Revolving Lenders in a manner consistent with Section 2.21(d)(i) (it being understood that Defaulting Lenders shall not participate therein).

(f) In the event that the Administrative Agent and the Parent Borrower agree that any Defaulting Lender has adequately remedied all matters that caused such Lender to be a Defaulting Lender, then the Applicable Revolving Credit Percentage of LC Exposure of the Revolving Lenders shall be readjusted to reflect the inclusion of such Lender's Revolving Credit Commitment, and on such date such Revolving Lender shall purchase at par such of the Revolving Loans of the applicable Class of the other Revolving Lenders or participations in Revolving Loans of the applicable Class as the Administrative Agent determine as necessary in order for such Revolving Lender to hold such Revolving Loans or participations in accordance with its Applicable Percentage of the applicable Class or its Applicable Revolving Credit Percentage, as applicable. Notwithstanding the fact that any Defaulting Lender has adequately remedied all matters that caused such Lender to be a Defaulting Lender, (x) no adjustments will be made retroactively with respect to fees accrued or payments made by or on behalf of the Parent Borrower while such Lender was a Defaulting Lender and (y) except to the extent otherwise expressly agreed by the affected parties, no change hereunder from "Defaulting Lender" to "Lender" will constitute a waiver or release of any claim of any party hereunder arising from such Lender's having been a Defaulting Lender.

Section 2.22. Incremental Credit Extensions.

(a) The Parent Borrower may, at any time after the Closing Date, on one or more occasions pursuant to an Incremental Facility Agreement, (i) add one or more new tranches of term facilities (each new tranche, a "New Incremental Term Facility") and/or increase the principal amount of the Term Loans of any existing Class by requesting new commitments to provide such Term Loans (each increase, an "Incremental Increase Facility"; together with any New Incremental Term Facility, "Incremental Term Facilities" and any loans made pursuant to an Incremental Term Facilities, "Incremental Term Loans") and/or (ii) add one or more new tranches of Incremental Revolving Commitments (each new tranche, a "New Incremental Revolving Facility") and/or increase the aggregate amount of the Revolving Credit Commitments of any existing Class (each increase, a "Revolving Commitment Increase"; together with any New Incremental Revolving Facility, "Incremental Revolving Facilities" and, together with any Incremental Term Facility, "Incremental Facilities"; and the loans thereunder, "Incremental Revolving Loans" and any Incremental Revolving Loans, together with any Incremental Term Loans, "Incremental Loans") in an aggregate outstanding principal amount not to exceed the Incremental Cap; provided that:

(i) unless the Administrative Agent otherwise agrees, no Incremental Facility may be less than \$1,000,000,

(ii) except as the Parent Borrower and any Lender may separately agree, no Lender shall be obligated to provide any Incremental Commitment, and the determination to provide such commitments shall be within the sole and absolute discretion of such Lender,

(iii) no Incremental Facility or Incremental Loan (nor the creation, provision or implementation thereof) shall require the approval of any existing Lender other than in its capacity, if any, as a lender providing all or part of any Incremental Commitment or Incremental Loan,

(iv) except as otherwise permitted herein (including as provided in clause (xii) below), (A) the terms of any Incremental Term Facility (other than any terms which are applicable only after the Latest Term Loan Maturity Date) must be substantially consistent with those applicable to any then-existing Class of Term Loans or otherwise reasonably acceptable to the Administrative Agent and (B) the terms of any Incremental Revolving Facility (other than any terms which are applicable only after the then-existing Latest Revolving Credit Maturity Date) must be substantially consistent with those applicable to any then-existing Revolving Facility or otherwise reasonably acceptable to the Administrative Agent (it being understood that to the extent that any financial maintenance covenant or other term is added for the benefit of (A) any Incremental Term Facility, no consent shall be required from the Administrative Agent to the extent that such financial maintenance covenant or other term is also added for the benefit of all Classes of Loans or (B) any Incremental Revolving Facility, no consent shall be required from the Administrative Agent or any Lender to the extent that such financial maintenance covenant or other term is also added for the benefit of each then-existing Revolving Facility),

(v) the Effective Yield (and the components thereof, including interest rate margins, rate floors, fees, premiums and funding discounts) and any “MFN” terms or prepayment premiums applicable to any Incremental Facility may be determined by the Parent Borrower and the lender or lenders providing such Incremental Facility; provided that (A) in the case of any Incremental Term Facility (other than, at the option of the Parent Borrower in connection with one or more Incremental Term Facilities (w) in an aggregate principal amount of up to \$50,000,000 of Incremental Term Facilities (x) that have a maturity date after the date that is two years following the Latest Term Loan Maturity Date, (y) that are incurred pursuant to clause (c) of the definition of “Incremental Cap” or (z) that are incurred after the date that is 12 months following the Closing Date), the Effective Yield applicable thereto may not be more than 0.75% higher than the Effective Yield applicable to the Initial Term Loans unless the Applicable Rate with respect to the Initial Term Loans is adjusted to the extent necessary to be equal to the Effective Yield with respect to such Incremental Facility, minus 0.75%, and (B) the Applicable Rate for any Incremental Increase Facility shall be (x) the Applicable Rate for the Class being increased in connection therewith or (y) higher than the Applicable Rate for the Class being increased as long as the Applicable Rate for the Class being increased is automatically increased as and to the extent necessary to eliminate the deficiency,

(vi) the maturity date of any Incremental Facility may be determined by the Parent Borrower and the lender or lenders providing such Incremental Facility; provided that (A) the final maturity date with respect to any Incremental Term Loans shall be no earlier than the Latest Term Loan Maturity Date and (B) no Incremental Revolving Facility may have a final maturity date earlier than (or require scheduled amortization or mandatory commitment reductions prior to) the Latest Revolving Credit Maturity Date; provided that at the option of the Parent Borrower, Incremental Facilities in an aggregate principal amount equal to the portion of the Maturity/Weighted Average Life Excluded Amount that the Parent Borrower elects to apply to this proviso may be incurred without regard to this clause (vi) (with any such application reducing the Maturity/Weighted Average Life Excluded Amount on a dollar-for-dollar basis),

(vii) the amortization schedule for any Incremental Term Facility may be determined by the Parent Borrower and the lender or lenders providing such Incremental Facility; provided that the Weighted Average Life to Maturity of any Incremental Term Facility shall be no shorter than the remaining Weighted Average Life to Maturity of the then-existing Classes of Term Loans (without giving effect to any prepayments thereof); provided that at the option of the Parent Borrower, Incremental Term Facilities in an aggregate principal amount equal to the portion of the Maturity/Weighted Average Life Excluded Amount that the Parent Borrower elects to apply to this proviso may be incurred without regard to this clause (vii) (with any such application reducing the Maturity/Weighted Average Life Excluded Amount on a dollar-for-dollar basis),

(viii) (A) any Incremental Term Facility or Incremental Revolving Facility shall be secured by a Lien on the Collateral that is pari passu with the Lien securing the Secured Obligations and (B) no Incremental Facility shall be (x) guaranteed by any Person other than a Loan Guarantor or (y) secured by any assets other than the Collateral,

(ix) any mandatory prepayment (other than any scheduled amortization payment) of Incremental Term Loans shall be made on a pro rata basis with all then-existing Term Loans, except that the Parent Borrower and the lenders providing the relevant Incremental Term Loans shall be permitted, in their sole discretion, to elect to prepay or receive, as applicable, any such mandatory prepayment on a less than pro rata basis (but not on a greater than pro rata basis),

(x) no Event of Default then exists (except in the case of the incurrence or provision of any Incremental Facility in connection with a Permitted Acquisition or similar Investment not prohibited by the terms of this Agreement, in which case, no Event of Default under Section 7.01(a), (f) or (g) then exists or would exist after giving effect thereto),

(xi) the proceeds of any Incremental Revolving Facility and/or any Incremental Term Facility may be used by the Parent Borrower and its subsidiaries for working capital and other general corporate purposes, including the financing of Permitted Acquisitions and other Investments and any other use not prohibited by this Agreement,

(xii) (A) any Incremental Increase Facility shall be on the same terms (including maturity date and interest rates) and pursuant to the same documentation (other than the relevant Incremental Facility Agreement) applicable to such Class of Term Loans, and (B) any Revolving Commitment Increase (x) shall be on the same terms (including maturity date and interest rates (except (i) if required to consummate such Revolving Commitment Increase, any increase in interest rates, rate floors and undrawn fees that is provided to all Lenders for such Class of Revolving Credit Commitments), but excluding upfront fees) and pursuant to the same documentation (other than the relevant Incremental Facility Agreement) applicable to such Class of Revolving Credit Commitments and (y) shall not require any scheduled amortization or mandatory commitment reduction prior to the Maturity Date with respect to such Class of Revolving Credit Commitments, and

(xiii) on the date of the Borrowing of any Incremental Term Loans that will be of the same Class as any then-existing Class of Term Loans, and notwithstanding anything to the contrary set forth in Section 2.08 or 2.13, such Incremental Term Loans shall be added to (and constitute a part of, be of the same Type as and, at the election of the Parent Borrower, have the same Interest Period as) each Borrowing of outstanding Term Loans of such Class on a pro rata basis (based on the relative sizes of such Borrowings), so that each Term Lender providing such Incremental Term Loans will participate proportionately in each then-outstanding Borrowing of Term Loans of such Class; it being acknowledged that the application of this clause (a)(xiii) may result in new Incremental Term Loans having Interest Periods (the duration of which may be less than one month) that begin during an Interest Period then applicable to outstanding Adjusted Eurocurrency Rate Loans of the relevant Class and that end on the last day of such Interest Period.

(b) Incremental Commitments may be provided by any existing Lender, or by any other Eligible Assignee (any such other lender being called an “Additional Lender”); provided that the Administrative Agent (and, in the case of any Incremental Revolving Facility, any Issuing Bank) shall have a right to consent (such consent not to be unreasonably withheld) to the relevant Additional Lender’s provision of Incremental Commitments if such consent would be required under Section 9.05(b) for an assignment of Loans to such Additional Lender; provided, further, that any Additional Lender that is an Affiliated Lender shall be subject to the provisions of Section 9.05(g), *mutatis mutandis*, to the same extent as if the relevant Incremental Commitments and related Obligations had been acquired by such Lender by way of assignment.

(c) Each Lender or Additional Lender providing a portion of any Incremental Commitment shall execute and deliver to the Administrative Agent and the Parent Borrower all such documentation (including the relevant Incremental Facility Agreement) as may be reasonably required by the Administrative Agent to evidence and effectuate such Incremental Commitment. On the effective date of such Incremental Commitment, each Additional Lender shall become a Lender for all purposes in connection with this Agreement.

(d) As conditions precedent to the effectiveness of any Incremental Facility or the making of any Incremental Loans, (i) upon its request, the Administrative Agent shall be entitled to receive customary written opinions of counsel, as well as such solvency certificates, reaffirmation agreements, supplements and/or amendments as it shall reasonably require, (ii) the Administrative Agent shall be entitled to receive, from each Additional Lender, (1) an administrative questionnaire, in the form provided to such Additional Lender by the Administrative Agent (the “Administrative Questionnaire”), and (2) such other documents as it shall reasonably require from such Additional Lender, (iii) the Administrative Agent and the relevant Additional Lenders shall be entitled to receive all fees required to be paid in respect of such Incremental Facility or Incremental Loans, (iv) subject to Section 2.22(a)(x), the Administrative Agent shall have received a Borrowing Request as if the relevant Incremental Loans were subject to Section 2.03 or another written request the form of which is reasonably acceptable to the Administrative Agent (it being understood and agreed that the requirement to deliver a Borrowing Request shall not, unless agreed by the Parent Borrower, result in the imposition of any additional condition precedent to the availability of the relevant Incremental Loans) and (v) the Administrative Agent shall be entitled to receive a certificate of the Parent Borrower signed by a Responsible Officer thereof:

(A) certifying and attaching a copy of the resolutions adopted by the governing body of the Parent Borrower approving or consenting to such Incremental Facility or Incremental Loans, and

(B) to the extent applicable, certifying that the condition set forth in clause (a)(x), above has been satisfied.

(e) Upon the implementation of any Incremental Revolving Facility pursuant to this Section 2.22:

(i) if such Incremental Revolving Facility establishes Revolving Credit Commitments of the same Class as any then-existing Class of Revolving Credit Commitments, (A) each Revolving Lender immediately prior to such increase will automatically and without further act be deemed to have assigned to each relevant Incremental Revolving Facility Lender, and each relevant Incremental Revolving Facility Lender will automatically and without further act be deemed to have assumed a portion of such Revolving Lender’s participations hereunder in outstanding Letters of Credit such that, after giving effect to each deemed assignment and assumption of participations, all of the Revolving Lenders’ (including each Incremental Revolving Facility Lender’s) participations hereunder in Letters of Credit shall be held ratably on the basis of their respective Revolving Credit Commitments (after giving effect to any increase in the Revolving Credit Commitment pursuant to Section 2.22) and (B) the existing Revolving Lenders of the applicable Class shall assign Revolving Loans to certain other Revolving Lenders of such Class (including the Revolving Lenders providing the relevant Incremental Revolving Facility), and such other Revolving Lenders (including the Revolving Lenders providing the relevant Incremental Revolving Facility) shall purchase such Revolving Loans, in each case to the extent necessary so that all of the Revolving Lenders of such Class participate in each outstanding Borrowing of Revolving Loans pro rata on the basis of their respective Revolving Credit Commitments of such Class (after giving effect to any increase in the Revolving Credit Commitment pursuant to this Section 2.22); it being understood and agreed that the minimum borrowing, pro rata borrowing and pro rata payment requirements contained elsewhere in this Agreement shall not apply to the transactions effected pursuant to this clause (i); and

(ii) if such Incremental Revolving Facility establishes a New Incremental Revolving Facility, then (A) the borrowing and repayment (except (x) payments of interest and fees at different rates on the Revolving Facilities (and related outstandings), (y) repayments required on the Maturity Date of any Revolving Facility and (z) as provided in clause (C) below) of Revolving Loans with respect to any Revolving Facility after the effective date of such Incremental Revolving Facility shall be made on a pro rata basis with all other Revolving Facilities, (B) all Letters of Credit shall be participated on a pro rata basis by all Revolving Lenders and (C) unless the relevant Additional Lenders elect payments and/or Commitment reductions on a less-than-pro rata basis, any permanent repayment of Revolving Loans with respect to, and reduction and termination of Revolving Credit Commitments under, any Revolving Facility after the effective date of such Incremental Revolving Facility shall be made on a pro rata basis with all other Revolving Facilities.

(f) On the date of effectiveness of any Incremental Revolving Facility, the maximum amount of LC Exposure permitted hereunder shall increase by an amount, if any, agreed upon by Administrative Agent, the relevant Issuing Bank and the Parent Borrower.

(g) The Lenders hereby irrevocably authorize the Administrative Agent to enter into any Incremental Facility Agreement and/or any amendment to any other Loan Document as may be necessary in order to establish new Classes or sub-Classes in respect of Loans or commitments pursuant to this Section 2.22 and such technical amendments as may be necessary or appropriate in the reasonable opinion of the Administrative Agent and the Parent Borrower in connection with the establishment of such new Classes or sub-Classes, in each case on terms consistent with this Section 2.22.

(h) This Section 2.22 shall supersede any provision in Section 2.18 or 9.02 to the contrary.

Section 2.23. Extensions of Loans and Revolving Commitments.

(a) Notwithstanding anything to the contrary in this Agreement, pursuant to one or more offers (each, an “Extension Offer”) made from time to time by the Parent Borrower to all Lenders holding Loans of the Parent Borrower of any Class or Commitments with respect to any Class, in each case on a pro rata basis (based on the aggregate outstanding principal amount of the respective Loans or Commitments of such Class) and on the same terms to each such Lender, the Parent Borrower is hereby permitted to consummate transactions with any individual Lender who accepts the terms contained in the relevant Extension Offer to extend the Maturity Date of such Lender’s Loans and/or Commitments of such Class and/or otherwise modify the terms of such Loans and/or Commitments pursuant to the terms of the relevant Extension Offer (including by increasing the interest rate or fees payable (or adding other pricing terms, including premiums, discounts, MFN terms or rate floors) in respect of such Loans and/or Commitments (and related outstandings) and/or modifying the amortization schedule, if any, in respect of such Loans) (each, an “Extension”), so long as the following terms are satisfied:

(i) except as to (A) interest rates, fees and other pricing terms (including rate floors, premiums, discounts and any MFN terms) and final maturity (which shall, subject to immediately succeeding clause (iii), be determined by the Parent Borrower and any Lender who agrees to an Extension of its Revolving Credit Commitments and set forth in the relevant Extension Offer) and (B) covenants or other provisions applicable only to periods after the Latest Maturity Date (in each case, as of the date of such Extension), the Revolving Credit Commitment of any Lender who agrees to an extension with respect to such Commitment (an “Extended Revolving Credit Commitment”; and the Loans thereunder, “Extended Revolving Loans”), and the related outstandings, shall constitute a revolving commitment (or related outstandings, as the case may be) with the same terms (or terms not more favorable to extending Lenders) as the Class of Revolving Credit Commitments subject to the relevant Extension Offer (and related outstandings) provided hereunder; provided that to the extent more than one Revolving Facility exists after giving effect to any such Extension, (x) the borrowing and repayment (except for (1) payments of interest and fees at different rates on the Revolving Facilities (and related outstandings), (2) repayments required upon the Maturity Date of any Revolving Facility and (3) as provided in clause (z) below) of Revolving Loans with respect to any Revolving Facility after the effective date of such Extended Revolving Credit Commitments shall be made on a pro rata basis with all other Revolving Facilities, (y) all Letters of Credit shall be participated on a pro rata basis by all Revolving Lenders and (z) unless the relevant Lenders elect payments and/or Commitment reductions on a less-than-pro rata basis, any permanent repayment of Revolving Loans with respect to, and reduction and termination of Revolving Credit Commitments under, any Revolving Facility after the effective date of such Extended Revolving Credit Commitment shall be made on a pro rata basis with all other Revolving Facilities; provided, further, that any representations and warranties, affirmative and negative covenants (including financial covenants) and events of default applicable to such Class of Extended Revolving Credit Commitments Loans that also expressly apply to (and for the benefit of) the Class of Revolving Credit Commitments subject to the Extension Offer and each other Class of Revolving Credit Commitments hereunder may be more favorable to the lenders of the applicable Class of Extended Revolving Credit Commitments than those originally applicable to the Class of Revolving Credit Commitments subject to the Extension Offer;

(ii) except as to (A) interest rates, fees, other pricing terms (including rate, discounts, floors and MFN terms), amortization, final maturity date, premiums, required prepayment dates and participation in prepayments (which shall, subject to immediately succeeding clauses (iii), (iv) and (v), be determined by the Parent Borrower and any Lender who agrees to an Extension of its Term Loans and set forth in the relevant Extension Offer) and (B) covenants or other provisions applicable only to periods after the Latest Maturity Date (in each case, as of the date of such Extension), the Term Loans of any Lender extended pursuant to any Extension (any such extended Term Loans, the “Extended Term Loans”) shall have the same terms (or terms not more favorable to extending Lenders) as the Class of Term Loans subject to the relevant Extension Offer; provided, however, that any representations and warranties, affirmative and negative covenants (including financial covenants) and events of default applicable to such Class of Extended Term Loans that also expressly apply to (and for the benefit of) the Class of Term Loans subject to the Extension Offer and each other Class of Term Loans hereunder may be more favorable to the lenders of the applicable Class of Extended Term Loans than those originally applicable to the Class of Term Loans subject to the Extension Offer;

(iii) (x) the final Maturity Date of any Class of Extended Term Loans may be no earlier than the Maturity Date of the Class of Term Loans subject to such Extension at the time of Extension and (y) no Class of Extended Revolving Credit Commitments or Extended Revolving Loans may have a final Maturity Date earlier than (or require commitment reductions prior to) the Latest Maturity Date applicable to any then-existing Revolving Facility;

(iv) the Weighted Average Life to Maturity of any Class of Extended Term Loans shall be no shorter than the remaining Weighted Average Life to Maturity of the Class of Term Loans subject to such Extension;

(v) any Class of Extended Term Loans may participate on a pro rata basis or a less than pro rata basis (but not greater than a pro rata basis) in any mandatory prepayment (but, for purposes of clarity, not scheduled amortization payments) in respect of the Term Loans, in each case as specified in the relevant Extension Offer;

(vi) if the aggregate principal amount of Loans or Commitments, as the case may be, in respect of which Lenders have accepted the relevant Extension Offer exceeds the maximum aggregate principal amount of Loans or Commitments, as the case may be, offered to be extended by the Parent Borrower pursuant to such Extension Offer, then the Loans or Commitments, as the case may be, of such Lenders shall be extended ratably up to such maximum amount based on the respective principal amounts (but not to exceed the applicable Lender's actual holdings of record) with respect to which such Lenders have accepted such Extension Offer;

(vii) unless the Administrative Agent otherwise agrees, each Extension shall be in a minimum amount of \$1,000,000;

(viii) any applicable Minimum Extension Condition must be satisfied or waived by the Parent Borrower;

(ix) any documentation in respect of any Extension shall be consistent with the foregoing; and

(x) no Extension of any Revolving Facility shall be effective as to the obligations of any Issuing Bank with respect to Letters of Credit without the consent of such Issuing Bank (such consent not to be unreasonably withheld or delayed) (and, in the absence of such consent, all references herein to Latest Revolving Credit Maturity Date shall be determined, when used in reference to such Issuing Bank, as applicable, without giving effect to such Extension).

(b) (i) No Extension consummated in reliance on this Section 2.23 shall constitute a voluntary or mandatory prepayment for purposes of Section 2.11, (ii) the scheduled amortization payments (insofar as such schedule affects payments due to Lenders participating in the relevant Class) set forth in Section 2.10 shall be adjusted to give effect to any Extension of any Class of Loans and/or Commitments and (iii) except as set forth in clause (a)(vii) above, no Extension Offer is required to be in any minimum amount or any minimum increment; provided that the Parent Borrower may at its election specify as a condition (a "Minimum Extension Condition") to the consummation of any Extension that a minimum amount (to be specified in the relevant Extension Offer in the Parent Borrower's sole discretion) of Loans or Commitments (as applicable) of any or all applicable tranches be extended; it being understood that the Parent Borrower may, in its sole discretion, waive any such Minimum Extension Condition. The Administrative Agent and the Lenders hereby consent to the transactions contemplated by this Section 2.23 (including, for the avoidance of doubt, the payment of any interest, fees or premium in respect of any Extended Term Loans and/or Extended Revolving Credit Commitments on such terms as may be set forth in the relevant Extension Offer) and hereby waive the requirements of any provision of this Agreement (including Sections 2.10, 2.11 and/or 2.18) or any other Loan Document that may otherwise prohibit any such Extension or any other transaction contemplated by this Section.

(c) Subject to any consent required in Section 2.23(a)(x), no consent of any Lender or the Administrative Agent shall be required to effectuate any Extension, other than the consent of each Lender agreeing to such Extension with respect to one or more of its Loans and/or Commitments of any Class (or a portion thereof). All Extended Term Loans and Extended Revolving Credit Commitments and all obligations in respect thereof shall constitute Secured Obligations under this Agreement and the other Loan Documents that are secured by the Collateral and guaranteed on a pari passu basis with all other applicable Secured Obligations under this Agreement and the other Loan Documents. The Lenders hereby irrevocably authorize the Administrative Agent to enter into any Extension Amendment and any amendment to any of the other Loan Documents with the Loan Parties as may be necessary in order to establish new Classes or sub-Classes in respect of Loans or Commitments so extended and such technical amendments as may be necessary or appropriate in the reasonable opinion of the Administrative Agent and the Borrower in connection with the establishment of such new Classes or sub-Classes, in each case on terms consistent with this Section 2.23.

(d) In connection with any Extension, the Parent Borrower shall provide the Administrative Agent at least five Business Days' (or such shorter period as may be agreed by the Administrative Agent) prior written notice thereof, and shall agree to such procedures (including regarding timing, rounding and other adjustments and to ensure reasonable administrative management of the credit facilities hereunder after such Extension (including mechanics to permit conversions, cashless rollovers and exchanges by Lenders and other repayments and reborrowings of Loans of Lenders agreeing to such Extension or non-accepting Lenders replaced or repaid in accordance with this Section 2.23)), if any, as may be established by, or acceptable to, the Administrative Agent, in each case acting reasonably to accomplish the purposes of this Section 2.23.

(e) Any Extended Term Loan and/or Extended Revolving Credit Commitment shall be established pursuant to an Extension Amendment, which shall be consistent with the provisions set forth in this Section 2.23. As conditions precedent to the effectiveness of any Extension Amendment, (i) upon its request, the Administrative Agent shall be entitled to receive customary written opinions of counsel, as well as such reaffirmation agreements, supplements and/or amendments as it shall reasonably require, (ii) the Administrative Agent and the relevant Lenders shall be entitled to receive all fees required to be paid in respect of such Extension Amendment and (iii) the Administrative Agent shall be entitled to receive a certificate of the Parent Borrower signed by a Responsible Officer thereof certifying and attaching a copy of the resolutions adopted by the governing body of the Parent Borrower approving or consenting to such Extension Amendment (and the Extended Term Loans and/or Extended Revolving Credit Commitments borrowed or implemented thereunder).

(f) This Section 2.23 shall supersede any provision in Section 2.11, 2.18 or 9.02 to the contrary.

ARTICLE 3 REPRESENTATIONS AND WARRANTIES

Holdings and the Buyer (in each case, solely with respect to Sections 3.01, 3.02, 3.03, 3.07, 3.08, 3.09, 3.13, 3.14, 3.16 and 3.17) and the Borrowers hereby represent and warrant to the Lenders that:

Section 3.01. Organization; Powers. Holdings, the Buyer, each Borrower and each of its Restricted Subsidiaries (a) is (i) duly organized and validly existing and (ii) in good standing (to the extent such concept exists in the relevant jurisdiction) under the Requirements of Law of its jurisdiction of organization, (b) has all requisite organizational power and authority to own its assets and to carry on its business as now conducted and (c) is qualified to do business and is in good standing (to the extent such concept exists in the relevant jurisdiction) in every jurisdiction where the ownership, lease or operation of its properties or conduct of its business requires such qualification, except, in each case referred to in this Section 3.01 (other than (i) clause (a) (i) and (ii) clause (b), in each case with respect to the Borrowers) where the failure to do so, individually or in the aggregate, would not reasonably be expected to result in a Material Adverse Effect.

Section 3.02. Authorization; Enforceability. The execution, delivery and performance by each Loan Party of each Loan Document to which such Loan Party is a party are within such Loan Party's corporate or other organizational power and have been duly authorized by all necessary corporate or other organizational action of such Loan Party. Each Loan Document to which any Loan Party is a party has been duly executed and delivered by such Loan Party and is a legal, valid and binding obligation of such Loan Party, enforceable in accordance with its terms, subject to the Legal Reservations.

Section 3.03. Governmental Approvals; No Conflicts. The execution and delivery of each Loan Document by each Loan Party thereto and the performance by such Loan Party thereof (a) do not require any consent or approval of, registration or filing with, or any other action by, any Governmental Authority, except (i) such as have been obtained or made and are in full force and effect, (ii) in connection with the Perfection Requirements and (iii) such consents, approvals, registrations, filings, or other actions the failure to obtain or make which could not be reasonably expected to have a Material Adverse Effect, (b) will not violate any (i) of such Loan Party's Organizational Documents or (ii) subject to the Legal Reservations, Requirement of Law applicable to such Loan Party which violation, in the case of this clause (b)(ii), could reasonably be expected to have a Material Adverse Effect and (c) will not violate or result in a default under (i) the Holdco Loan Agreement or (ii) any other material Contractual Obligation to which such Loan Party is a party which violation, in the case of this clause (c), could reasonably be expected to result in a Material Adverse Effect.

Section 3.04. Financial Condition; No Material Adverse Effect.

(a) The Annual Financial Statements and the Quarterly Financial Statements heretofore provided to the Administrative Agent present fairly, in all material respects, the financial condition, income and cash flows of the Initial Borrower and/or Arsenal MBDD Holding, LP, as applicable, on a consolidated basis as of such dates and for such periods in accordance with GAAP, subject, in the case of the Quarterly Financial Statements, to the absence of footnotes and normal year-end adjustments.

(b) After the Closing Date, the financial statements most recently provided pursuant to Section 5.01(a) or (b), as applicable, present fairly, in all material respects, the financial condition, income and cash flows of the Parent Borrower (or its applicable Parent Company) on a consolidated basis as of such dates and for such periods in accordance with GAAP, subject, in the case of the financial statements provided pursuant to Section 5.01(a), to the absence of footnotes and normal year-end adjustments.

(c) Since the Closing Date, there have been no events, developments or circumstances that have had, or could reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

Section 3.05. Properties.

(a) As of the Closing Date, no Real Estate Asset is owned in fee simple by any Loan Party.

(b) Each Borrower and each of its Restricted Subsidiaries have good and marketable fee simple title (or similar concept in any applicable jurisdiction) to, or valid leasehold interests in, or easements or other limited property interests in, all of their respective Real Estate Assets and have good title to their respective personal property and assets, in each case, except (i) for defects in title that do not materially interfere with their ability to conduct their respective businesses as currently conducted or to utilize such properties and assets for their intended purposes or (ii) where the failure to have such title would not reasonably be expected to have a Material Adverse Effect.

(c) Each Borrower and each of its Restricted Subsidiaries own or otherwise have a license or right to use all rights in Designs, Patents, Trademarks, Domain Names, Copyrights, Software, Trade Secrets and all other intellectual property rights (“IP Rights”) reasonably necessary to conduct their respective businesses as presently conducted without, to the knowledge of any Borrower, any infringement or misappropriation of the IP Rights of third parties, except to the extent the failure to own or license or have rights to use would not, or where such infringement or misappropriation would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

Section 3.06. Litigation and Environmental Matters.

(a) There are no actions, suits or proceedings by or before any arbitrator or Governmental Authority pending against or, to the knowledge of any Borrower, threatened in writing against or affecting any Borrower or any of its Restricted Subsidiaries which would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect.

(b) Except for any matters that, individually or in the aggregate, would not reasonably be expected to result in a Material Adverse Effect, (i) no Borrower nor any of its Restricted Subsidiaries is subject to or has received written notice of any Environmental Claim or Environmental Liability or knows of any fact or circumstance that would give rise to any Environmental Liability and (ii) no Borrower nor any of its Restricted Subsidiaries has failed to comply with any Environmental Law or to obtain, maintain or comply with any Governmental Authorization required under any Environmental Law for the operation of their respective businesses.

(c) No Borrower nor any of its Restricted Subsidiaries has treated, stored, transported or Released any Hazardous Materials on, at, under or from any currently or formerly owned, leased or operated real estate or Facility in a manner that would reasonably be expected to have a Material Adverse Effect.

Section 3.07. Compliance with Laws. Each of Holdings, the Buyer, each Borrower and each of its Restricted Subsidiaries is in compliance with all Requirements of Law applicable to it or its property, except, in each case, where the failure to do so, individually or in the aggregate, would not reasonably be expected to result in a Material Adverse Effect; it being understood and agreed that this Section 3.07 shall not apply to any Requirement of Law specifically referenced in Section 3.17.

Section 3.08. Investment Company Status. No Loan Party is an “investment company” as defined in, or is required to be registered under, the Investment Company Act of 1940.

Section 3.09. Taxes. Each of Holdings, the Buyer, each Borrower and each of its Restricted Subsidiaries has timely filed or caused to be filed all Tax returns and reports required to have been filed and has paid or caused to be paid all Taxes required to have been paid by it that are due and payable (including in its capacity as a withholding agent), except (a) Taxes (or any requirement to file Tax returns with respect thereto) that are being contested in good faith by appropriate proceedings and for which the applicable Borrower or such Restricted Subsidiary, as applicable, has set aside on its books adequate reserves in accordance with GAAP or (b) to the extent that the failure to do so, individually or in the aggregate, would not reasonably be expected to result in a Material Adverse Effect.

Section 3.10. ERISA.

(a) Each Plan is in compliance in form and operation with its terms and with ERISA and the Code and all other applicable Requirements of Law, except where any failure to comply would not reasonably be expected to result in a Material Adverse Effect.

(b) No ERISA Event has occurred and is continuing that, when taken together with all other such ERISA Events, would reasonably be expected to result in a Material Adverse Effect.

(c) There exists no Unfunded Pension Liability with respect to any Plan, except as would not have a Material Adverse Effect.

Section 3.11. Disclosure.

(a) As of the Closing Date, and with respect to information relating to the Target and its subsidiaries, to the knowledge of any Borrower, all written information (other than the Projections, other forward-looking information and information of a general economic or industry-specific nature) concerning Holdings, the Buyer, any Borrower and their respective subsidiaries that was included in the Information Memorandum or otherwise prepared by or on behalf of Holdings, any Borrower or their respective subsidiaries or their respective representatives and made available to any Initial Lender or the Administrative Agent in connection with the Transactions on or before the Closing Date, when taken as a whole, did not, when furnished, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements contained therein not materially misleading in light of the circumstances under which such statements are made (after giving effect to all supplements and updates thereto from time to time prior to the Closing Date).

(b) The Projections have been prepared in good faith based upon assumptions believed by the Parent Borrower to be reasonable at the time furnished (it being recognized that such Projections are as to future events, are not to be viewed as facts and are subject to significant uncertainties and contingencies many of which are beyond the Parent Borrower’s control, that no assurance can be given that any particular financial projections will be realized, that actual results may differ from projected results and that such differences may be material).

Section 3.12. Solvency. As of the Closing Date, immediately after the consummation of the Transactions to occur on the Closing Date and the incurrance of Indebtedness and obligations on the Closing Date in connection with this Agreement and the Transactions, the Parent Borrower and its Restricted Subsidiaries, on a consolidated basis, are Solvent.

Section 3.13. Capitalization and Subsidiaries. Schedule 3.13 sets forth, in each case as of the Closing Date, (a) a correct and complete list of the name of each subsidiary of Holdings and the ownership interest therein held by Holdings or its applicable subsidiary and (b) the type of entity of Holdings and each of its subsidiaries.

Section 3.14. Security Interest in Collateral. Subject to the terms of the last paragraph of Section 4.01 and the Legal Reservations, the Collateral Documents create legal, valid and enforceable Liens on all of the Collateral in favor of the Administrative Agent, for the benefit of itself and the other Secured Parties, and upon the satisfaction of the applicable Perfection Requirements, such Liens constitute perfected first-priority Liens (subject to Permitted Liens) on the Collateral (to the extent such Liens are required to be perfected under the terms of the Loan Documents and limited to the actions described in the Perfection Requirements) securing the Secured Obligations, in each case as and to the extent set forth therein.

Section 3.15. Labor Disputes. Except as individually or in the aggregate would not reasonably be expected to have a Material Adverse Effect, (a) there are no strikes, lockouts or slowdowns against the any Borrower or any of its Restricted Subsidiaries pending or, to the knowledge of any Borrower or any of its Restricted Subsidiaries, threatened and (b) the hours worked by and payments made to employees of any Borrower and its Restricted Subsidiaries have not been in violation of the Fair Labor Standards Act or any other applicable Requirements of Law dealing with such matters.

Section 3.16. Federal Reserve Regulations. No part of the proceeds of any Loan or any Letter of Credit have been used, whether directly or indirectly, for any purpose that results in a violation of the provisions of Regulation U or Regulation X.

Section 3.17. Economic Sanctions, Anti-Terrorism and Anti-Corruption Laws.

(a) None of Holdings, the Initial Borrower, any Borrower nor any of its Restricted Subsidiaries is subject to any US sanctions administered by the Office of Foreign Assets Control of the US Treasury Department (“OFAC”).

(b) Except to the extent that any such sanction could not reasonably be expected to have a Material Adverse Effect, to the knowledge of any Borrower, no director, officer, agent or employee of Holdings, the Buyer, any Borrower or any of its Restricted Subsidiaries is subject to any US sanctions administered OFAC.

(c) Except to the extent that the relevant violation could not reasonably be expected to have a Material Adverse Effect, to the extent applicable, each Loan Party is in compliance with (i) the USA PATRIOT Act and (ii) each Anti-Terrorism Law.

(d) Except to the extent that the relevant violation could not reasonably be expected to have a Material Adverse Effect, none of Holdings, the Buyer, any Borrower or any of its Restricted Subsidiaries nor, to the knowledge of any Borrower, any director, officer, agent or employee of any of the foregoing, has taken any action, directly or indirectly, that would result in a violation by any such Person of the US Foreign Corrupt Practices Act of 1977 (the “FCPA”), including making any offer, payment, promise to pay or authorization or approval of the payment of any money, or other property, gift, promise to give or authorization of the giving of anything of value, directly or indirectly, to any “foreign official” (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in each case in contravention of the FCPA.

(e) None of Holdings, the Buyer, any Borrower or any of its Restricted Subsidiaries will, directly, or to its knowledge, indirectly, (i) use or make available the proceeds of any Loan or Letter of Credit for the purpose of financing the activities of any Person that is subject to sanctions administered by OFAC or any Anti-Terrorism Law, except to the extent the same is licensed or otherwise approved, as applicable, by OFAC and/or any other applicable agency of the U.S. government having similar authority or (ii) use the proceeds of any Loan or Letter of Credit for the purpose of violating the FCPA or the PATRIOT Act.

Section 3.18. Senior Indebtedness. The Obligations constitute “Senior Indebtedness” (or any comparable term) under and as defined in the documentation governing any Junior Indebtedness that is subordinated to the Obligations.

Section 3.19. Use of Proceeds. The Borrowers shall use the proceeds of (a) the Initial Term Loans to finance the Transactions (including to pay Transaction Costs), (b) the Revolving Loans on the Closing Date to pay a portion of the Transaction Costs and on and after the Effective Date for working capital and general corporate purposes (including any purpose not prohibited by this Agreement) and (c) any Incremental Facility for working capital and other general corporate purposes, including the financing of Permitted Acquisitions, other Investments and any other use not prohibited by this Agreement.

ARTICLE 4 CONDITIONS

Section 4.01. Closing Date. The obligations of (i) each Lender to make Loans and (ii) each Issuing Bank to issue Letters of Credit shall not become effective until the date on which each of the following conditions is satisfied (or waived in accordance with Section 9.02):

(a) Credit Agreement and Loan Documents. The Administrative Agent (or its counsel) shall have received from each Loan Party party thereto (i) a counterpart signed by such Loan Party (or written evidence satisfactory to the Administrative Agent (which may include a copy transmitted by facsimile or other electronic method) that such party has signed a counterpart) of (A) this Agreement, (B) the Security Agreement, (C) any Intellectual Property Security Agreement, (D) the Loan Guaranty, and (E) any Promissory Note requested by a Lender at least three Business Days prior to the Closing Date and (ii) a Borrowing Request as required by Section 2.03.

(b) Legal Opinion. The Administrative Agent shall have received, on behalf of itself, the Lenders and each Issuing Bank, a customary written opinion of Simpson Thacher & Bartlett LLP, in its capacity as New York counsel to the Loan Parties on the Closing Date dated the Closing Date and addressed to the Administrative Agent and each Lender and Issuing Bank as of the Closing Date.

(c) Financial Statements. The Administrative Agent shall have received (i) an audited consolidated balance sheet and audited consolidated statements of operations, comprehensive loss, partners’ equity and cash flows of the Target (or the direct parent company thereof) as of and for the Fiscal Years ended December 31, 2016, December 31, 2015 and December 31, 2014 (collectively, the “Annual Financial Statements”) and (ii) an unaudited consolidated balance sheet and unaudited consolidated statements of income, operations, comprehensive loss, partners’ equity and cash flows of the Target (or the direct parent company thereof) as of and for the Fiscal Quarter ended March 31, 2017 (the “Quarterly Financial Statements”).

(d) Secretary’s Certificate and Good Standing Certificates. The Administrative Agent shall have received (i) a certificate of each Loan Party, dated the Closing Date and executed by a secretary, assistant secretary or other Responsible Officer thereof, which shall (A) certify that attached thereto are (x) a true and complete copy of the certificate or articles of incorporation, formation or organization of such Loan Party certified by the relevant authority of its jurisdiction of organization, which certificate or articles of incorporation, formation or organization have not been amended (except as attached thereto) since the date reflected thereon, (y) a true and correct copy of the by-laws or operating, management, partnership or similar agreement of such Loan Party, together with all amendments thereto as of the Closing Date, which by-laws or operating, management, partnership or similar agreement are in full force and effect, and (z) a true and complete copy of the resolutions or written consent, as applicable, of its board of directors, board of managers, sole member or other applicable governing body authorizing the execution and delivery of the Loan Documents, which resolutions or consent have not been modified, rescinded or amended (other than as attached thereto) and are in full force and effect, and (B) identify by name and title and bear the signatures of the officers, managers, directors or other authorized signatories of such Loan Party authorized to sign the Loan Documents to which such Loan Party is a party on the Closing Date and (ii) a good standing (or equivalent) certificate for such Loan Party from the relevant authority of its jurisdiction of organization, dated as of a recent date.

(e) Representations and Warranties. The (i) Specified Acquisition Agreement Representations shall be true and correct to the extent required by the definition thereof and (ii) the Specified Representations shall be true and correct in all material respects on and as of the Closing Date; provided that (A) in the case of any Specified Representation which expressly relates to a given date or period, such representation and warranty shall be true and correct in all material respects as of the respective date or for the respective period, as the case may be and (B) if any Specified Representation is qualified by or subject to a “material adverse effect”, “material adverse change” or similar term or qualification, such Specified Representation shall be true and correct in all respects.

(f) Fees. Prior to or substantially concurrently with the funding of the Initial Term Loans hereunder, the Administrative Agent shall have received (i) all fees required to be paid by the Initial Borrower on the Closing Date pursuant to the Fee Letters and (ii) all expenses required to be paid by the Initial Borrower (including the reasonable fees and expenses of legal counsel that are payable under the “commitment letter” relating to the Credit Facilities) for which invoices have been presented at least three Business Days prior to the Closing Date or such later date to which the Initial Borrower may agree, in each case on or before the Closing Date, which amounts may be offset against the proceeds of the Loans.

(g) Refinancing. Prior to or substantially concurrently with the initial funding of the Loans hereunder, all principal, accrued and unpaid interest, fees, premium, if any, and other amounts outstanding under and with respect to the Target Credit Agreement (other than (i) contingent obligations not then due and payable and that by their terms survive the termination of the Target Credit Agreement and (ii) certain existing letters of credit outstanding under the Target Credit Agreement that on the Closing Date will be grandfathered into, or backstopped by Letters of Credit under, the Initial Revolving Facility or cash collateralized in a manner reasonably satisfactory to the issuing banks with respect thereto) will be repaid in full and all commitments to extend credit under the Target Credit Agreement will be terminated and any security interests and guarantees in connection therewith shall be terminated and/or released (the transactions described in this clause (g), together, collectively, the “Refinancing”).

(h) Equity Contribution. Prior to or substantially concurrently with the funding of the Initial Term Loans hereunder, (i) Holdings shall have received the Equity Contribution (to the extent not otherwise applied to finance the Transactions) and (ii) the proceeds of the Holdco Facility in an amount not less than \$100,000,000 shall have been funded in all material respects in accordance with the terms of the Holdco Facility (after giving effect to any modifications, amendments, supplements, consents, waivers or requests related thereto, other than those modifications, amendments, supplements, consents, waivers or requests (including the effects of any such requests) that are materially adverse to the interests of the Lenders); provided that to the extent any or all of the proceeds of the Holdco Facility are not funded in the amounts described above, this clause (h) will be satisfied if the amount of such deficiency is funded on a dollar-for-dollar basis through additional Equity Contributions.

(i) Solvency. The Administrative Agent shall have received a certificate in substantially the form of Exhibit M from a senior authorized financial executive (or other officer with equivalent duties) of Certara Holdco, Inc. dated as of the Closing Date and certifying as to the matters set forth therein.

(j) Perfection Certificate. The Administrative Agent shall have received a completed Perfection Certificate dated as of the Closing Date and signed by a Responsible Officer of each Loan Party, together with all attachments contemplated thereby.

(k) Pledged Stock and Pledged Notes. Subject to the final paragraph of this Section 4.01, the Administrative Agent shall have received (i) the certificates representing any Capital Stock listed on Schedule 3 to the Perfection Certificate dated as of the Closing Date, together with an undated stock power or similar instrument of transfer for each such certificate endorsed in blank by a duly authorized officer of the pledgor thereof, and (ii) any Material Debt Instrument required to be pledged pursuant to the Security Agreement endorsed (without recourse) in blank (or accompanied by a transfer form endorsed in blank) by the pledgor thereof.

(l) Filings, Registrations and Recordings. Subject to the last paragraph of this Section 4.01, each document (including any UCC financing statement) required by any Collateral Document or under any applicable Requirement of Law (but limited to actions described in the Perfection Requirements) to be filed, registered or recorded in order to create in favor of the Administrative Agent, for the benefit of the Secured Parties, a perfected, first-priority (subject to Permitted Liens) Lien on the Collateral required to be delivered on the Closing Date pursuant to such Collateral Document, shall be in proper form for filing, registration or recordation and provided to the Administrative Agent for filing.

(m) Acquisition. Substantially concurrently with the initial funding of the Loans hereunder, the Acquisition shall be consummated in all material respects in accordance with the terms of the Acquisition Agreement, but without giving effect to any amendment, waiver or consent by the Initial Borrower that is materially adverse to the interests of the Arrangers or the Initial Lenders in their respective capacities as such without the consent of the Arrangers, such consent not to be unreasonably withheld, delayed or conditioned.

(n) Closing Date Material Adverse Effect. Except as provided in the Disclosure Schedules (as defined in the Acquisition Agreement), since May 31, 2017 no Closing Date Material Adverse Effect has occurred (it being understood that the Disclosure Schedules are arranged in sections corresponding to the sections contained in the Acquisition Agreement merely for convenience, and the disclosure of an item in one section of the Disclosure Schedules as an exception to a particular covenant, agreement, representation or warranty will be deemed adequately disclosed as an exception with respect to all other covenants, agreements, representations and warranties to the extent that the relevance of such item to such other covenants, representations, agreements or warranties is reasonably apparent on its face, notwithstanding the presence or absence of an appropriate cross reference thereto).

(o) USA PATRIOT Act. No later than three Business Days in advance of the Closing Date, the Administrative Agent shall have received all documentation and other information reasonably requested with respect to any Loan Party in writing by the Administrative Agent (including on behalf of the Initial Lenders) or the Arrangers at least ten Business Days in advance of the Closing Date, which documentation or other information is required by regulatory authorities under applicable "know your customer" and anti-money laundering rules and regulations, including the USA PATRIOT Act.

For purposes of determining whether the conditions specified in this Section 4.01 have been satisfied on the Closing Date, by funding the Loans hereunder, the Administrative Agent and each Lender shall be deemed to have consented to, approved or accepted, or to be satisfied with, each document or other matter required hereunder to be consented to or approved by or acceptable or satisfactory to the Administrative Agent or such Lender, as the case may be.

Notwithstanding the foregoing, to the extent that the Lien on any Collateral is not or cannot be created or perfected on the Closing Date (other than (a) by the execution and delivery of the Security Agreement by each Loan Party, (b) a Lien on Collateral that is of the type that may be perfected by the filing of a financing statement under the UCC and (c) a Lien on the Capital Stock of the Initial Borrower and each Restricted Subsidiary required to be pledged pursuant to the Collateral and Guarantee Requirement (other than the Initial Borrower or any subsidiary thereof the certificate evidencing the Capital Stock of which has not been delivered to the Initial Borrower prior to the Closing Date, to the extent the Initial Borrower has used commercially reasonable efforts to procure delivery thereof) that may be perfected on the Closing Date by the delivery of a stock or equivalent certificate (together with a stock power or similar instrument endorsed in blank for the relevant certificate)), in each case after the Initial Borrower's use of commercially reasonable efforts to do so without undue burden or expense, then the creation and/or perfection of such Lien shall not constitute a condition precedent to the availability or initial funding of the Credit Facilities on the Closing Date.

Section 4.02. Each Credit Extension. After the Closing Date, the obligation of each Revolving Lender or Issuing Bank to make any Credit Extension is subject to the satisfaction of the following conditions:

(a) (i) In the case of any Borrowing, the Administrative Agent shall have received a Borrowing Request as required by Section 2.03 or (ii) in the case of the issuance of any Letter of Credit, the applicable Issuing Bank and the Administrative Agent shall have received a Letter of Credit Request as required by Section 2.05(b).

(b) The representations and warranties of the Loan Parties set forth in this Agreement and the other Loan Documents shall be true and correct in all material respects on and as of the date of any such Credit Extension with the same effect as though such representations and warranties had been made on and as of the date of such Credit Extension; provided that to the extent that any representation and warranty specifically refers to a given date or period, it shall be true and correct in all material respects as of such date or for such period.

(c) At the time of and immediately after giving effect to the applicable Credit Extension, no Event of Default or Default has occurred and is continuing.

Each Credit Extension after the Closing Date shall be deemed to constitute a representation and warranty by the Parent Borrower on the date thereof as to the matters specified in paragraphs (b) and (c) of this Section 4.02; provided, however, that the conditions set forth in this Section 4.02 shall not apply to (A) any Incremental Loan and/or (B) any Credit Extension under any Refinancing Amendment and/or Extension Amendment unless in each case the lenders in respect thereof have required satisfaction of the same in the applicable Incremental Facility Agreement, Refinancing Amendment or Extension Amendment, as applicable; it being understood and agreed that Event of Default under Section 7.01(a), 7.01(f) or 7.01(g) shall be continuing at the time of the borrowing of any Incremental Loan.

ARTICLE 5 AFFIRMATIVE COVENANTS

From the Closing Date until the date on which all Revolving Credit Commitments have expired or terminated and the principal of and interest on each Loan and all fees, expenses and other amounts payable under any Loan Document (other than contingent indemnification obligations for which no claim or demand has been made) have been paid in full in Cash and all Letters of Credit have expired or have been terminated (or have been collateralized or back-stopped by a letter of credit or are otherwise no longer subject to this Agreement in a manner reasonably satisfactory to the relevant Issuing Bank) and all LC Disbursements have been reimbursed (such date, the "Termination Date"), each of Holdings and the Buyer (in each case, solely with respect to Sections 5.02, 5.03, 5.12 and 5.14) and the Borrowers hereby covenant and agree with the Lenders that:

Section 5.01. Financial Statements and Other Reports. The Parent Borrower will deliver to the Administrative Agent for delivery by the Administrative Agent to each Lender:

(a) Quarterly Financial Statements. As soon as available, and in any event within 45 days (or, in the case of (x) the Fiscal Quarter ending September 30, 2017 and (y) the first two full Fiscal Quarters ending after the Closing Date, 75 days) after the end of each of the first three Fiscal Quarters of each Fiscal Year, commencing with the Fiscal Quarter ending September 30, 2017, the unaudited consolidated balance sheet of the Parent Borrower as at the end of such Fiscal Quarter and the related unaudited consolidated statements of income, operations, comprehensive loss, partners' equity and cash flows of the Parent Borrower for such Fiscal Quarter and for the period from the beginning of the then current Fiscal Year to the end of such Fiscal Quarter, and setting forth, in reasonable detail, in comparative form the corresponding figures for the corresponding periods of the previous Fiscal Year, all in reasonable detail, together with a Responsible Officer Certification (which may be included in the applicable Compliance Certificate) with respect thereto; provided, however, that such financial statements shall not be required to reflect any purchase accounting adjustments relating to the Acquisition or any other acquisition consummated after the Closing Date until after the delivery of financial statements pursuant to Section 5.01(b) which include such adjustments.

(b) Annual Financial Statements. As soon as available, and in any event within 120 days (or, in the case of the Fiscal Year ending December 31, 2017, 150 days) after the end of each Fiscal Year ending after the Closing Date, (i) the audited consolidated balance sheet of the Parent Borrower as at the end of such Fiscal Year and the related consolidated statements of operations, comprehensive loss, partners' equity and cash flows of the Parent Borrower for such Fiscal Year and setting forth, in reasonable detail, in comparative form the corresponding figures for the previous Fiscal Year and (ii) with respect to such consolidated financial statements, a report thereon of an independent certified public accountant of recognized national standing (which report shall be unqualified as to "going concern" and scope of audit (except for any such qualification pertaining to the maturity of any Indebtedness occurring within 12 months of the relevant audit or any potential inability to satisfy any financial covenant on a future date or in a future period), and shall state that such consolidated financial statements fairly present, in all material respects, the consolidated financial position of the Parent Borrower as at the dates indicated and its income and cash flows for the periods indicated in conformity with GAAP).

(c) Compliance Certificate. Together with each delivery of financial statements of the Parent Borrower pursuant to Section 5.01(a) or (b), (i) a duly executed and completed Compliance Certificate and (ii) a summary of the pro forma adjustments necessary to eliminate the accounts of Unrestricted Subsidiaries (if any) from such financial statements;

(d) [Reserved].

(e) Notice of Default. Promptly upon any Responsible Officer of the Parent Borrower obtaining knowledge of any Default or Event of Default, a reasonably-detailed notice specifying the nature and period of existence of such Default or Event of Default and what action the Parent Borrower has taken, is taking and proposes to take with respect thereto;

(f) Notice of Litigation. Promptly upon any Responsible Officer of the Parent Borrower obtaining knowledge of (i) the institution of, or written threat of, any Adverse Proceeding not previously disclosed in writing by the Parent Borrower to the Administrative Agent, (ii) any material development in any Adverse Proceeding or (iii) the occurrence of an ERISA Event that, in the case of clauses (i) through (iii), could reasonably be expected to have a Material Adverse Effect, written notice thereof from the Parent Borrower together with such other non-privileged information as may be reasonably available to the Loan Parties to enable the Lenders to evaluate such matters;

(g) Financial Plan. As soon as available and in any event no later than 120 days (or, in the case of the Fiscal Year ending December 31, 2017, 150 days) after the beginning of each Fiscal Year, commencing with the Fiscal Year ending December 31, 2017, an annual operating budget (on a quarterly basis) prepared by management of the Parent Borrower for such Fiscal Year; provided that the requirement described in this clause (g) shall no longer apply following the consummation of a Qualifying IPO;

(h) Information Regarding Collateral. Prompt (and, in any event, within 60 days of the relevant change) written notice of any change (i) in any Loan Party's legal name, (ii) in any Loan Party's type of organization or (iii) in any Loan Party's jurisdiction of organization, in each case to the extent such information is necessary to enable the Administrative Agent to perfect or maintain the perfection and priority of its security interest in the Collateral of the relevant Loan Party, together with a certified copy of the applicable Organizational Document reflecting the relevant change;

(i) Perfection Certificate Supplement. Together with the delivery of each Compliance Certificate provided with the financial statements required to be delivered pursuant to Section 5.01(b), a Perfection Certificate Supplement;

(j) Certain Reports. Promptly upon their becoming available and without duplication of any obligations with respect to any such information that is otherwise required to be delivered under the provisions of any Loan Document, copies of (i) following a Qualifying IPO, all financial statements, reports, notices and proxy statements sent or made available generally by Holdings or its applicable Parent Company to its security holders acting in such capacity and (ii) all regular and periodic reports and all registration statements (other than amendments to any registration statement (to the extent such registration statement, in the form it became effective, is delivered to the Administrative Agent), exhibits to any registration statement and, if applicable, any registration statement on Form S-8) and prospectuses, if any, filed by Holdings or its applicable Parent Company with any securities exchange or with the SEC or any analogous Governmental Authority or private regulatory authority with jurisdiction over matters relating to securities; and

(k) Other Information. Such other certificates, reports and information (financial or otherwise) as the Administrative Agent may reasonably request from time to time regarding the financial condition or business of the Parent Borrower and its Restricted Subsidiaries; provided, however, that none of the Parent Borrower nor any Restricted Subsidiary shall be required to disclose or provide any information (a) that constitutes non-financial Trade Secrets or non-financial proprietary information of the Parent Borrower or any of its subsidiaries or any of their respective customers and/or suppliers, (b) in respect of which disclosure to the Administrative Agent or any Lender (or any of their respective representatives) is prohibited by any applicable Requirement of Law, (c) that is subject to attorney-client or similar privilege or constitutes attorney work product or (d) in respect of which the Parent Borrower or any Restricted Subsidiary owes confidentiality obligations to any third party (provided such confidentiality obligations were not entered into in contemplation of the requirements of this Section 5.01(j)).

Documents required to be delivered pursuant to this Section 5.01 may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date (i) on which the Parent Borrower (or a representative thereof) posts such documents (or provides a link thereto) at the website address listed on Schedule 9.01; provided that the Parent Borrower shall promptly notify (which notice may be by facsimile or electronic mail) the Administrative Agent of the posting of any such documents at the website address listed on Schedule 9.01 and provide to the Administrative Agent by electronic mail electronic versions (i.e., soft copies) of such documents, (ii) on which such documents are delivered by the Parent Borrower to the Administrative Agent for posting on behalf of the Parent Borrower on IntraLinks, SyndTrak or another relevant secure website, if any, to which each Lender and the Administrative Agent have access (whether a commercial, third-party website or whether sponsored by the Administrative Agent), (iii) on which such documents are faxed to the Administrative Agent (or electronically mailed to an address provided by the Administrative Agent) or (iv) with respect to any item required to be delivered pursuant to Section 5.01(j), in respect of information filed by Holdings or its applicable Parent Company with any securities exchange or with the SEC or any analogous Governmental Authority or private regulatory authority with jurisdiction over matters relating to securities (other than Form 10-Q Reports and Form 10-K reports), on which such items have been made available on the SEC website or the website of the relevant analogous governmental or private regulatory authority or securities exchange.

Notwithstanding the foregoing, the obligations in paragraphs (a) and (b) of this Section 5.01 may be satisfied with respect to any financial statements of the Parent Borrower by furnishing (A) the applicable financial statements of Holdings (or any other Parent Company) or (B) Holdings' (or any other Parent Company's), as applicable, Form 10-K or 10-Q, as applicable, filed with the SEC, in each case, within the time periods specified in such paragraphs; provided that, with respect to each of clauses (A) and (B), (i) to the extent such financial statements relate to any Parent Company, such financial statements shall be accompanied by unaudited consolidating information that summarizes in reasonable detail the differences between the information relating to such Parent Company, on the one hand, and the information relating to the Parent Borrower on a standalone basis, on the other hand, which consolidating information shall be certified by a Responsible Officer of the Parent Borrower as having been fairly presented in all material respects and (ii) to the extent such statements are in lieu of statements required to be provided under Section 5.01(b), such financial statements of Holdings (or the other relevant Parent Company) shall be accompanied by a report and opinion of an independent registered public accounting firm of nationally recognized standing (which report shall be unqualified as to "going concern" and scope of audit (except for any such qualification pertaining to the maturity of any Indebtedness occurring within the four fiscal quarter period following the relevant audit opinion or any potential inability to satisfy any financial covenant on a future date or in a future period), and shall state that such consolidated financial statements fairly present, in all material respects, the consolidated financial position of such Parent Company as at the dates indicated and its income and cash flows for the periods indicated in conformity with GAAP).

Section 5.02. Existence. Except as otherwise permitted under Section 6.07 or Section 6.11 hereof, as applicable, Holdings, the Buyer and each Borrower will, and each Borrower will cause each of its Restricted Subsidiaries to, at all times preserve and keep in full force and effect its existence and all rights, franchises, licenses and permits material to its business except, other than with respect to the preservation of the existence of each Borrower, to the extent that the failure to do so could not reasonably be expected to result in a Material Adverse Effect; provided that none of Holdings, the Buyer or any Borrower nor any of each Borrower's Restricted Subsidiaries shall be required to preserve any such existence (other than with respect to the preservation of existence of each Borrower), right, franchise, license or permit if a Responsible Officer of such Person or such Person's board of directors (or similar governing body) determines that the preservation thereof is no longer desirable in the conduct of the business of such Person, and that the loss thereof is not disadvantageous in any material respect to such Person or to the Lenders.

Section 5.03. Payment of Taxes. Holdings, the Buyer and each Borrower will, and each Borrower will cause each of its Restricted Subsidiaries to, pay all Taxes imposed upon it or any of its properties or assets or in respect of any of its income or businesses or franchises before any penalty or fine accrues thereon; provided, however, that no such Tax need be paid if (a) it is being contested in good faith by appropriate proceedings, so long as (i) adequate reserves or other appropriate provisions, as are required in conformity with GAAP, have been made therefor and (ii) in the case of a Tax which has resulted or may result in the creation of a Lien on any of the Collateral, such contest proceedings conclusively operate to stay the sale of any portion of the Collateral to satisfy such Tax or (b) failure to pay or discharge the same could not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect.

Section 5.04. Maintenance of Properties. Each Borrower will, and will cause each of its Restricted Subsidiaries to, maintain or cause to be maintained in good repair, working order and condition, ordinary wear and tear and casualty and condemnation excepted, all property reasonably necessary to the normal conduct of business of each Borrower and its Restricted Subsidiaries and from time to time will make or cause to be made all needed and appropriate repairs, renewals and replacements thereof except as expressly permitted by this Agreement or where the failure to maintain such properties or make such repairs, renewals or replacements could not reasonably be expected to have a Material Adverse Effect.

Section 5.05. Insurance. Except where the failure to do so would not reasonably be expected to have a Material Adverse Effect, each Borrower will maintain or cause to be maintained, with financially sound and reputable insurers or, other than with respect to flood insurance, with a Captive Insurance Subsidiary, such insurance coverage with respect to liabilities, losses or damage in respect of the assets, properties and businesses of each Borrower and its Restricted Subsidiaries as may customarily be carried or maintained under similar circumstances by Persons of established reputation engaged in similar businesses, in each case in such amounts (other than with respect to flood insurance, giving effect to self-insurance), with such deductibles, covering such risks and otherwise on such terms and conditions as shall be customary for such Persons, including flood insurance with respect to each Flood Hazard Property, in each case to the extent required under and in compliance with all applicable Flood Insurance Laws. Each such policy of insurance shall (a) name the Administrative Agent on behalf of the Secured Parties as an additional insured thereunder as its interests may appear and (b) to the extent available from the relevant insurance carrier, in the case of each casualty insurance policy (excluding any business interruption insurance policy), contain a lender's loss payable clause or endorsement that names the Administrative Agent, on behalf of the Secured Parties as the lender's loss payee thereunder and, to the extent available from the relevant insurance carrier after submission of a request by the applicable Loan Party to obtain the same, provide for at least 30 days' prior written notice to the Administrative Agent of any modification or cancellation of such policy (other than with respect to flood insurance covering a Flood Hazard Property which requires 45 days' prior written notice to the extent available from the relevant insurance carrier after submission of a request by the applicable Loan Party to obtain the same); provided that, to the extent that such requirements are not satisfied on the Closing Date after the Parent Borrower's commercially reasonable efforts to obtain the same, the Parent Borrower may satisfy such requirements within ninety (90) days of the Closing Date (as extended by the Administrative Agent in its reasonable discretion).

Section 5.06. Inspections. Each Borrower will, and will cause each of its Restricted Subsidiaries to, permit any authorized representative designated by the Administrative Agent to visit and inspect any of the properties of each Borrower and any of its Restricted Subsidiaries at which the principal financial records and executive officers of the applicable Person are located, to inspect, copy and take extracts from its and their respective financial and accounting records, and to discuss its and their respective affairs, finances and accounts with its and their Responsible Officers and independent public accountants (provided that the Parent Borrower (or any of its subsidiaries) may, if it so chooses, be present at or participate in any such discussion), all upon reasonable notice and at reasonable times during normal business hours; provided that (a) only the Administrative Agent on behalf of the Lenders may exercise the rights of the Administrative Agent and the Lenders under this Section 5.06, (b) except as expressly set forth in clause (c) below during the continuance of an Event of Default, (i) the Administrative Agent shall not exercise such rights more often than one time during any calendar year and (ii) only one such time per calendar year shall be at the expense of the Parent Borrower and its Restricted Subsidiaries, (c) when an Event of Default exists, the Administrative Agent (or any of its representatives or independent contractors) may do any of the foregoing at the expense of the Parent Borrower at any time during normal business hours and upon reasonable advance notice and (d) notwithstanding anything to the contrary herein, no Borrower nor any Restricted Subsidiary shall be required to disclose, permit the inspection, examination or making of copies of or taking abstracts from, or discuss any document, information or other matter (i) that constitutes non-financial trade secrets or non-financial proprietary information of any Borrower and its subsidiaries and/or any of its customers and/or suppliers, (ii) in respect of which disclosure to the Administrative Agent or any Lender (or any of their respective representatives or contractors) is prohibited by applicable Requirements of Law, (iii) that is subject to attorney-client or similar privilege or constitutes attorney work product or (iv) in respect of which each Borrower or any Restricted Subsidiary owes confidentiality obligations to any third party (provided such confidentiality obligations were not entered into in contemplation of the requirements of this Section 5.06).

Section 5.07. Maintenance of Book and Records. Each Borrower will, and will cause its Restricted Subsidiaries to, maintain proper books of record and account containing entries of all material financial transactions and matters involving the assets and business of each Borrower and its Restricted Subsidiaries that are full, true and correct in all material respects and permit the preparation of consolidated financial statements in accordance with GAAP.

Section 5.08. Compliance with Laws. Each Borrower will comply, and will cause each of its Restricted Subsidiaries to comply, with the requirements of all applicable Requirements of Law (including applicable ERISA and all Environmental Laws, sanctions laws and regulations administered by OFAC, the USA PATRIOT Act, the FCPA and/or any Anti-Terrorism Law), except to the extent that the failure of each Borrower or the relevant Restricted Subsidiary to comply therewith could not reasonably be expected to result in a Material Adverse Effect; provided that the covenant in this Section 5.08, insofar as it applies to compliance by any Person (other than any US Person) with OFAC, the USA PATRIOT Act and the FCPA, shall be subject to and limited by any Requirement of Law applicable to the relevant Person in its jurisdiction of organization.

Section 5.09. Environmental. Each Borrower shall promptly take, and shall cause each of its Restricted Subsidiaries promptly to take, any and all actions necessary to (i) cure any violation of any Environmental Law by each Borrower or its Restricted Subsidiaries, and address with appropriate corrective or remedial action any Release or threatened Release of Hazardous Material, as required of any Borrower or its Restricted Subsidiaries by any Environmental Law, in each case, that could reasonably be expected to have a Material Adverse Effect and (ii) make an appropriate response to any Environmental Claim against any Borrower or any of its Restricted Subsidiaries and discharge any obligations it may have to any Person thereunder, in each case, where failure to do so could reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

Section 5.10. Designation of Subsidiaries. The Parent Borrower may at any time after the Closing Date designate (or redesignate) any subsidiary as an Unrestricted Subsidiary or any Unrestricted Subsidiary as a Restricted Subsidiary; provided that (a) immediately before and after such designation, no Event of Default exists (including after giving effect to the reclassification of Investments in, Indebtedness of and Liens on the assets of, the applicable Restricted Subsidiary or Unrestricted Subsidiary), (b) no subsidiary may be designated as an Unrestricted Subsidiary if it is a “Restricted Subsidiary” for purposes of any third party Indebtedness with an aggregate outstanding principal amount in excess of the Threshold Amount and (c) as of the date of the designation thereof, no Unrestricted Subsidiary shall own any Capital Stock in any Restricted Subsidiary of any Borrower or hold any Indebtedness of or any Lien on any property of any Borrower or any Restricted Subsidiary. The designation of any subsidiary as an Unrestricted Subsidiary shall constitute an Investment by the Parent Borrower (or its applicable Restricted Subsidiary) therein at the date of designation in an amount equal to the portion of the fair market value of the net assets of such Restricted Subsidiary attributable to the Parent Borrower’s (or its applicable Restricted Subsidiary’s) equity interest therein as reasonably determined by the Parent Borrower in good faith (and such designation shall only be permitted to the extent such Investment is permitted under Section 6.06). The designation of any Unrestricted Subsidiary as a Restricted Subsidiary shall constitute (i) the making, incurrence or granting, as applicable, at the time of designation of any then-existing Investment, Indebtedness or Lien of such Restricted Subsidiary, as applicable and (ii) a return on any Investment by the Parent Borrower in Unrestricted Subsidiaries pursuant to the preceding sentence in an amount equal to the fair market value at the date of such designation of the Parent Borrower’s or its Restricted Subsidiary’s Investment in such Subsidiary.

Section 5.11. Use of Proceeds.

(a) The Borrowers shall use the proceeds of the Revolving Loans (i) on the Closing Date, in an aggregate principal amount of up to \$10,000,000 to finance working capital needs and the payment of Transaction Costs (not including any portion thereof described in clause (A) above) and (ii) after the Closing Date, to finance the working capital needs and other general corporate purposes of the Borrowers and their respective subsidiaries (including for capital expenditures, acquisitions, working capital and/or purchase price adjustments, the payment of transaction fees and expenses (in each case, including in connection with the Acquisition), other Investments, Restricted Payments and any other purpose not prohibited by the terms of the Loan Documents).

(b) The Initial Borrower shall use the proceeds of the Initial Term Loans solely to finance a portion of the Transactions (including the payment of Transaction Costs).

(c) It is understood and agreed that Letters of Credit may be issued (i) on the Closing Date in the ordinary course of business and to replace or provide credit support for any letter of credit, bank guarantee and/or any surety, customs, performance or similar bond of any Borrower and its subsidiaries or any of their Affiliates and/or to replace cash collateral posted by any of such Person and (ii) after the Closing Date, for general corporate purposes of any Borrower and its subsidiaries and any other purpose not prohibited by the terms of the Loan Documents.

(d) The proceeds of any Incremental Facility shall be used for working capital and other general corporate purposes of any Borrower and its subsidiaries, including the financing of Permitted Acquisitions (as defined below), other Investments and any other use not prohibited by this Agreement.

Section 5.12. Covenant to Guarantee Obligations and Provide Security.

(a) Upon (i) the formation or acquisition after the Closing Date of any Restricted Subsidiary, (ii) the designation of any Unrestricted Subsidiary as a Restricted Subsidiary or (iii) any Restricted Subsidiary that was an Excluded Subsidiary ceasing to be an Excluded Subsidiary, (x) if the event giving rise to the obligation under this Section 5.12(a) occurs during the first three Fiscal Quarters of any Fiscal Year, on or before the date on which financial statements are required to be delivered pursuant to Section 5.01(a) for the Fiscal Quarter in which the relevant formation, acquisition, designation or cessation occurred or (y) if the event giving rise to the obligation under this Section 5.12(a) occurs during the fourth Fiscal Quarter of any Fiscal Year, on or before the date that is 60 days after the end of such Fiscal Quarter (or, in the cases of clauses (x) and (y), such longer period as the Administrative Agent may reasonably agree), the Parent Borrower shall (A) cause such Restricted Subsidiary to comply with the relevant requirements set forth in the definition of "Collateral and Guarantee Requirement" and (B) upon the reasonable request of the Administrative Agent, cause the relevant Restricted Subsidiary to deliver to the Administrative Agent a signed copy of a customary opinion of counsel for such Restricted Subsidiary, addressed to the Administrative Agent, the Lenders and each Issuing Bank at such time; provided, however, that notwithstanding the foregoing, no subsidiary that is an Excluded Subsidiary shall be required to take any action described in this Section 5.12(a).

(b) Within 90 days after the acquisition by any Loan Party of any Material Real Estate Asset (other than any Excluded Asset) (or such longer period as the Administrative Agent may reasonably agree), the Parent Borrower shall notify the Administrative Agent, and, if requested by the Administrative Agent, will cause such Loan Party to take such actions as are necessary or reasonably requested by the Administrative Agent to execute, deliver and record a Mortgage with respect thereto and, in connection therewith, take or cause to be taken such further actions (including the filing and recording of financing statements, fixture filings, and other documents and such other actions or deliveries, as applicable, including the provision of title insurance policies (insuring an amount not to exceed the fair market value (as reasonably determined in good faith by the Parent Borrower) of the Material Real Estate Asset subject to the Mortgage), customary legal opinions of local counsel, surveys and appraisals (if required under the Financial Institutions Reform Recovery Act of 1989) and "Life of Loan" flood certifications and any required borrower notices under Regulation H (together with evidence of federal flood insurance for any Flood Hazard Property located in a flood hazard area (it being understood that the Administrative Agent may, in its reasonable discretion, accept any existing survey or appraisal so long as the same satisfies applicable local Requirements of Law)), in each case in form and substance reasonably acceptable to the Administrative Agent) to create a valid and subsisting first priority Lien on such Material Real Estate Asset, subject only to Liens permitted under Section 6.02; it being understood and agreed that with respect to any Material Real Estate Asset owned by any Restricted Subsidiary at the time such Restricted Subsidiary is required to become a Loan Party under Section 5.12(a) above, such Material Real Estate Asset shall be deemed to have been acquired by such Restricted Subsidiary on the first day of the time period within which such Restricted Subsidiary is required to become a Loan Party under Section 5.12(a).

(c) Notwithstanding anything to the contrary herein or in any other Loan Document, it is understood and agreed that:

(i) the Administrative Agent may grant extensions of time for the creation and perfection of security interests in, or obtaining of title insurance, legal opinions, surveys or other deliverables with respect to, particular assets or the provision of any Loan Guaranty by any Restricted Subsidiary (in connection with assets acquired, or Restricted Subsidiaries formed or acquired, after the Closing Date), and each Lender hereby consents to any such extension of time,

(ii) any Lien required to be granted from time to time pursuant to the definition of “Collateral and Guarantee Requirement” shall be subject to the exceptions and limitations set forth in the applicable Collateral Documents,

(iii) (A) perfection by control shall not be required with respect to assets requiring perfection through control agreements or other control arrangements, including deposit accounts, securities accounts and commodities accounts (other than control or possession of pledged Capital Stock (to the extent certificated) and/or Material Debt Instruments that constitute Collateral) and (B) no blocked account agreement, deposit account control agreement or similar agreement shall be required for any Deposit Account,

(iv) no Loan Party shall be required to seek any landlord lien waiver, bailee letter, estoppel, warehouseman waiver or other collateral access or similar letter or agreement,

(v) no action outside of the US shall be required in order to create or perfect any security interest in any asset of any Loan Party that is located outside of the US, and no non-US security or pledge agreement or foreign intellectual property filing, search or schedule shall be required with respect to any asset of any Loan Party,

(vi) in no event will the Collateral include any Excluded Asset (so long as such asset constitutes an Excluded Asset),

(vii) no action shall be required to perfect any Lien with respect to (A) any vehicle or other asset subject to a certificate of title, (B) letter-of-credit rights not constituting supporting obligations of other Collateral, (C) the Capital Stock of any Immaterial Subsidiary (other than any Immaterial Subsidiary that is a Loan Party), (D) the Capital Stock of any Person that is not a subsidiary, which Person, if a subsidiary, would constitute an Immaterial Subsidiary or (E) Commercial Tort Claims with a value (as reasonably estimated by the Parent Borrower) of less than \$5,000,000, in each case except to the extent that a security interest therein can be perfected by filing a UCC-1 financing statement or any analogous filing in any other jurisdiction,

(viii) notifications of receivables security to debtors of security over goods held by third parties or of security over intellectual property (other than the filing of Intellectual Property Security Agreements with the US Patent and Trademark Office and/or the US Copyright Office) will only be provided if an Event of Default is continuing and the Obligations have been accelerated in accordance with Article 7,

(ix) subject to the provisions of the Loan Documents, each Loan Party shall be free to deal with any asset in which it grants a Lien (and the proceeds thereof) in the ordinary course of its business,

(x) no grant by any Loan Party of a Lien in any intellectual property will or will be deemed to constitute a present assignment of such intellectual property,

(xi) the Collateral Documents will only operate to create Liens and will not impose new commercial obligations; it being understood and agreed that no Collateral Document will contain any additional representation, undertaking or other term unless the same are strictly required for the creation, perfection or enforcement of a security interest in the asset or assets subject thereto, and

(xii) no (A) Foreign Subsidiary, (B) Domestic Subsidiary Holdco and/or (C) Domestic Subsidiary that is a direct or indirect subsidiary of any CFC shall be required to provide a Loan Guaranty.

Section 5.13. Maintenance of Ratings. The Initial Borrower shall use commercially reasonable efforts to maintain public corporate credit and public corporate family ratings and public ratings with respect to the Initial Term Loans from each of S&P and Moody's; provided that in no event shall the Borrowers be required to maintain any specific rating with any such agency.

Section 5.14. Further Assurances. Promptly upon request of the Administrative Agent and subject to the limitations described in Section 5.12:

(a) each Borrower will, and will cause each other Loan Party to, execute any and all further documents, financing statements, agreements, instruments, certificates, notices and acknowledgments and take all such further actions (including the filing and recordation of financing statements, fixture filings, Mortgages and/or amendments thereto and other documents but limited to the Perfection Requirements and related actions), that may be required under any applicable Requirements of Law and which the Administrative Agent may reasonably request to ensure the creation, perfection and priority (or continuance thereof) of the Liens created or intended to be created under the Collateral Documents, all at the expense of the relevant Loan Parties, and

(b) each Borrower will, and will cause each other Loan Party to, (i) correct any material defect or error that may be discovered in the execution, acknowledgment, filing or recordation of any Collateral Document or other document or instrument relating to any Collateral and (ii) do, execute, acknowledge, deliver, record, re-record, file, re-file, register and re-register any and all such further acts (including notices to third parties), deeds, certificates, assurances and other instruments as the Administrative Agent may reasonably request from time to time in order to carry out more effectively the purposes of the Collateral Documents, the "Collateral and Guarantee Requirement" and Section 5.12(b).

Section 5.15. [Reserved].

Section 5.16. Annual Lender Calls. Following delivery (or, if later, required delivery) of the annual financial statements pursuant to Section 5.01(b), at the request of the Administrative Agent, the Parent Borrower will promptly host a conference call with the Lenders to review the financial information presented therein at a time selected by the Parent Borrower and reasonably acceptable to the Administrative Agent.

Section 5.17. Changes in Fiscal Periods. The Parent Borrower shall maintain a Fiscal Year-end date of December 31; provided that the Parent Borrower may, upon written notice to the Administrative Agent, change the Fiscal Year-end of the Parent Borrower to another date, in which case the Parent Borrower and the Administrative Agent will, and are hereby authorized to, make any adjustments to this Agreement that are necessary to reflect such change in Fiscal Year.

Section 5.18. Conduct of Business. The material lines of business engaged in by the Parent Borrower and its Restricted Subsidiaries shall be reasonably similar to the businesses engaged in by the Parent Borrower or any Restricted Subsidiary on the Closing Date and similar, incidental, complementary, ancillary or reasonably related businesses or reasonable extensions, developments or expansions of, the businesses conducted or proposed to be conducted by the Parent Borrower and its Restricted Subsidiaries on the Closing Date.

ARTICLE 6 NEGATIVE COVENANTS

From the Closing Date and until the Termination Date, Holdings and the Buyer (in each case, solely with respect to Section 6.11) and each Borrower covenant and agree with the Lenders that:

Section 6.01. Indebtedness. Each Borrower shall not, nor shall it permit any of its Restricted Subsidiaries to, directly or indirectly, create, incur, assume or otherwise become or remain liable with respect to any Indebtedness, except:

(a) the Secured Obligations (including any Additional Term Loans and any Additional Revolving Loans);

(b) Indebtedness of any Borrower to Holdings and/or any Restricted Subsidiary and/or of any Restricted Subsidiary to Holdings, any Borrower and/or any other Restricted Subsidiary to the extent permitted as an Investment under Section 6.06; provided that any Indebtedness of any Loan Party owing to any Restricted Subsidiary that is not a Loan Party must be unsecured and expressly subordinated to the Obligations of such Loan Party (but only to the extent any such Indebtedness is outstanding at any time after the date that is 30 days after the Closing Date or such later date as the Administrative Agent may reasonably agree and thereafter only to the extent permitted by applicable law and not giving rise to material adverse Tax consequences) on terms (i) at least as favorable to the Lenders as those set forth in the form of intercompany note attached as Exhibit O or (ii) otherwise reasonably acceptable to the Administrative Agent;

(c) Indebtedness in respect of Permitted Receivables Financings;

(d) Indebtedness arising from any agreement providing for indemnification, adjustment of purchase price or similar obligations (including contingent earn-out obligations) incurred in connection with the Transactions, any Disposition permitted hereunder, any acquisition or Investment permitted hereunder or consummated prior to the Closing Date or any other purchase of assets or Capital Stock, and Indebtedness arising from guaranties, letters of credit, bank guaranties, surety bonds, performance bonds or similar instruments securing the performance of any Borrower or any such Restricted Subsidiary pursuant to any such agreement;

(e) Indebtedness of any Borrower and/or any Restricted Subsidiary (i) pursuant to tenders, statutory obligations, bids, leases, governmental contracts, trade contracts, surety, stay, customs, appeal, performance and/or return of money bonds or other similar obligations incurred in the ordinary course of business (including relating to any litigation being contested in good faith and not constituting an Event of Default under Section 7.01(h)) and (ii) in respect of letters of credit, bank guaranties, surety bonds, performance bonds or similar instruments to support any of the foregoing items;

(f) Indebtedness of any Borrower and/or any Restricted Subsidiary in respect of Banking Services (including Indebtedness owed on a short term basis of no longer than 30 days to banks and other financial institutions incurred in the ordinary course of business of any Borrower and any of its Restricted Subsidiaries with such banks or financial institutions that arises in connection with ordinary banking arrangements to manage cash balances of any Borrower and any of its Restricted Subsidiaries) and incentive, supplier finance or similar programs;

(g) (i) Guarantees by any Borrower and/or any Restricted Subsidiary of the obligations of suppliers, customers and licensees in the ordinary course of business, (ii) Indebtedness incurred in the ordinary course of business in respect of obligations of any Borrower and/or any Restricted Subsidiary to pay the deferred purchase price of goods or services or progress payments in connection with such goods and services and (iii) Indebtedness in respect of letters of credit, bankers' acceptances, bank guaranties or similar instruments supporting trade payables, warehouse receipts or similar facilities entered into in the ordinary course of business;

(h) Guarantees by any Borrower and/or any Restricted Subsidiary of Indebtedness or other obligations of any Borrower, any Restricted Subsidiary and/or any joint venture with respect to Indebtedness otherwise permitted to be incurred pursuant to this Section 6.01 or other obligations not prohibited by this Agreement; provided that (i) in the case of any Guarantee by any Loan Party of the obligations of any non-Loan Party, the related Investment is permitted under Section 6.06 and (ii) any Guarantee by any non-Loan Party in respect of any Incurred Acquisition Debt and/or any Ratio Debt shall be subject to the Non-Loan Party Cap (without duplication of any portion of the Non-Loan Party Cap utilized by the primary obligor in respect of such Indebtedness);

(i) Indebtedness of any Borrower and/or any Restricted Subsidiary existing, or pursuant to commitments existing, on the Closing Date and described on Schedule 6.01;

(j) Indebtedness of Restricted Subsidiaries that are not Loan Parties; provided that the aggregate outstanding principal amount of such Indebtedness shall not exceed the greater of \$15,000,000 and 30.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period;

(k) Indebtedness of any Borrower and/or any Restricted Subsidiary consisting of obligations owing under incentive, supply, license or similar agreements entered into in the ordinary course of business;

(l) Indebtedness of any Borrower and/or any Restricted Subsidiary consisting of (i) the financing of insurance premiums, (ii) take-or-pay obligations contained in supply arrangements, in each case, in the ordinary course of business, and/or (iii) obligations to reacquire assets or inventory in connection with customer financing arrangements in the ordinary course of business;

(m) Indebtedness of any Borrower and/or any Restricted Subsidiary with respect to Capital Leases and purchase money Indebtedness (including Indebtedness financing the acquisition, construction, repair, replacement or improvement of fixed or capital assets (whether through the direct purchase of property or any Person owning such property)); provided that the aggregate principal amount of Indebtedness that is outstanding in reliance on this clause (m) shall not exceed the greater of \$15,000,000 and 30.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period;

(n) Indebtedness of any Person that becomes a Restricted Subsidiary (or of any Person not previously a Restricted Subsidiary that is merged or consolidated with or into any Borrower or a Restricted Subsidiary) or Indebtedness assumed in connection with an acquisition of assets permitted hereunder after the Closing Date; provided that (i) such Indebtedness (A) existed at the time such Person became a Restricted Subsidiary or the assets subject to such Indebtedness were acquired, (B) was not created or incurred in anticipation thereof and (C) is only the obligation of such Person and/or such Person's Subsidiaries, (ii) no Event of Default under Section 7.01(a), 7.01(f) or 7.01(g) exists or would result from the consummation of such acquisition and (iii) after giving effect to such acquisition on a Pro Forma Basis, the Parent Borrower is in compliance with Section 6.12(a) (regardless of whether the Revolving Facility Test Condition is then satisfied); provided further that this clause (iii) shall not apply in respect of, at the Parent Borrower's election, any such Indebtedness in an aggregate principal amount not to exceed the greater of \$15,000,000 and 30.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period;

(o) Indebtedness issued by any Borrower or any Restricted Subsidiary to any stockholder of any Parent Company or any current or former director, officer, employee, member of management, manager or consultant of any Parent Company, any Borrower or any subsidiary (or their respective Immediate Family Members) to finance the purchase or redemption of Capital Stock of any Parent Company permitted by Section 6.04(a);

(p) any Borrower and any of its Restricted Subsidiaries may become and remain liable for any Indebtedness refinancing, refunding or replacing any Indebtedness incurred under clause (a), (i), (j), (m), (n), (q), (r), (u), (w), (y), (z) or (bb) of this Section 6.01 (in any case, including any refinancing Indebtedness incurred in respect thereof, "Refinancing Indebtedness") and any subsequent Refinancing Indebtedness in respect thereof; provided that:

(i) the principal amount of such Refinancing Indebtedness does not exceed the principal amount of the Indebtedness being refinanced, refunded or replaced, except by (A) an amount equal to unpaid accrued interest and premiums (including tender premiums) thereon plus underwriting discounts and other reasonable and customary fees, commissions and expenses (including upfront fees, original issue discount or initial yield payments) incurred in connection with the relevant refinancing, refunding or replacement, (B) an amount equal to any existing commitments unutilized thereunder and (C) additional amounts permitted to be incurred pursuant to this Section 6.01 (provided that (1) any additional Indebtedness referenced in this clause (C) satisfies the other applicable requirements of this Section 6.01(p) (with additional amounts incurred in reliance on this clause (C) constituting a utilization of the relevant basket or exception pursuant to which such additional amount is permitted) and (2) if such additional Indebtedness is secured, the Lien securing such Refinancing Indebtedness is permitted pursuant to Section 6.02),

(ii) other than in the case of Refinancing Indebtedness with respect to Indebtedness incurred under clause (i), (j), (m), (n), (u), (y) or (bb), or with respect to Indebtedness incurred under clause (q) or (w), but solely (in the case of Indebtedness incurred under clause (q) or (w)) to the extent relating to Indebtedness having an outstanding principal amount equal to or in excess of the Threshold Amount, (A) such Refinancing Indebtedness has a final maturity that is equal to or later than (and, in the case of revolving Indebtedness, does not require mandatory commitment reductions, if any, prior to) the final maturity of the Indebtedness being refinanced, refunded or replaced, (B) other than with respect to revolving Indebtedness, such Refinancing Indebtedness has a Weighted Average Life to Maturity equal to or greater than the Weighted Average Life to Maturity of the Indebtedness being refinanced, refunded or replaced; provided that at the option of the Parent Borrower, Refinancing Indebtedness in an aggregate principal amount equal to the portion of the Maturity/Weighted Average Life Excluded Amount that the Parent Borrower elects to apply to this proviso may be incurred without regard to this clause (B) (with any such application reducing the Maturity/Weighted Average Life Excluded Amount on a dollar-for-dollar basis) and (C) any such Refinancing Indebtedness (i) with respect to Indebtedness incurred under clause (a) of this Section 6.01 and (ii) in the form of notes shall not have mandatory redemption features (other than customary asset sale, insurance and condemnation proceeds events, change of control offers or events of default) that could result in redemption of such Refinancing Indebtedness prior to the maturity date of the applicable Indebtedness that is being refinanced (without giving effect to any amortization or prepayments in respect of such Indebtedness that is being refinanced),

(iii) the terms of any Refinancing Indebtedness with respect to Indebtedness incurred under clause (a), (i), (q), (w) or (z) of this Section 6.01 with an original principal amount in excess of the Threshold Amount (excluding pricing, fees, discounts, premiums, rate floors, optional prepayment or redemption terms (and, if applicable, subordination terms) and, with respect to Refinancing Indebtedness incurred in respect of Indebtedness incurred under clause (a) above, security), are not, taken as a whole (as reasonably determined by the Parent Borrower), materially more restrictive on the Loan Parties than those applicable to the Indebtedness being refinanced, refunded or replaced (taken as a whole) (or, in the case of Refinancing Indebtedness with respect to clause (q) or (w), the then existing Term Loans) (other than any covenants or any other terms that are applicable only to periods after the Latest Maturity Date as of such date or any covenants or terms that are then-current market terms for the applicable type of Indebtedness) (it being understood that to the extent that any financial maintenance covenant or other term is added for the benefit of the Lenders providing the Refinancing Indebtedness, the terms and conditions of such Refinancing Indebtedness will be deemed not to be more restrictive than the terms and conditions of the Indebtedness being refinanced, refunded or replaced (or the then existing Term Loans) if such financial maintenance covenant or other term is also added for the benefit of all Classes of Loans remaining outstanding),

(iv) in the case of Refinancing Indebtedness with respect to Indebtedness incurred under clause (j), (m), (q) (solely as it relates to the Non-Loan Party Cap), (u), (w) (solely as it relates to the Non-Loan Party Cap), (y), (z) (solely as it relates to the Incremental Amount) or (bb) of this Section 6.01, the incurrence thereof shall be without duplication of any amounts outstanding in reliance on the relevant clause,

(v) except in the case of Refinancing Indebtedness incurred in respect of Indebtedness incurred under clause (a) of this Section 6.01, (A) such Indebtedness, if secured, is secured only by Permitted Liens at the time of such refinancing, refunding or replacement (it being understood that secured Indebtedness may be refinanced with unsecured Indebtedness), (B) such Refinancing Indebtedness is incurred only by the obligor or obligors in respect of the Indebtedness being refinanced, refunded or replaced, except to the extent otherwise permitted pursuant to Section 6.01 (provided that Holdings may not be the primary obligor in respect of the applicable Refinancing Indebtedness if Holdings was not the primary obligor in respect of the relevant refinanced Indebtedness) and (C) if the Indebtedness being refinanced, refunded or replaced was originally contractually subordinated to the Obligations in right of payment (or the Liens securing such Indebtedness were originally contractually subordinated to the Liens on the Collateral securing the Initial Term Loans), such Refinancing Indebtedness is contractually subordinated to the Obligations in right of payment (or the Liens securing such Refinancing Indebtedness are subordinated to the Liens on the Collateral securing the Initial Term Loans) on terms not materially less favorable (as reasonably determined by the Parent Borrower), taken as a whole, to the Lenders than those applicable to the Indebtedness (or Liens, as applicable) being refinanced, refunded or replaced, taken as a whole, and

(vi) in the case of Refinancing Indebtedness incurred in respect of Indebtedness incurred under clause (a) of this Section 6.01, (A) such Refinancing Indebtedness is pari passu or junior in right of payment and secured by the Collateral on a pari passu or junior basis with respect to the remaining Obligations hereunder or is unsecured; provided that any such Refinancing Indebtedness that is pari passu or junior with respect to the Collateral shall be subject to an Acceptable Intercreditor Agreement, (B) if the Indebtedness being refinanced, refunded or replaced is secured, it is not secured by any assets other than the Collateral, (C) if the Indebtedness being refinanced, refunded or replaced is Guaranteed, it shall not be Guaranteed by any Person other than one or more Loan Parties that Guaranteed the Indebtedness being refinanced, (D) such Refinancing Indebtedness is incurred under (and pursuant to) documentation other than this Agreement and (E) if the Indebtedness being refinanced, refunded or replaced was originally contractually subordinated to the Obligations in right of payment (or the Liens securing such Indebtedness were originally contractually subordinated to the Liens on the Collateral securing the Initial Term Loans), such Refinancing Indebtedness is contractually subordinated to the Obligations in right of payment (or the Liens securing such Refinancing Indebtedness are subordinated to the Liens on the Collateral securing the Initial Term Loans) on terms not materially less favorable (as reasonably determined by the Parent Borrower), taken as a whole, to the Lenders than those applicable to the Indebtedness (or Liens, as applicable) being refinanced, refunded or replaced, taken as a whole; it being understood and agreed that any such Refinancing Indebtedness that is pari passu with the Initial Term Loans hereunder in right of payment and secured by the Collateral on a pari passu basis with respect to the Secured Obligations hereunder that are secured on a first lien basis may participate on a pro rata basis or a less than pro rata basis (but not greater than a pro rata basis) in any mandatory prepayment in respect of the Initial Term Loans (and any Additional Term Loans then subject to ratable repayment requirements), in each case as the Parent Borrower and the relevant lender may agree;

(q) Indebtedness incurred to finance any acquisition permitted hereunder after the Closing Date (such Indebtedness incurred pursuant to this clause (q), “Incurred Acquisition Debt”); provided that:

(i) before and after giving effect to such acquisition on a Pro Forma Basis, no Event of Default under Sections 7.01(a), 7.01(f) or 7.01(g) exists,

(ii) after giving effect to such acquisition on a Pro Forma Basis, either (I) with respect to unsecured Indebtedness only, the Interest Coverage Ratio is not less than the lesser of (x) 1.75:1.00 and (y) the Interest Coverage Ratio as of the last day of the most recently ended Test Period or (II) the Total Leverage Ratio does not exceed the greater of (x) 7.00:1.00 and (y) the Total Leverage Ratio as of the last day of the most recently ended Test Period,

(iii) any such Indebtedness that is subordinated to the Obligations in right of payment shall be subject to an Acceptable Intercreditor Agreement,

(iv) the aggregate outstanding principal amount of Indebtedness that is incurred in reliance on this Section 6.01(q) or Section 6.01(w) by Restricted Subsidiaries that are not Loan Parties shall not, at any time, exceed the Non-Loan Party Cap,

(v) in the case of any such Indebtedness in an aggregate initial principal amount in excess of the Threshold Amount (other than Customary Bridge Loans), (A) the final maturity date with respect to any such Indebtedness shall be no earlier than the Latest Term Loan Maturity Date and (B) the Weighted Average Life to Maturity of any such Indebtedness shall be no shorter than the remaining Weighted Average Life to Maturity of any then-existing Class of Term Loans (without giving effect to any prepayment thereof),

(vi) in the case of any such Indebtedness in an aggregate initial principal amount in excess of the Threshold Amount (other than Customary Bridge Loans), no such Indebtedness shall have any mandatory prepayment or redemption features (other than customary asset sale events, insurance and condemnation proceeds events, change of control offers or events of default and in the case of loans, excess cash flow sweeps) that could result in prepayments or redemptions of such Indebtedness prior to the Maturity Date of any then-existing Class of Loans, and

(vii) in the case of any such Indebtedness in an aggregate initial principal amount in excess of the Threshold Amount (other than Customary Bridge Loans), the terms and conditions of such Indebtedness (excluding pricing, interest rate margins, rate floors, MFN terms, discounts, premiums, fees and (subject to clause (q)(vi) above) prepayment or redemption terms and provisions, which, in each case, shall be determined by the Parent Borrower and the lenders with respect to such Indebtedness) are not materially more restrictive on the Borrowers and its Restricted Subsidiaries (when taken as a whole) than those applicable to the then-existing Term Loans or are (when taken as a whole) otherwise reasonably acceptable to the Administrative Agent (except for covenants and other provisions applicable only to periods after the Latest Term Loan Maturity Date or Latest Revolving Credit Maturity Date, as applicable) (it being understood that to the extent that any financial maintenance covenant or other term is added for the benefit of any such Indebtedness, the terms and conditions of such Indebtedness will be deemed not to be materially more restrictive than the terms and conditions of this Agreement if such financial maintenance covenant or other term is also added for the benefit of all Classes of Loans);

(r) unsecured Indebtedness of any Borrower and/or any of its Restricted Subsidiaries in an aggregate outstanding principal amount not to exceed 100% of the amount of Net Proceeds received by any Borrower from (i) the issuance or sale of common Capital Stock or (ii) any cash contribution to its common equity with the Net Proceeds from the issuance and sale by any Parent Company of its Qualified Capital Stock or a contribution to the common equity of any Parent Company, in each case, (A) other than any Net Proceeds received from the sale of Capital Stock to, or contributions from, any Borrower or any of its Restricted Subsidiaries, (B) to the extent the relevant Net Proceeds have not otherwise been applied to make Investments, Restricted Payments or Restricted Debt Payments hereunder and (C) other than Cure Amounts;

(s) Indebtedness of any Borrower and/or any Restricted Subsidiary under any Derivative Transaction not entered into for speculative purposes;

(t) Indebtedness of any Borrower and/or any Restricted Subsidiary representing (i) deferred compensation to current or former directors, officers, employees, members of management, managers and consultants of any Parent Company, any Borrower and/or any Restricted Subsidiary in the ordinary course of business and (ii) deferred compensation or other similar arrangements in connection with the Transactions, any Permitted Acquisition or any other Investment permitted hereby;

(u) Indebtedness of any Borrower and/or any Restricted Subsidiary in an aggregate outstanding principal amount not to exceed the greater of \$22,500,000 and 45.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period;

(v) to the extent constituting Indebtedness, obligations arising under the Acquisition Agreement;

(w) additional Indebtedness of any Borrower and/or any Restricted Subsidiary so long as (such Indebtedness incurred pursuant to this clause (w), “Ratio Debt”):

(i) before and after giving effect to the incurrence of such Indebtedness on a Pro Forma Basis, no Event of Default under Section 7.01(a), 7.01(f) or 7.01(g) exists,

(ii) after giving Pro Forma Effect thereto, including the application of the proceeds thereof, either (I) the Interest Coverage Ratio is not less than 2.00:1.00 or (II) the Total Leverage Ratio does not exceed 7.00:1.00,

(iii) any such Indebtedness that is subordinated to the Obligations in right of payment shall be subject to an Acceptable Intercreditor Agreement,

(iv) the aggregate outstanding principal amount of Indebtedness that is incurred in reliance on Section 6.01(g) or this Section 6.01(w) by Restricted Subsidiaries that are not Loan Parties shall not, at any time, exceed the Non-Loan Party Cap,

(v) in the case of any such Indebtedness in an aggregate initial principal amount in excess of the Threshold Amount (other than Customary Bridge Loans), (A) the final maturity date with respect to any such Indebtedness shall be no earlier than the Latest Term Loan Maturity Date and (B) the Weighted Average Life to Maturity of any such Indebtedness shall be no shorter than the remaining Weighted Average Life to Maturity of any then-existing Class of Term Loans (without giving effect to any prepayment thereof),

(vi) in the case of any such Indebtedness in an aggregate initial principal amount in excess of the Threshold Amount (other than Customary Bridge Loans), the terms and conditions of such Indebtedness (excluding pricing, interest rate margins, rate floors, MFN terms, discounts, premiums, fees and (subject to clause (w)(vii) below) prepayment or redemption terms and provisions, which, in each case, shall be determined by the Parent Borrower and the lenders with respect to such indebtedness) are not materially more restrictive on the Borrowers and its Restricted Subsidiaries (when taken as a whole) than those applicable to the then-existing Term Loans or are (when taken as a whole) otherwise reasonably acceptable to the Administrative Agent (except for covenants and other provisions applicable only to periods after the Latest Term Loan Maturity Date or Latest Revolving Credit Maturity Date, as applicable) (it being understood that to the extent that any financial maintenance covenant or other term is added for the benefit of any such Indebtedness, the terms and conditions of such Indebtedness will be deemed not to be materially more restrictive than the terms and conditions of this Agreement if such financial maintenance covenant or other term is also added for the benefit of all Classes of Loans), and

(vii) in the case of any such Indebtedness in an aggregate initial principal amount in excess of the Threshold Amount (other than Customary Bridge Loans), no such Indebtedness shall have any mandatory prepayment or redemption features (other than customary asset sale events, insurance and condemnation proceeds events, change of control offers or events of default and in the case of loans, excess cash flow sweeps) that could result in prepayments or redemptions of such Indebtedness prior to the Maturity Date of any then-existing Class of Loans;

(x) Indebtedness of any Borrower and/or any Subsidiary Guarantor incurred to refinance the Holdco Facility (the "Holdco Refinancing Debt"); provided that (i) any such Holdco Refinancing Debt shall not (a) mature earlier than the date which is 91 days following the Latest Maturity Date as of the date such Holdco Refinancing Debt is incurred, (b) be incurred or guaranteed by any subsidiary of any Borrower that is not a Subsidiary Guarantor, (c) be subject to any interim amortization or require any payments under any mandatory prepayment, mandatory redemption or mandatory offer to purchase events until all amounts under any similar mandatory prepayment event required hereunder have been accepted or declined by the Lenders (and in any event no such mandatory prepayment, mandatory redemption events or mandatory offers to purchase shall be more onerous to the Borrowers and their respective Restricted Subsidiaries than those set forth herein), (d) have an Effective Yield in excess of 11.25% per annum or (e) contain a cross default to the Credit Facilities, (ii) such Holdco Refinancing Debt, if secured, shall not be secured by any assets other than the Collateral, (iii) such Holdco Refinancing Debt, if secured, shall be subject to an Acceptable Intercreditor Agreement, which shall provide, among other things, that such Holdco Refinancing Debt has a "silent second" lien in relation to the lien securing the Credit Facilities, (iv) the aggregate principal amount of such Holdco Refinancing Debt shall not exceed the aggregate principal amount of, and interest, fees and premiums payable in connection with the refinancing of, the Holdco Facility and (v) the terms and conditions of such Holdco Refinancing Debt (excluding pricing, interest rate margins, rate floors, discounts, premiums, fees, and prepayment or redemption terms and provisions which shall be determined by the Parent Borrower) are not materially more restrictive on the Borrowers and their respective Restricted Subsidiaries (when taken as a whole) than the terms and conditions contained herein (when taken as a whole) (except for covenants or other provisions applicable only to periods after the Latest Maturity Date) (it being understood that to the extent that any financial maintenance covenant is added for the benefit of any such indebtedness, the terms and conditions of such indebtedness will be deemed not to be more restrictive than the terms and conditions hereof if such financial maintenance covenant is also added for the benefit of all Credit Facilities);

(y) Indebtedness (including in the form of Capital Leases) of any Borrower and/or any of its Restricted Subsidiaries incurred in connection with Sale and Lease-Back Transactions permitted pursuant to Section 6.08;

(z) Incremental Equivalent Debt;

(aa) Indebtedness (including obligations in respect of letters of credit, bank guaranties, surety bonds, performance bonds or similar instruments with respect to such Indebtedness) incurred by any Borrower and/or any Restricted Subsidiary in respect of workers compensation claims, unemployment insurance (including premiums related thereto), other types of social security, pension obligations, vacation pay, health, disability or other employee benefits or property, casualty or liability insurance or self-insurance compensation claims;

(bb) Indebtedness of any Restricted Subsidiary that is not a Loan Party pursuant to a working capital or other similar line of credit facility in an aggregate outstanding principal amount not to exceed the greater of \$4,250,000 and 8.50% of Consolidated Adjusted EBITDA for the most recently ended Test Period;

(cc) Indebtedness of any Borrower and/or any Restricted Subsidiary in respect of any letter of credit or bank guarantee issued in favor of any Issuing Bank to support any Defaulting Lender's participation in Letters of Credit issued hereunder;

(dd) Indebtedness of any Borrower or any Restricted Subsidiary supported by any Letter of Credit or any other letter of credit, bank guaranty or similar instrument otherwise permitted by this Section 6.01;

(ee) unfunded pension fund and other employee benefit plan obligations and liabilities incurred by any Borrower and/or any Restricted Subsidiary in the ordinary course of business to the extent that the unfunded amounts would not otherwise cause an Event of Default under Section 7.01(i);

(ff) customer deposits and advance payments received in the ordinary course of business from customers for goods and services purchased in the ordinary course of business; and

(gg) without duplication of any other Indebtedness, all premiums (if any), interest (including post-petition interest and payment in kind interest), accretion or amortization of original issue discount, fees, expenses and charges with respect to Indebtedness of any Borrower and/or any Restricted Subsidiary otherwise permitted hereunder.

For the avoidance of doubt and notwithstanding anything herein to the contrary, the accrual of interest or dividends, the accretion of accreted value, the accretion or amortization of original issue discount and the payment of interest or dividends in the form of additional Indebtedness will not be deemed to be an incurrence of Indebtedness for purposes of this covenant.

Section 6.02. Liens. Each Borrower shall not, nor shall it permit any of its Restricted Subsidiaries to, create, incur, assume or permit or suffer to exist any Lien on or with respect to any property of any kind owned by it, whether now owned or hereafter acquired, or any income or profits therefrom, except:

(a) Liens created pursuant to the Loan Documents securing the Secured Obligations;

(b) Liens for Taxes which are (i) not then due, (ii) if due, not at such time required to be paid pursuant to Section 5.03 or (iii) being contested in accordance with Section 5.03;

(c) statutory Liens (and rights of set-off) of landlords, banks, carriers, warehousemen, mechanics, repairmen, workmen and materialmen, and other Liens imposed by applicable Requirements of Law, in each case incurred in the ordinary course of business (i) for amounts not yet overdue by more than 30 days, (ii) for amounts that are overdue by more than 30 days and that are being contested in good faith by appropriate proceedings, so long as any reserves or other appropriate provisions required by GAAP have been made for any such contested amounts or (iii) with respect to which the failure to make payment could not reasonably be expected to have a Material Adverse Effect;

(d) Liens incurred or deposits made in the ordinary course of business (i) in connection with workers' compensation, unemployment insurance and other types of social security laws and regulations, (ii) to secure the performance of tenders, statutory obligations, surety, stay, customs and appeal bonds, bids, leases, government contracts, trade contracts, performance and return-of-money bonds and other similar obligations (including those to secure health, safety and environmental obligations but exclusive of obligations for the payment of borrowed money), (iii) securing or in connection with (x) any liability for reimbursement or indemnification obligations of insurance carriers providing property, casualty, liability or other insurance to Holdings, any Borrower and its subsidiaries or (y) leases or licenses of property otherwise permitted by this Agreement and use and occupancy agreements, utility services and similar transactions entered into in the ordinary course of business and (iv) to secure obligations in respect of letters of credit, bank guaranties, surety bonds, performance bonds or similar instruments posted with respect to the items described in clauses (i) through (iii) above;

(e) Liens consisting of easements, rights-of-way, restrictions, encroachments, and other similar encumbrances or minor defects or irregularities in title, in each case which do not, in the aggregate, materially interfere with the ordinary conduct of the business of any Borrower and/or its Restricted Subsidiaries, taken as a whole;

(f) Liens consisting of any (i) interest or title of a lessor or sub-lessor under any lease of real estate permitted hereunder, (ii) landlord lien permitted by the terms of any lease, (iii) restriction or encumbrance to which the interest or title of such lessor or sub-lessor may be subject or (iv) subordination of the interest of the lessee or sub-lessee under such lease to any restriction or encumbrance referred to in the preceding clause (iii);

(g) Liens solely on any Cash earnest money or escrow deposits made by any Borrower and/or any of its Restricted Subsidiaries in connection with any letter of intent or purchase agreement with respect to any Investment or Disposition permitted hereunder;

(h) Liens or purported Liens evidenced by the filing of UCC financing statements relating solely to (i) operating leases or consignment or bailee arrangements entered into in the ordinary course of business and/or (ii) the sale of accounts receivable in the ordinary course of business (to the extent otherwise permitted herein) for which a UCC financing statement is required;

(i) Liens in favor of customs and revenue authorities arising as a matter of law to secure payment of customs duties in connection with the importation of goods;

(j) Liens in connection with any zoning, building or similar Requirement of Law or right reserved to or vested in any Governmental Authority to control or regulate the use of any or dimensions of real property or the structure thereon that does not materially interfere with the ordinary conduct of the business of any Borrower and any of its Restricted Subsidiaries, taken as a whole, including Liens in connection with any condemnation or eminent domain proceeding or compulsory purchase order;

(k) Liens securing Indebtedness permitted pursuant to Section 6.01(p) (solely with respect to the permitted refinancing of (x) Indebtedness permitted pursuant to Section 6.01(a), (i), (j), (m), (n), (q), (u), (w), (y), (z) or (bb) or (y) Indebtedness that is secured in reliance on Section 6.02(u) (without duplication of any amount outstanding thereunder)); provided that (i) no such Lien extends to any asset not covered by the Lien securing the Indebtedness that is being refinanced (it being understood that individual financings of the type permitted under Section 6.01(m) provided by any lender may be cross-collateralized to other financings of such type provided by such lender or its affiliates) and (ii) if the Lien securing the Indebtedness being refinanced was subject to intercreditor arrangements, then (A) the Lien securing any refinancing Indebtedness in respect thereof shall be subject to intercreditor arrangements that are not materially less favorable to the Secured Parties, taken as a whole, than the intercreditor arrangements governing the Lien securing the Indebtedness that is refinanced or (B) the intercreditor arrangements governing the Lien securing the relevant refinancing Indebtedness shall be set forth in an Acceptable Intercreditor Agreement;

(l) Liens existing on the Closing Date and any modification, replacement, refinancing, renewal or extension thereof; provided that any Lien securing Indebtedness or other obligations in excess of \$5,000,000 individually shall only be permitted if set forth on Schedule 6.02; provided that (i) no such Lien extends to any additional property other than (A) after-acquired property that is affixed or incorporated into the property covered by such Lien or financed by Indebtedness permitted under Section 6.01 and (B) proceeds and products thereof, accessions thereto and improvements thereon (it being understood that individual financings of the type permitted under Section 6.01(m) provided by any lender may be cross-collateralized to other financings of such type provided by such lender or its Affiliates) and (ii) any such modification, replacement, refinancing, renewal or extension of the obligations secured or benefited by such Liens, if the same constitute Indebtedness, is permitted by Section 6.01;

(m) Liens arising out of Sale and Lease-Back Transactions permitted under Section 6.08;

(n) Liens securing Indebtedness permitted pursuant to Section 6.01(m); provided that any such Lien shall encumber only the asset acquired with the proceeds of such Indebtedness and proceeds and products thereof, accessions thereto and improvements thereon (it being understood that individual financings of the type permitted under Section 6.01(m) provided by any lender may be cross-collateralized to other financings of such type provided by such lender or its Affiliates);

(o) Liens securing Indebtedness permitted pursuant to Section 6.01(n) on the relevant acquired assets or on the Capital Stock and assets of the relevant newly acquired Restricted Subsidiary or Liens otherwise existing on property at the time of its acquisition or existing on the property of any Person at the time such Person becomes a Restricted Subsidiary (including by the designation of an Unrestricted Subsidiary as a Restricted Subsidiary); provided that no such Lien (A) extends to or covers any other assets (other than (w) the proceeds or products thereof, accessions or additions thereto and improvements thereon, (x) with respect to such Person, any replacements of such property or assets and additions and accessions thereto, or proceeds and products thereof, (y) after-acquired property to the extent such Indebtedness requires or includes, pursuant to its terms at the time assumed, a pledge of after-acquired property of such Person, and the proceeds and the products thereof and customary security deposits in respect thereof and (z) in the case of multiple financings of equipment provided by any lender or its affiliates, other equipment financed by such lender or its affiliates, it being understood that such requirement shall not be permitted to apply to any property to which such requirement would not have applied but for such acquisition) or (B) was created in contemplation of the applicable acquisition of assets or Capital Stock;

(p) (i) Liens that are contractual rights of setoff or netting relating to (A) the establishment of depositary relations with banks not granted in connection with the issuance of Indebtedness, (B) pooled deposit or sweep accounts of any Borrower or any Restricted Subsidiary to permit satisfaction of overdraft or similar obligations incurred in the ordinary course of business of any Borrower or any Restricted Subsidiary, (C) purchase orders and other agreements entered into with customers of any Borrower or any Restricted Subsidiary in the ordinary course of business and (D) commodity trading or other brokerage accounts incurred in the ordinary course of business, (ii) Liens encumbering reasonable customary initial deposits and margin deposits, (iii) bankers Liens and rights and remedies as to Deposit Accounts, (iv) Liens on the proceeds of any Indebtedness in favor of the holders of such Indebtedness incurred in connection with any transaction permitted hereunder, which proceeds have been deposited into an escrow account on customary terms to secure such Indebtedness pending the application of such proceeds to finance such transaction and (v) Liens consisting of an agreement to dispose of any property in a Disposition permitted under Section 6.07, in each case, solely to the extent such Investment or Disposition, as the case may be, would have been permitted on the date of the creation of such Lien;

(q) Liens on assets and Capital Stock of Restricted Subsidiaries that are not Loan Parties (including Capital Stock owned by such Persons) securing Indebtedness of Restricted Subsidiaries that are not Loan Parties; provided that any Lien on the Collateral that is granted in reliance on this clause (q) and is pari passu with or junior to the Lien securing the Secured Obligations shall be subject to an Acceptable Intercreditor Agreement;

(r) (i) Liens securing obligations (other than obligations representing Indebtedness for borrowed money) under operating, reciprocal easement or similar agreements entered into in the ordinary course of business of any Borrower and/or its Restricted Subsidiaries and (ii) Liens not securing Indebtedness for borrowed money that are granted in the ordinary course of business and customary in the operation of the business of any Borrower and any of its Restricted Subsidiaries;

(s) [Reserved];

(t) other than any Indebtedness incurred under any Interest Coverage Ratio test, Liens securing Indebtedness incurred pursuant to Section 6.01(x) or (z), subject to an Acceptable Intercreditor Agreement;

(u) other Liens on assets securing Indebtedness or other obligations in an aggregate principal amount at any time outstanding not to exceed the greater of \$22,500,000 and 45.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period;

(v) (i) Liens on assets securing judgments, awards, attachments and/or decrees and notices of *lis pendens* and associated rights relating to litigation being contested in good faith not constituting an Event of Default under Section 7.01(h) and (ii) any pledge and/or deposit securing any settlement of litigation;

(w) (i) leases, licenses, subleases or sublicenses granted to others in the ordinary course of business (and other agreements pursuant to which any Borrower or any Restricted Subsidiary has granted rights to end users to access and use any Borrower's or any Restricted Subsidiary's products, technologies or services) which do not secure any Indebtedness, and which do not materially interfere with the ordinary conduct of business of any Borrower and any of its Restricted Subsidiaries, taken as a whole and (ii) ground leases in respect of real property on which facilities owned or leased by any Borrower or any of its Restricted Subsidiaries are located;

(x) Liens on Securities that are the subject of repurchase agreements constituting Investments permitted under Section 6.06 arising out of such repurchase transaction and reasonable customary initial deposits and margin deposits and similar Liens attaching to commodity trading accounts or other brokerage accounts maintained in the ordinary course of business and not for speculative purposes;

(y) Liens securing obligations in respect letters of credit, bank guaranties, surety bonds, performance bonds or similar instruments permitted under Section 6.01(d), (e), (g), (aa) or (cc);

(z) Liens arising (i) out of conditional sale, title retention, consignment or similar arrangements for the sale of any asset in the ordinary course of business and permitted by this Agreement or (ii) by operation of law under Article 2 of the UCC (or any similar Requirement of Law under any jurisdiction);

(aa) Liens (i) in favor of any Loan Party and/or (ii) granted by any non-Loan Party in favor of any Restricted Subsidiary that is not a Loan Party, in each case, securing intercompany Indebtedness permitted under Section 6.01;

(bb) Liens on insurance policies and the proceeds thereof securing the financing of the premiums with respect thereto;

(cc) (i) Liens on specific items of inventory or other goods and the proceeds thereof securing the relevant Person's obligations in respect of documentary letters of credit or banker's acceptances issued or created for the account of such Person to facilitate the purchase, shipment or storage of such inventory or goods and (ii) receipt of progress payments and advances from customers in the ordinary course of business to the extent the same creates a Lien on the related inventory and proceeds thereof;

(dd) Liens securing (i) obligations of the type described in Section 6.01(f) and/or (ii) obligations of the type described in Section 6.01(s), subject, if applicable, to an Acceptable Intercreditor Agreement;

(ee) (i) Liens on Capital Stock of joint ventures or Unrestricted Subsidiaries securing capital contributions to, or obligations of, such Persons and (ii) customary rights of first refusal and tag, drag and similar rights in joint venture agreements and agreements with respect to non-Wholly-Owned Subsidiaries;

(ff) Liens on Cash or Cash Equivalents arising in connection with the defeasance, discharge or redemption of Indebtedness;

(gg) Liens consisting of the prior rights of consignees and their lenders under consignment arrangements entered into in the ordinary course of business;

(hh) Liens disclosed in any mortgage policy delivered pursuant to Section 5.12(b) with respect to any Material Real Estate Asset and any replacement, extension or renewal thereof; provided that no such replacement, extension or renewal Lien shall cover any property other than the property that was subject to such Lien prior to such replacement, extension or renewal (and additions thereto, improvements thereon and the proceeds thereof);

(ii) Liens on receivables and related assets incurred in connection with Permitted Receivables Financings; and

(jj) Liens of a collection bank arising under Section 4-208 or 4-210 of the Uniform Commercial Code on the items in the course of collection.

Section 6.03. Reserved.

Section 6.04. Restricted Payments; Restricted Debt Payments.

(a) Each Borrower shall not, nor shall it permit any of its Restricted Subsidiaries to, pay or make, directly or indirectly, any Restricted Payment, except that:

(i) the Borrowers may make Restricted Payments to the extent necessary to permit any Parent Company:

(A) to pay general administrative costs and expenses (including corporate overhead, legal or similar expenses and customary salary, bonus and other benefits payable to any director, officer, employee, member of management, manager and/or consultant of any Parent Company) and franchise Taxes and similar fees and expenses required to maintain the organizational existence of such Parent Company, in each case, to the extent attributable to any Borrower and any of its Restricted Subsidiaries (and Unrestricted Subsidiaries, to the extent (x) of Cash received from the applicable Unrestricted Subsidiary for payment thereof by any Borrower or any Restricted Subsidiary or (y) the applicable payment is treated by any Borrower or its applicable Restricted Subsidiary as an Investment in such Unrestricted Subsidiary and is permitted under Section 6.06) and which are reasonable and customary and incurred in the ordinary course of business, plus any reasonable and customary indemnification claim made by any director, officer, member of management, manager, employee and/or consultant of any Parent Company, in each case, to the extent attributable to the ownership or operations of any Parent Company and/or its subsidiaries (but excluding, for the avoidance of doubt, the portion of any such amount, if any, that is attributable to the ownership or operations of any subsidiary of any Parent Company other than any Borrower and/or its subsidiaries);

(B) to discharge the consolidated, combined, unitary or similar Tax liabilities of such Parent Company and its subsidiaries when and as due, to the extent such liabilities are attributable to the income of any Borrower and any of its Restricted Subsidiaries (and Unrestricted Subsidiaries, to the extent (x) of Cash received from the applicable Unrestricted Subsidiary for payment thereof by any Borrower or any Restricted Subsidiary or (y) the applicable payment is treated by any Borrower or its applicable Restricted Subsidiary as an Investment in such Unrestricted Subsidiary and is permitted under Section 6.06); provided that the amount of any such payment in respect of any taxable year does not exceed the amount of such Taxes that any Borrower and/or its applicable subsidiary would have paid had such Taxes been paid as standalone companies or as a standalone group;

(C) to pay audit and other accounting and reporting expenses of such Parent Company to the extent such expenses are attributable to any Parent Company and/or its subsidiaries, but excluding, for the avoidance of doubt, the portion of any such expenses, if any, that is attributable to the ownership or operations of any subsidiary of any Parent Company other than any Borrower and/or its subsidiaries;

(D) to pay any insurance premium that is payable by, or attributable to, any Parent Company and/or its subsidiaries, but excluding, for the avoidance of doubt, the portion of any such premium, if any, that is attributable to the ownership or operations of any subsidiary of any Parent Company other than any Borrower and/or its subsidiaries;

(E) to pay (x) fees and expenses related to any debt and/or equity offering, investment and/or acquisition (whether or not consummated) to the extent such fees and expenses are attributable to any Borrower and any of its Restricted Subsidiaries (and Unrestricted Subsidiaries, to the extent (I) of Cash received from the applicable Unrestricted Subsidiary for payment thereof by any Borrower or any Restricted Subsidiary or (II) the applicable payment is treated by any Borrower or its applicable Restricted Subsidiary as an Investment in such Unrestricted Subsidiary and is permitted under Section 6.06) and (y) after the consummation of a Qualifying IPO or the issuance of public debt Securities, Public Company Costs;

(F) to finance any Investment permitted under Section 6.06 (provided that (x) any Restricted Payment under this clause (a)(i)(E) shall be made substantially concurrently with the closing of such Investment and (y) the relevant Parent Company shall, promptly following the closing thereof, cause (I) all property acquired to be contributed to any Borrower or one or more of its Restricted Subsidiaries, or (II) the merger, consolidation or amalgamation of the Person formed or acquired into any Borrower or one or more of its Restricted Subsidiaries, in order to consummate such Investment in compliance with the applicable requirements of Section 6.06 as if undertaken as a direct Investment by any Borrower or the relevant Restricted Subsidiary); and

(G) to pay customary salary, bonus, severance and other benefits payable to current or former directors, officers, members of management, managers, employees or consultants of any Parent Company (or any Immediate Family Member of any of the foregoing) to the extent such salary, bonuses and other benefits are attributable and reasonably allocated to the operations of any Borrower and/or its subsidiaries, in each case, so long as such Parent Company applies the amount of any such Restricted Payment for such purpose;

(ii) any Borrower may pay (or make Restricted Payments to allow any Parent Company to pay) to repurchase, redeem, retire or otherwise acquire or retire for value the Capital Stock of any Parent Company or any subsidiary thereof held by any future, present or former employee, director, member of management, officer, manager or consultant (or any Affiliate or Immediate Family Member thereof) of any Parent Company, any Borrower or any subsidiary of any of the foregoing (or any options, warrants, restricted stock units or stock appreciation rights or other equity-linked interests issued with respect to any of such Capital Stock):

(A) with Cash and Cash Equivalents (and including, to the extent constituting a Restricted Payment, amounts paid in respect of Indebtedness issued to evidence any obligation to repurchase, redeem, retire or otherwise acquire or retire for value the Capital Stock of any Parent Company or any subsidiary thereof held by any future, present or former employee, director, member of management, officer, manager or consultant (or any Affiliate or Immediate Family Member thereof) of any Parent Company, any Borrower or any subsidiary of any of the foregoing) in an amount not to exceed the greater of \$5,000,000 and 10.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period in any Fiscal Year, which, if not used in such Fiscal Year, may be carried forward to the next two succeeding Fiscal Years;

(B) with the proceeds of any sale or issuance of the Capital Stock of any Borrower or any Parent Company (to the extent such proceeds are contributed in respect of Qualified Capital Stock to any Borrower or any Restricted Subsidiary and are not used to build the Available Amount, are not an Available Excluded Contribution Amount and are not a Cure Amount); or

(C) with the net proceeds of any key-man life insurance policy;

(iii) any Borrower may make additional Restricted Payments in an amount not to exceed (A) the portion, if any, of the Available Amount on such date that the Parent Borrower elects to apply to this clause (iii)(A); provided that the portions of the Available Amount that are attributable to clause (a)(i) or (ii) of the definition of “Available Amount” shall not be available for any Restricted Payment pursuant to this clause (iii)(A) unless no Event of Default then exists and/or (B) the portion, if any, of the Available Excluded Contribution Amount on such date that the Parent Borrower elects to apply to this clause (iii)(B);

(iv) any Borrower may make Restricted Payments (A) to any Parent Company to enable such Parent Company to make Cash payments in lieu of the issuance of fractional shares in connection with any dividend, split or combination thereof or any Permitted Acquisition (or other similar Investment) or the exercise of warrants, options or other securities convertible into or exchangeable for Capital Stock of such Parent Company and (B) consisting of (1) payments made or expected to be made in respect of withholding or similar Taxes payable by any future, present or former officer, director, employee, member of management, manager and/or consultant of any Borrower, any Restricted Subsidiary or any Parent Company or any of their respective Immediate Family Members and/or (2) repurchases of Capital Stock in consideration of the payments described in sub-clause (1) above, including demand repurchases in connection with the exercise of stock options (or similar instruments);

(v) any Borrower may repurchase (or make Restricted Payments to any Parent Company to enable it to repurchase) Capital Stock upon the exercise of warrants, options or other securities convertible into or exchangeable for Capital Stock if such Capital Stock represents all or a portion of the exercise price of such warrants, options or other securities convertible into or exchangeable for Capital Stock as part of a “cashless” exercise or required withholding or similar Taxes;

(vi) any Borrower may make Restricted Payments the proceeds of which are applied (i) on the Closing Date, solely to effect the consummation of the Transactions and (ii) on and after the Closing Date, to satisfy any payment obligations owing under (or otherwise contemplated by) the Acquisition Agreement as in effect on the Closing Date (including in each case, without limitation, (A) cash payments to holders of Capital Stock as provided by the Acquisition Agreement, (B) cash payments to holders of Restricted Cash Awards upon vesting, (C) Restricted Payments (x) to direct and indirect parent companies of any Borrower to finance a portion of the consideration for the Acquisition and (y) to holders of Capital Stock of the Target (immediately prior to giving effect to the Acquisition) in connection with, or as a result of, their exercise of appraisal rights and the settlement of any claims or actions (whether actual, contingent or potential) with respect thereto, in each case, with respect to the Transactions and (D) other payments with respect to working capital adjustments or otherwise, to the extent contemplated by the Acquisition Agreement);

(vii) so long as no Event of Default exists on the date of declaration thereof, following the consummation of the first Qualifying IPO, any Borrower may (or may make Restricted Payments to any Parent Company to enable it to) make Restricted Payments in an amount in any Fiscal Year not to exceed an amount equal to the sum of (A) 6.00% of the net Cash proceeds received by or contributed to any Borrower from any Qualifying IPO plus (B) 7.00% of the market capitalization of Holdings at the time of such Qualifying IPO;

(viii) any Borrower may make Restricted Payments to (i) redeem, repurchase, retire or otherwise acquire any (A) Capital Stock (“Treasury Capital Stock”) of any Borrower and/or any Restricted Subsidiary or (B) Capital Stock of any Parent Company, in the case of each of subclauses (A) and (B), in exchange for, or out of the proceeds of the substantially concurrent sale (other than to any Borrower and/or any Restricted Subsidiary) of, Qualified Capital Stock of any Borrower or any Parent Company to the extent any such proceeds are contributed to the capital of any Borrower and/or any Restricted Subsidiary in respect of Qualified Capital Stock (“Refunding Capital Stock”) and (ii) declare and pay dividends on any Treasury Capital Stock out of the proceeds of the substantially concurrent sale (other than to any Borrower or a Restricted Subsidiary) of any Refunding Capital Stock;

(ix) to the extent constituting a Restricted Payment, any Borrower may consummate any transaction permitted by Section 6.06 (other than Sections 6.06(j) and (t)), Section 6.07 (other than Section 6.07(g)) and Section 6.09 (other than Section 6.09(d));

(x) so long as no Event of Default is continuing at the time of the declaration thereof, any Borrower may make additional Restricted Payments in an aggregate amount not to exceed the greater of \$10,000,000 and 20.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period minus the amount of Restricted Debt Payments made in reliance on Section 6.04(b)(iv)(B);

(xi) any Borrower may make additional Restricted Payments so long as (A) the Total Leverage Ratio, calculated on a Pro Forma Basis at the time of the declaration thereof, would not exceed 6.00:1.00 and (B) no Event of Default is continuing at the time of the declaration thereof;

(xii) the distribution, by dividend or otherwise, of shares of Capital Stock of, or Indebtedness owed to any Borrower or a Restricted Subsidiary by, Unrestricted Subsidiaries (other than Unrestricted Subsidiaries, the primary assets of which are Cash and cash equivalents);

(xiii) payments or distributions to satisfy dissenters' or appraisal rights, pursuant to or in connection with a consolidation, amalgamation, merger or transfer of assets that complies with Section 6.07;

(xiv) any Borrower may make Restricted Payments representing the net proceeds of any Holdco Refinancing Debt, solely to the extent such proceeds are promptly applied to refinance the Holdco Facility; and

(xv) any Borrower may make Restricted Payments to Holdings to allow Holdings to make cash interest payments due under the Holdco Facility so long as Consolidated Interest Expense for the Test Period in which such Restricted Payments are made is increased by the amount of such cash interest payments.

(b) Each Borrower shall not, nor shall it permit any Restricted Subsidiary to, make any payment in Cash on or in respect of principal of or interest on any Junior Indebtedness, including any sinking fund or similar deposit, on account of the purchase, redemption, retirement, acquisition, cancellation or termination of any Junior Indebtedness more than one year prior to the scheduled maturity date thereof (collectively, "Restricted Debt Payments"), except:

(i) with respect to any purchase, defeasance, redemption, repurchase, repayment or other acquisition or retirement thereof made by exchange for, or out of the proceeds of, Refinancing Indebtedness permitted by Section 6.01 and/or refinancing Indebtedness permitted by Section 6.01(x);

(ii) as part of an applicable high yield discount obligation catch-up payment;

(iii) payments of regularly scheduled interest and payments of fees, expenses and indemnification obligations as and when due;

(iv) so long as, at the time of delivery of an irrevocable notice with respect thereto, no Event of Default exists or would result therefrom, additional Restricted Debt Payments in an aggregate amount not to exceed:

(A) the greater of \$15,000,000 and 30.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period minus the amount of Investments made in reliance on Section 6.06(q)(iii); plus

(B) the greater of \$10,000,000 and 20.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period minus the amount of Restricted Payments made in reliance on Section 6.04(a)(x);

(v) (A) Restricted Debt Payments in exchange for, or with proceeds of any issuance of, Qualified Capital Stock of any Borrower and/or any Restricted Subsidiary and/or any capital contribution in respect of Qualified Capital Stock of any Borrower or any Restricted Subsidiary (in each case, other than to any Borrower or any of its Restricted Subsidiaries), (B) Restricted Debt Payments as a result of the conversion of all or any portion of any Junior Indebtedness into Qualified Capital Stock of any Borrower and/or any Restricted Subsidiary and (C) to the extent constituting a Restricted Debt Payment, payment-in-kind interest with respect to any Junior Indebtedness that is permitted under Section 6.01;

(vi) Restricted Debt Payments in an aggregate amount not to exceed (A) the portion, if any, of the Available Amount on such date that the Parent Borrower elects to apply to this clause (vi)(A); provided that the portions of the Available Amount that are attributable to clause (a)(i) or (ii) of the definition of “Available Amount” shall not be available for any Restricted Debt Payment pursuant to this clause (vi) (A) unless no Event of Default then exists and/or (B) the portion, if any, of the Available Excluded Contribution Amount on such date that the Parent Borrower elects to apply to this clause (vi)(B); and

(vii) additional Restricted Debt Payments; provided that at the time of delivery of an irrevocable notice with respect thereto, (A) the Total Leverage Ratio, calculated on a Pro Forma Basis would not exceed 6.00:1.00 and (B) no Event of Default exists or would result therefrom.

Section 6.05. Burdensome Agreements. Except as provided herein or in any other Loan Document, the Holdco Loan Agreement, any document with respect to any “Incremental Equivalent Debt” (as defined herein) and/or in any agreement with respect to any refinancing, renewal or replacement of such Indebtedness that is permitted by Section 6.01, each Borrower shall not, nor shall it permit any of its Restricted Subsidiaries to, enter into or cause to exist any agreement restricting the ability of (x) any Restricted Subsidiary of any Borrower to pay dividends or other distributions to any Borrower or any other Loan Party, (y) any Restricted Subsidiary to make cash loans or advances to any Borrower or any other Loan Party or (z) any Loan Party to create, permit or grant a Lien on any of its properties or assets to secure the Secured Obligations, except restrictions:

(a) set forth in any agreement evidencing or governing (i) Indebtedness of a Restricted Subsidiary that is not a Loan Party permitted by Section 6.01, (ii) Indebtedness permitted by Section 6.01 that is secured by a Permitted Lien if the relevant restriction applies only to the Person obligated under such Indebtedness and its Restricted Subsidiaries or the assets intended to secure such Indebtedness, (iii) Indebtedness permitted pursuant to clauses (m), (p) (as it relates to Indebtedness in respect of clauses (a), (m), (q), (r), (u), (w), (y) and/or (bb) of Section 6.01), (q), (r), (u), (w), (y) and/or (bb) of Section 6.01 and (iv) any Permitted Receivables Financing solely with respect to the assets subject to such Permitted Receivables Financing;

(b) arising under customary provisions restricting assignments, subletting or other transfers (including the granting of any Lien) contained in leases, subleases, licenses, sublicenses, joint venture agreements and other agreements entered into in the ordinary course of business;

(c) that are or were created by virtue of any Lien granted upon, transfer of, agreement to transfer or grant of, any option or right with respect to any assets or Capital Stock not otherwise prohibited under this Agreement;

(d) that are assumed in connection with any acquisition of property or the Capital Stock of any Person, so long as the relevant encumbrance or restriction relates solely to the Person and its subsidiaries (including the Capital Stock of the relevant Person or Persons) and/or property so acquired and was not created in connection with or in anticipation of such acquisition;

(e) set forth in any agreement for any Disposition of any Restricted Subsidiary (or all or substantially all of the assets thereof) that restricts the payment of dividends or other distributions or the making of cash loans or advances by such Restricted Subsidiary pending such Disposition;

- (f) set forth in provisions in agreements or instruments which prohibit the payment of dividends or the making of other distributions with respect to any class of Capital Stock of a Person other than on a pro rata basis;
- (g) imposed by customary provisions in partnership agreements, limited liability company organizational governance documents, joint venture agreements and other similar agreements;
- (h) on Cash, other deposits or net worth or similar restrictions imposed by any Person under any contract entered into in the ordinary course of business or for whose benefit such Cash, other deposits or net worth or similar restrictions exist;
- (i) set forth in documents which exist on the Closing Date and were not created in contemplation thereof;
- (j) arising pursuant to an agreement or instrument relating to any Indebtedness permitted to be incurred after the Closing Date if the relevant restrictions, taken as a whole, are not materially less favorable to the Lenders than the restrictions contained in this Agreement, taken as a whole (as determined in good faith by the Parent Borrower);
- (k) arising under or as a result of applicable Requirements of Law or the terms of any license, authorization, concession or permit;
- (l) arising in any Hedge Agreement and/or any agreement relating to Banking Services;
- (m) relating to any asset (or all of the assets) of and/or the Capital Stock of any Borrower and/or any Restricted Subsidiary which is imposed pursuant to an agreement entered into in connection with any Disposition of such asset (or assets) and/or all or a portion of the Capital Stock of the relevant Person that is permitted or not restricted by this Agreement;
- (n) set forth in any agreement relating to any Permitted Lien that limits the right of any Borrower or any Restricted Subsidiary to Dispose of or encumber the assets subject thereto; and/or
- (o) imposed by any amendment, modification, restatement, renewal, increase, supplement, refunding, replacement or refinancing of any contract, instrument or obligation referred to in clauses (a) through (n) above; provided that no such amendment, modification, restatement, renewal, increase, supplement, refunding, replacement or refinancing is, in the good faith judgment of the Parent Borrower, more restrictive with respect to such restrictions, taken as a whole, than those in existence prior to such amendment, modification, restatement, renewal, increase, supplement, refunding, replacement or refinancing.

Section 6.06. Investments. Each Borrower shall not, nor shall it permit any of its Restricted Subsidiaries to, make or own any Investment in any other Person except:

- (a) Cash or Investments that were Cash Equivalents at the time made;
- (b) (i) Investments existing on the Closing Date in any Borrower or in any Restricted Subsidiary or (ii) Investments made after the Closing Date among any Borrower and/or one or more Restricted Subsidiaries;

(c) Investments (i) constituting deposits, prepayments, trade credit and/or other credits to suppliers, (ii) made in connection with obtaining, maintaining or renewing client and customer contracts and/or (iii) in the form of advances made to distributors, suppliers, licensors and licensees, in each case, in the ordinary course of business or, in the case of clause (iii), to the extent necessary to maintain the ordinary course of supplies to any Borrower or any Restricted Subsidiary;

(d) Investments in joint ventures and Unrestricted Subsidiaries in an aggregate outstanding amount not to exceed the greater of \$17,500,000 and 35.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period;

(e) Permitted Acquisitions;

(f) Investments (i) existing on, or contractually committed to or contemplated as of, the Closing Date and described on Schedule 6.06 and (ii) any modification, replacement, renewal or extension of any Investment described in clause (i) above so long as no such modification, renewal or extension increases the amount of such Investment except by the terms thereof in effect on the Closing Date or as otherwise permitted by this Section 6.06;

(g) Investments received in lieu of Cash in connection with any Disposition permitted by Section 6.07;

(h) loans or advances to present or former employees, directors, members of management, officers, managers or consultants or independent contractors (or their respective Immediate Family Members) of any Parent Company, any Borrower, its subsidiaries and/or any joint venture (i) to the extent permitted by applicable Requirements of Law, in connection with such Person's purchase of Capital Stock of any Parent Company, so long as any cash proceeds of such loan or advance are substantially contemporaneously contributed to any Borrower for the purchase of such Capital Stock, (ii) for reasonable and customary business-related travel, entertainment, relocation and analogous ordinary business purposes and (iii) for purposes not described in the foregoing clauses (i) and (ii); provided that the aggregate principal amount of loans or advances made in reliance on this clause (iii) at any one time outstanding shall not exceed the greater of \$2,500,000 and 3.0% of Consolidated Adjusted EBITDA as of the last day of the most recently ended Test Period;

(i) Investments (i) made in the ordinary course of business in connection with obtaining, maintaining or renewing client contacts and loans or advances made to distributors in the ordinary course of business or (ii) consisting of extensions of credit in the nature of accounts receivable or notes receivable arising from the grant of trade credit in the ordinary course of business;

(j) Investments consisting of (or resulting from) Indebtedness permitted under Section 6.01 (other than Indebtedness permitted under Section 6.01(b) or (h)), Permitted Liens, Restricted Payments permitted under Section 6.04 (other than Section 6.04(a)(ix)), Restricted Debt Payments permitted by Section 6.04 and mergers, consolidations, amalgamations, liquidations, windings up, dissolutions or Dispositions permitted by Section 6.07 (other than Section 6.07(a) (if made in reliance on subclauses (i) or (ii) of the proviso thereto), Section 6.07(b) (if made in reliance on clause (ii) therein), Section 6.07(c)(ii) (if made in reliance on clause (B) therein) and Section 6.07(g));

(k) Investments in the ordinary course of business consisting of endorsements for collection or deposit and customary trade arrangements with customers;

(l) Investments (including debt obligations and Capital Stock) received (i) in connection with the bankruptcy or reorganization of any Person, (ii) in settlement of delinquent obligations of, or other disputes with, customers, suppliers and other account debtors arising in the ordinary course of business, (iii) upon foreclosure with respect to any secured Investment or other transfer of title with respect to any secured Investment and/or (iv) as a result of the settlement, compromise, resolution of litigation, arbitration or other disputes;

(m) loans and advances of payroll payments or other compensation (including deferred compensation) to present or former employees, directors, members of management, officers, managers or consultants of any Parent Company (to the extent such payments or other compensation relate to services provided to such Parent Company (but excluding, for the avoidance of doubt, the portion of any such amount, if any, attributable to the ownership or operations of any subsidiary of any Parent Company other than any Borrower and/or its subsidiaries)), any Borrower and/or any subsidiary in the ordinary course of business;

(n) Investments to the extent that payment therefor is made solely with Capital Stock of any Parent Company or Qualified Capital Stock of any Borrower or any Restricted Subsidiary, in each case, to the extent not resulting in a Change of Control;

(o) (i) Investments of any Restricted Subsidiary acquired after the Closing Date, or of any Person acquired by, or merged into or consolidated or amalgamated with, any Borrower or any Restricted Subsidiary after the Closing Date, in each case as part of an Investment otherwise permitted by this Section 6.06 to the extent that such Investments were not made in contemplation of or in connection with such acquisition, merger, amalgamation or consolidation and were in existence on the date of the relevant acquisition, merger, amalgamation or consolidation and (ii) any modification, replacement, renewal or extension of any Investment permitted under clause (i) of this Section 6.06(o) so long as no such modification, replacement, renewal or extension thereof increases the amount of such Investment except as otherwise permitted by this Section 6.06;

(p) Investments made in connection with the Transactions;

(q) Investments made after the Closing Date by any Borrower and/or any of its Restricted Subsidiaries in an aggregate amount at any time outstanding not to exceed:

plus (i) the greater of \$20,000,000 and 40.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period,

(ii) the greater of \$15,000,000 and 30.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period minus the amount of Restricted Debt Payments made in reliance on Section 6.04(b)(iv)(A), plus

(iii) in the event that (A) any Borrower or any of its Restricted Subsidiaries makes any Investment after the Closing Date in any Person that is not a Restricted Subsidiary and (B) such Person subsequently becomes a Restricted Subsidiary, at the election of the Parent Borrower, an amount equal to 100.0% of the fair market value (as reasonably determined in good faith by the Parent Borrower) of such Investment as of the date on which such Person becomes a Restricted Subsidiary; provided that if the Parent Borrower elects to apply the fair market value of any such Investment (other than any Investment made pursuant to clause (q)(i) or (ii)) in the manner described above in order to increase availability under this clause (q), then such fair market value, and such Person becoming a Restricted Subsidiary, shall not increase the Available Amount or reduce the amount of outstanding Investments under the provision pursuant to which such Investment was initially made;

(r) Investments made after the Closing Date by any Borrower and/or any of its Restricted Subsidiaries in an aggregate outstanding amount not to exceed (i) the portion, if any, of the Available Amount on such date that the Parent Borrower elects to apply to this clause (r)(i) and/or (ii) the portion, if any, of the Available Excluded Contribution Amount on such date that the Parent Borrower elects to apply to this clause (r)(ii);

(s) to the extent constituting Investments, (i) Guarantees of leases (other than Capital Leases) or of other obligations not constituting Indebtedness of any Borrower and/or its Restricted Subsidiaries and (ii) Guarantees of the lease obligations of suppliers, customers, franchisees and licensees of any Borrower and/or its Restricted Subsidiaries, in each case, in the ordinary course of business;

(t) Investments in any Parent Company in amounts and for purposes for which Restricted Payments to such Parent Company are permitted under Section 6.04(a); provided that any Investment made as provided above in lieu of any such Restricted Payment shall reduce availability under the applicable Restricted Payment basket under Section 6.04(a);

(u) [Reserved];

(v) Investments in subsidiaries in connection with internal reorganizations and/or restructurings and activities related to tax planning; provided that, after giving effect to any such reorganization, restructuring or activity, neither the Loan Guaranty, taken as a whole, nor the security interest of the Administrative Agent in the Collateral, taken as a whole, is materially impaired;

(w) Investments arising under or in connection with any Derivative Transaction of the type permitted under Section 6.01(s);

(x) Investments consisting of the licensing of Trademarks or other works of authorship for the purpose of joint marketing arrangements with other Persons;

(y) Investments made in joint ventures as required by, or made pursuant to, customary buy/sell arrangements between the joint venture parties set forth in joint venture agreements and similar binding arrangements entered into in the ordinary course of business;

(z) (i) unfunded pension fund and other employee benefit plan obligations and liabilities to the extent that the same are permitted to remain unfunded under applicable Requirements of Law and (ii) Investments made in connection with the funding of contributions under any non-qualified retirement plan or similar employee compensation plan in an amount not to exceed the amount of compensation expense recognized by any Borrower and the Restricted Subsidiaries in connection with such plans;

(aa) Investments in Holdings, any Borrower, any subsidiary and/or any joint venture in connection with intercompany cash management arrangements and related activities in the ordinary course of business;

(bb) so long as no Event of Default then exists, additional Investments so long as, after giving effect thereto on a Pro Forma Basis, the Total Leverage Ratio does not exceed 6.25:1.00;

(cc) any Investment made by any Unrestricted Subsidiary prior to the date on which such Unrestricted Subsidiary is designated as a Restricted Subsidiary so long as the relevant Investment was not made in contemplation of the designation of such Unrestricted Subsidiary as a Restricted Subsidiary;

(dd) Investments in Similar Businesses in an aggregate outstanding amount not to exceed the greater of \$7,500,000 and 15.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period;

(ee) Investments in Subsidiaries in the form of receivables and related assets required in connection with a Permitted Receivables Financing;

(ff) contributions to a “rabbi” trust for the benefit of employees, directors, consultants, independent contractors or other service providers or other grantor trust subject to claims of creditors in the case of a bankruptcy of any Borrower; and

(gg) to the extent that they constitute Investments, purchases and acquisitions of inventory, supplies, materials or equipment or purchases, acquisitions, licenses or leases of other assets, intellectual property, or other rights or the contribution of IP Rights pursuant to joint marketing arrangements, in each case in the ordinary course of business.

Section 6.07. Fundamental Changes; Disposition of Assets. The Borrowers shall not, nor shall they permit any of their respective Restricted Subsidiaries to, enter into any transaction of merger, consolidation or amalgamation, or liquidate, wind up or dissolve themselves (or suffer any liquidation or dissolution), or make any Disposition of any assets having a fair market value (as reasonably determined in good faith by the Parent Borrower) in excess of \$3,500,000 in a single transaction or in a series of related transactions, except:

(a) any Restricted Subsidiary may be merged, consolidated or amalgamated with or into any other Restricted Subsidiary;

(i) any Borrower may be merged, consolidated or amalgamated with or into any other Person (including any Restricted Subsidiary); provided that (i) such Borrower shall be the continuing or surviving Person or (ii) if the Person formed by or surviving any such merger, consolidation or amalgamation is not such Borrower (any such Person, the “Successor Borrower”), (w) the Successor Borrower shall be an entity organized or existing under the laws of the US, any state thereof or the District of Columbia, (x) the Successor Borrower shall expressly assume the Obligations of such Borrower in a manner reasonably satisfactory to the Administrative Agent, (y) the Administrative Agent shall have a security interest in the Collateral for the benefit of the Secured Parties pursuant to the Collateral Documents that is perfected to at least the same extent as in effect immediately prior to such merger, consolidation or amalgamation and all actions reasonably requested by the Administrative Agent to maintain such perfected status have been or will promptly be taken (subject to the terms of the applicable Loan Documents), and (z) except as the Administrative Agent may otherwise agree, each Guarantor, unless it is the other party to such merger, consolidation or amalgamation, shall have executed and delivered a reaffirmation agreement with respect to its obligations under the Loan Guaranty and the other Loan Documents; it being understood and agreed that if the foregoing conditions under clauses (w) through (z) are satisfied, the Successor Borrower will succeed to, and be substituted for, such Borrower under this Agreement and the other Loan Documents;

(b) Dispositions (including of Capital Stock) among any Borrower and/or any Restricted Subsidiary (upon voluntary liquidation or otherwise);

(c) (i) the liquidation or dissolution of any Restricted Subsidiary if the Parent Borrower determines in good faith that such liquidation or dissolution is in the best interests of the Borrowers or such Restricted Subsidiary, is not materially disadvantageous to the Lenders, and the Borrowers or any Restricted Subsidiary receives any assets of the relevant dissolved or liquidated Restricted Subsidiary, (ii) any merger, amalgamation, dissolution, liquidation or consolidation, the purpose of which is to effect (A) any Disposition otherwise permitted under this Section 6.07 (other than Section 6.07(a) or (b) or this Section 6.07(c)) or (B) any Investment permitted under Section 6.06; and (iii) the conversion of any Borrower or any Restricted Subsidiary into another form of entity, so long as such conversion does not adversely affect the value of the Loan Guaranty or the Collateral, taken as a whole;

(d) (i) Dispositions of inventory or other assets in the ordinary course of business (including on an intercompany basis) and (ii) the leasing or subleasing of real property in the ordinary course of business;

(e) Dispositions of surplus, obsolete, used or worn out property or other property that, in the reasonable judgment of the Parent Borrower, is (i) no longer useful in its business (or in the business of any Restricted Subsidiary of any Borrower) or (ii) otherwise economically impracticable to maintain;

(f) Dispositions of Cash and/or Cash Equivalents and/or other assets that were Cash Equivalents when the relevant original Investment was made;

(g) Dispositions, mergers, amalgamations, consolidations or conveyances that constitute (w) Investments permitted pursuant to Section 6.06 (other than Section 6.06(j)), (x) Permitted Liens, (y) Restricted Payments permitted by Section 6.04(a) (other than Section 6.04(a)(ix)) or (z) Sale-Leaseback Transactions permitted by Section 6.08;

(h) Dispositions for fair market value; provided that with respect to any such Disposition with a purchase price in excess of the greater of \$3,500,000 and 7.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period, at least 75% of the consideration for such Disposition shall consist of Cash or Cash Equivalents (provided that for purposes of the 75% Cash consideration requirement, (w) the greater of the principal amount and carrying value of any liabilities (as reflected on the most recent balance sheet of the Parent Borrower (or a Parent Company) provided hereunder or in the footnotes thereto), or if incurred, accrued or increased subsequent to the date of such balance sheet, such liabilities that would have been reflected on the balance sheet of the Parent Borrower (or Parent Company) or in the footnotes thereto if such incurrence, accrual or increase had taken place on or prior to the date of such balance sheet, as determined in good faith by the Parent Borrower) of any Borrower or such Restricted Subsidiary, other than liabilities that are by their terms subordinated to the Obligations, that are assumed by the transferee of any such assets (or are otherwise extinguished in connection with the transactions relating to such Disposition) pursuant to a written agreement which releases such Borrower or such Restricted Subsidiary from such liabilities, (x) the amount of any trade-in value applied to the purchase price of any replacement assets acquired in connection with such Disposition, (y) any Securities received by any Borrower or any Restricted Subsidiary from the transferee that are converted by such Person into Cash or Cash Equivalents (to the extent of the Cash or Cash Equivalents received) within 180 days following the closing of the applicable Disposition and (z) any Designated Non-Cash Consideration received in respect of such Disposition having an aggregate fair market value (as reasonably determined in good faith by the Parent Borrower), taken together with all other Designated Non-Cash Consideration received pursuant to this clause (z) and Section 6.08(b)(z), that is at that time outstanding, not in excess of the greater of \$10,000,000 and 20.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period, in each case, shall be deemed to be Cash); provided, further, that (x) immediately prior to and after giving effect to such Disposition, as determined on the date on which the agreement governing such Disposition is executed, no Event of Default exists and (y) the Net Proceeds of such Disposition shall be applied and/or reinvested as (and to the extent) required by Section 2.11(b)(ii);

- (i) to the extent that (i) the relevant property is exchanged for credit against the purchase price of similar replacement property or (ii) the proceeds of the relevant Disposition are promptly applied to the purchase price of such replacement property;
- (j) Dispositions of Investments in joint ventures to the extent required by, or made pursuant to, buy/sell arrangements between joint venture or similar parties set forth in the relevant joint venture arrangements and/or similar binding arrangements;
- (k) Dispositions of (i) accounts receivable in the ordinary course of business (including any discount and/or forgiveness thereof and sales to factors or similar third parties) or in connection with the collection or compromise thereof and (ii) receivables and related assets pursuant to any Permitted Receivables Financing;
- (l) Dispositions and/or terminations of leases, subleases, licenses or sublicenses (including the provision of software under any open source license), (i) the Disposition or termination of which will not materially interfere with the business of any Borrower and any of its Restricted Subsidiaries or (ii) which relate to closed facilities or the discontinuation of any product or business line;
- (m) (i) any termination of any lease in the ordinary course of business, (ii) any expiration of any option agreement in respect of real or personal property and (iii) any surrender or waiver of contractual rights or the settlement, release or surrender of contractual rights or litigation claims (including in tort) in the ordinary course of business;
- (n) Dispositions of property subject to foreclosure, casualty, eminent domain or condemnation proceedings (including in lieu thereof or any similar proceeding);
- (o) Dispositions or consignments of equipment, inventory or other assets (including leasehold interests in real property) with respect to facilities that are temporarily not in use, held for sale or closed (or otherwise in connection with the closing or sale of any facility);
- (p) to the extent otherwise restricted by this Section 6.07, the consummation of the Transactions (including the Target Merger);
- (q) Dispositions of non-core assets and sales of Real Estate Assets acquired in any acquisition permitted hereunder which the Parent Borrower determines in good faith will not be used or useful for the continued operation of any Borrower or any of its Restricted Subsidiaries or any of their respective businesses;
- (r) exchanges or swaps, including, without limitation, transactions covered by Section 1031 of the Code (or any comparable provision of any foreign jurisdiction), of assets so long as any such exchange or swap is made for fair value (as reasonably determined by the Parent Borrower) for like assets; provided that upon the consummation of any such exchange or swap by any Loan Party, to the extent the assets received do not constitute Excluded Assets, the Administrative Agent has a perfected Lien with the same priority as the Lien held on the Real Estate Assets so exchanged or swapped;
- (s) Dispositions of assets that do not constitute Collateral for fair market value;

(t) (i) licensing and cross-licensing arrangements involving any technology, intellectual property or other IP Rights of any Borrower or any Restricted Subsidiary in the ordinary course of business and (ii) Dispositions, abandonments, cancellations or lapses of IP Rights, or issuance or registration, or applications for issuance or registration, of IP Rights, which, in the reasonable good faith determination of the Parent Borrower, are not material to the conduct of the business of any Borrower and any of its Restricted Subsidiaries, or are no longer economical to maintain in light of its use;

(u) terminations or unwinds of Derivative Transactions;

(v) Dispositions of Capital Stock of, or sales of Indebtedness or other Securities of, Unrestricted Subsidiaries;

(w) Dispositions of Real Estate Assets and related assets in the ordinary course of business in connection with relocation activities for directors, officers, employees, members of management, managers or consultants of any Parent Company, any Borrower and/or any Restricted Subsidiary;

(x) Dispositions made to comply with any order of any Governmental Authority or any applicable Requirement of Law (including, without limitation, the Dispositions of any assets (including Capital Stock) made to obtain the approval of any applicable antitrust authority in connection with a Permitted Acquisition);

(y) any merger, consolidation, Disposition or conveyance the sole purpose of which is to reincorporate or reorganize (i) any Domestic Subsidiary in another jurisdiction in the US and/or (ii) any Foreign Subsidiary in the US or any other jurisdiction;

(z) any sale of motor vehicles and information technology equipment purchased at the end of an operating lease and resold thereafter;

(aa) other Dispositions involving assets having a fair market value (as reasonably determined in good faith by the Parent Borrower at the time of the relevant Disposition) of not more than the greater of \$7,500,000 and 15.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period; and

(bb) Dispositions contemplated on the Closing Date and described on Schedule 6.07 hereto.

To the extent that any Collateral is Disposed of as expressly permitted by this Section 6.07 to any Person other than a Loan Party, such Collateral shall be sold free and clear of the Liens created by the Loan Documents, which Liens shall be automatically released upon the consummation of such Disposition; it being understood and agreed that the Administrative Agent shall be authorized to take, and shall take, any actions reasonably requested by the Parent Borrower (including, without limitation, any full or partial release or subordination of any Lien granted pursuant to the terms of this Agreement) in order to effect the foregoing in accordance with Article 8 hereof.

Section 6.08. Sale and Lease-Back Transactions. The Borrowers shall not, nor shall they permit any of their respective Restricted Subsidiaries to, directly or indirectly, become or remain liable as lessee or as a guarantor or other surety with respect to any lease of any property (whether real, personal or mixed), whether now owned or hereafter acquired, which any Borrower or the relevant Restricted Subsidiary (a) has sold or transferred or is to sell or to transfer to any other Person (other than any Borrower or any of its Restricted Subsidiaries) and (b) intends to use for substantially the same purpose as the property which has been or is to be sold or transferred by any Borrower or such Restricted Subsidiary to such other Person in connection with such lease (such a transaction, a "Sale and Lease-Back Transaction"); provided that any Sale and Lease-Back Transaction shall be permitted so long as the Net Proceeds of such Disposition are applied and/or reinvested as (and to the extent) required by Section 2.11(b)(ii) and the relevant Sale and Leaseback Transaction is consummated in exchange for consideration constituting Cash or Cash Equivalents (provided that for purposes of the foregoing Cash consideration requirement, (w) the greater of the principal amount and carrying value of any liabilities (as reflected on the most recent balance sheet of the Parent Borrower (or a Parent Company) provided hereunder or in the footnotes thereto), or if incurred, accrued or increased subsequent to the date of such balance sheet, such liabilities that would have been reflected on the balance sheet of the Parent Borrower (or Parent Company) or in the footnotes thereto if such incurrence, accrual or increase had taken place on or prior to the date of such balance sheet, as determined in good faith by the Parent Borrower) of such Borrower or such Restricted Subsidiary, other than liabilities that are by their terms subordinated to the Obligations, that are assumed by the transferee of any such assets (or are otherwise extinguished in connection with the transactions relating to such Disposition) pursuant to a written agreement which releases such Borrower or such Restricted Subsidiary from such liabilities, (x) the amount of any trade-in value applied to the purchase price of any replacement assets acquired in connection with such Disposition, (y) any Securities received by any Borrower or any Restricted Subsidiary from the transferee that are converted by such Person into Cash or Cash Equivalents (to the extent of the Cash or Cash Equivalents received) within 180 days following the closing of the applicable Disposition and (z) any Designated Non-Cash Consideration received in respect of the relevant Sale and Leaseback Transaction having an aggregate fair market value (as reasonably determined in good faith by the Parent Borrower), taken together with all other Designated Non-Cash Consideration received pursuant to this clause (z) and Section 6.07(h)(z) that is at that time outstanding, not in excess of the greater of \$10,000,000 and 20.0% of Consolidated Adjusted EBITDA for the most recently ended Test Period, in each case, shall be deemed to be Cash), and (2) any Borrower or its applicable Restricted Subsidiary would otherwise be permitted to enter into, and remain liable under, the applicable underlying lease.

Section 6.09. Transactions with Affiliates. The Borrowers shall not, nor shall they permit any of their respective Restricted Subsidiaries to, enter into any transaction (including the purchase, sale, lease or exchange of any property or the rendering of any service) in excess of \$10,000,000 with any of their respective Affiliates on terms (taken as a whole) that are less favorable to any Borrower or such Restricted Subsidiary in any material respect, as the case may be (as reasonably determined by the Parent Borrower), than those that might be obtained at the time in a comparable arm's-length transaction from a Person who is not an Affiliate; provided that the foregoing restriction shall not apply to:

(a) any transaction between or among Holdings, any Borrower, one or more Restricted Subsidiaries and/or one or more joint ventures with respect to which any Borrower or any of its Restricted Subsidiaries holds Capital Stock (or any entity that becomes a Restricted Subsidiary or a joint venture, as applicable, as a result of such transaction) to the extent permitted or not restricted by this Agreement;

(b) any issuance, sale or grant of securities (or other payments, awards or grants in cash, securities or otherwise pursuant to, or the funding of, employment arrangements, stock options and stock ownership plans approved by the board of directors (or equivalent governing body) of any Parent Company or of any Borrower or any Restricted Subsidiary;

(c) (i) any collective bargaining, employment or severance agreement or compensatory (including profit sharing) arrangement entered into by any Borrower or any of its Restricted Subsidiaries with their respective current or former officers, directors, members of management, managers, employees, consultants or independent contractors or those of any Parent Company, (ii) any subscription agreement or similar agreement pertaining to the repurchase of Capital Stock pursuant to put/call rights or similar rights with current or former officers, directors, members of management, managers, employees, consultants or independent contractors and (iii) transactions pursuant to any employee compensation, benefit plan, stock option plan or arrangement, any health, disability or similar insurance plan which covers current or former officers, directors, members of management, managers, employees, consultants or independent contractors or any employment contract or arrangement;

(d) (i) transactions permitted by Section 6.01(d), (o) or (ee), 6.04 or 6.06(h), (m), (o), (t), (v), (y), (z), (aa) or (ff) and (ii) issuances of Capital Stock and issuances and incurrences of Indebtedness not restricted by this Agreement;

(e) transactions in existence on the Closing Date and any amendment, modification or extension thereof to the extent such amendment, modification or extension, taken as a whole, is not (i) materially adverse to the Lenders or (ii) more disadvantageous, in any material respect, to the Lenders than the relevant transaction in existence on the Closing Date;

(f) (i) so long as no Event of Default under Sections 7.01(a), 7.01(f) or 7.01(g) then exists or would result therefrom, the payment of management, monitoring, consulting, advisory and similar fees to Investors in an aggregate amount not to exceed the greater of \$1,000,000 and 2.00% of Consolidated Adjusted EBITDA per Fiscal Year (it being understood that such fees may accrue during such Event of Default and may be paid when such Event of Default has been cured or waived) and (ii) the payment of all indemnification obligations and expenses owed to any Investor and any of their respective directors, officers, members of management, managers, employees and consultants in connection with such management, monitoring, consulting, advisory or similar services provided by them, in each case of clauses (i) and (ii) whether currently due or paid in respect of accruals from prior periods;

(g) the Transactions, including the payment of Transaction Costs and payments required under the Acquisition Agreement;

(h) customary compensation to Affiliates in connection with financial advisory, financing, underwriting or placement services or in respect of other investment banking activities and other transaction fees, which payments are approved by the majority of the members of the board of directors (or similar governing body) or a majority of the disinterested members of the board of directors (or similar governing body) of the Parent Borrower in good faith;

(i) Guarantees permitted by Section 6.01 or Section 6.06;

(j) transactions among Holdings, any Borrower and any of its Restricted Subsidiaries that are otherwise permitted (or not restricted) under this Article 6;

(k) the payment of customary fees and reasonable out-of-pocket costs to, and indemnities provided on behalf of, members of the board of directors (or similar governing body), officers, employees, members of management, managers, consultants and independent contractors of any Borrower and/or any of its Restricted Subsidiaries in the ordinary course of business and, in the case of payments to such Person in such capacity on behalf of any Parent Company, to the extent attributable to the operations of any Borrower or its subsidiaries;

(l) transactions with customers, clients, suppliers, joint ventures, purchasers or sellers of goods or services or providers of employees or other labor entered into in the ordinary course of business, which are (i) fair to any Borrower and/or its applicable Restricted Subsidiary in the good faith determination of the board of directors (or similar governing body) of any Borrower or the senior management thereof or (ii) on terms at least as favorable to any Borrower and/or its applicable Restricted Subsidiary as might reasonably be obtained from a Person other than an Affiliate;

(m) the payment of reasonable out-of-pocket costs and expenses related to registration rights and customary indemnities provided to shareholders under any shareholder agreement;

(n) (i) any purchase by Holdings of the Capital Stock of (or contribution to the equity capital of) any Borrower and (ii) any intercompany loan made by Holdings to any Borrower or any Restricted Subsidiary;

(o) any transaction in respect of which any Borrower delivers to the Administrative Agent a letter addressed to the board of directors (or equivalent governing body) of such Borrower from an accounting, appraisal or investment banking firm of nationally recognized standing stating that such transaction is on terms that are no less favorable to such Borrower or the applicable Restricted Subsidiary than might be obtained at the time in a comparable arm's length transaction from a Person who is not an Affiliate; and

(p) transactions in connection with any Permitted Receivables Financing.

Section 6.10. Amendments of or Waivers with Respect to Restricted Debt. The Borrowers shall not, nor shall they permit any of their respective Restricted Subsidiaries to, amend or otherwise modify the terms of any Junior Indebtedness (or the documentation governing any Junior Indebtedness) (a) if the effect of such amendment or modification, together with all other amendments or modifications made thereto, is materially adverse to the interests of the Lenders (in their capacities as such), (b) in violation of any intercreditor agreement related to such debt entered into with the Administrative Agent or the subordination terms set forth in the definitive documentation governing any Junior Indebtedness or (c) to add any financial maintenance covenant unless the Parent Borrower has provided written notice thereof to the Administrative Agent and has offered to make (and, at the request of the Administrative Agent, has made) a corresponding addition for the benefit of all Classes of Loans remaining outstanding (subject to customary "cushions" in favor of the Loans); provided that, for purposes of clarity, it is understood and agreed that the foregoing limitation shall not otherwise prohibit any Refinancing Indebtedness or any other replacement, refinancing, amendment, supplement, modification, extension, renewal, restatement or refunding of any Junior Indebtedness, in each case, that is permitted under the Loan Documents in respect thereof.

Section 6.11. Permitted Activities of Holdings and the Initial Borrower.

(a) Neither Holdings nor, following the Closing Date Assumption, the Initial Borrower shall incur any third party Indebtedness for borrowed money other than (i) the Indebtedness permitted to be incurred by Holdings and the Initial Borrower under the Loan Documents (including any intercompany Indebtedness permitted pursuant to Section 6.01) and (ii) Guarantees of Indebtedness or other obligations of any Borrower and/or any Restricted Subsidiary, which Indebtedness or other obligations are otherwise permitted or not prohibited hereunder;

(b) Neither Holdings nor, following the Closing Date Assumption, the Initial Borrower, shall create or suffer to exist any Lien on any asset now owned or hereafter acquired by it other than (i) the Liens created under the Collateral Documents, (ii) any other Lien created in connection with the Transactions, (iii) Permitted Liens on the Collateral that are secured on a pari passu or junior basis with the Secured Obligations, so long as such Permitted Liens secure Guarantees permitted under clause (a)(ii) above and the underlying Indebtedness subject to such Guarantee is permitted to be secured on the same basis pursuant to Section 6.02 and (iv) Liens of the type permitted under Section 6.02 (other than in respect of debt for borrowed money); or

(c) Each of Holdings and the Initial Borrower shall not consolidate or amalgamate with, or merge with or into, or convey, sell or otherwise transfer all or substantially all of its assets to, any Person; provided that, so long as no Default or Event of Default exists or would result therefrom and subject to Sections 6.11(a) and (b), (A) Holdings or the Initial Borrower may consolidate or amalgamate with, or merge with or into, any other Person (other than any Borrower and any of its subsidiaries) so long as (i) Holdings or the Initial Borrower, as applicable, is the continuing or surviving Person or (ii) if the Person formed by or surviving any such consolidation, amalgamation or merger is not Holdings or the Initial Borrower, as applicable, (w) the successor Person (such successor Person, “Successor Holdings” or the “Successor Initial Borrower”, as applicable) expressly assumes all obligations of Holdings or the Initial Borrower, as applicable, under this Agreement and the other Loan Documents to which Holdings or the Initial Borrower, as applicable, is a party pursuant to a supplement hereto and/or thereto in a form reasonably satisfactory to the Administrative Agent, (x) Successor Holdings or Successor Initial Borrower, as applicable, shall be an entity organized or existing under the laws of the US, any state thereof or the District of Columbia, (y) the Administrative Agent shall have a security interest in the Collateral for the benefit of the Secured Parties pursuant to the Collateral Documents that is perfected to at least the same extent as in effect immediately prior to such merger, consolidation or amalgamation and all actions reasonably requested by the Administrative Agent to maintain such perfected status have been or will promptly be taken (subject to the terms of the applicable Loan Documents), and (z) the Parent Borrower delivers a certificate of a Responsible Officer with respect to the satisfaction of the conditions set forth in clause (w) of this clause (A)(ii) and (B) Holdings or the Initial Borrower, as applicable, may otherwise convey, sell or otherwise transfer all or substantially all of its assets to any other Person (other than any Borrower and any of its subsidiaries) so long as (x) no Change of Control results therefrom, (y) the Person acquiring such assets expressly assumes all of the obligations of Holdings or the Initial Borrower, as applicable, under this Agreement and the other Loan Documents to which Holdings is a party pursuant to a supplement hereto and/or thereto in a form reasonably satisfactory to the Administrative Agent and (z) the Parent Borrower delivers a certificate of a Responsible Officer with respect to the satisfaction of the conditions under clause (y) set forth in this clause (B); provided, further, that (1) if the conditions set forth in the preceding proviso are satisfied, Successor Holdings or the Successor Initial Borrower, as applicable, will succeed to, and be substituted for, Holdings or the Initial Borrower, as applicable, under this Agreement and (2) it is understood and agreed that Holdings or the Initial Borrower, as applicable, may convert into another form of entity so long as such conversion does not adversely affect the value of the Loan Guaranty or the Collateral.

Section 6.12. Financial Covenant.

(a) First Lien Leverage Ratio. On the last day of any Test Period on which the Revolving Facility Test Condition is then satisfied (it being understood and agreed that this Section 6.12(a) shall not apply until the last day of the first full Fiscal Quarter ending after the Closing Date), the Borrowers shall not permit the First Lien Leverage Ratio to be greater than 7.50:1.00.

(b) Financial Cure. Notwithstanding anything to the contrary in this Agreement (including Article 7), upon (or in anticipation of) any Borrower's failure to comply with Section 6.12(a) for any Fiscal Quarter, Holdings shall have the right (the "Cure Right") (at any time during such Fiscal Quarter or thereafter until the date that is 10 Business Days after the date on which financial statements for such Fiscal Quarter are required to be delivered pursuant to Section 5.01(a) or (b), as applicable) to issue common Capital Stock or other equity (such other equity to be on terms reasonably acceptable to the Administrative Agent) for Cash or otherwise receive Cash contributions in respect of common Capital Stock which Cash shall subsequently be contributed to any Borrower (the "Cure Amount"), and thereupon the Borrowers' compliance with Section 6.12(a) shall be recalculated giving effect to a pro forma increase in the amount of Consolidated Adjusted EBITDA by an amount equal to the Cure Amount (notwithstanding the absence of a related addback in the definition of "Consolidated Adjusted EBITDA") solely for the purpose of determining compliance with Section 6.12(a) as of the end of such Fiscal Quarter and for applicable subsequent periods that include such Fiscal Quarter. If, after giving effect to the foregoing recalculation, the requirements of Section 6.12(a) would be satisfied, then the requirements of Section 6.12(a) shall be deemed satisfied as of the end of the relevant Fiscal Quarter with the same effect as though there had been no failure to comply therewith at such date, and the applicable breach of Section 6.12(a) that had occurred (or would have occurred) shall be deemed cured for all purposes under this Agreement. Notwithstanding anything herein to the contrary, (i) in each four consecutive Fiscal Quarter period there shall be at least two Fiscal Quarters (which may be, but are not required to be, consecutive) in which the Cure Right is not exercised, (ii) during the term of this Agreement, the Cure Right shall not be exercised more than five times, (iii) the Cure Amount shall be no greater than the amount required for the purpose of causing compliance with Section 6.12(a), (iv) upon the Administrative Agent's receipt of a written notice from the Parent Borrower that the Parent Borrower intends to exercise the Cure Right (a "Notice of Intent to Cure"), until the 10th Business Day following the date on which financial statements for the Fiscal Quarter to which such Notice of Intent to Cure relates are required to be delivered pursuant to Section 5.01(a) or (b), as applicable, neither the Administrative Agent (nor any sub-agent therefor) nor any Lender shall exercise any right to accelerate the Loans or terminate the Revolving Credit Commitments, and none of the Administrative Agent (nor any sub-agent therefor) nor any Lender or Secured Party shall exercise any right to foreclose on or take possession of the Collateral or any other right or remedy under the Loan Documents solely on the basis of the relevant failure to comply with Section 6.12(a), (v) there shall be no pro forma or other reduction of the amount of Indebtedness by the amount of any Cure Amount for purposes of determining compliance with Section 6.12(a) for the Fiscal Quarter in respect of which the Cure Right was exercised (other than to the extent of any portion of such Cure Amount that is actually applied to repay Indebtedness), (vi) during any Test Period in which any Cure Amount is included in the calculation of Consolidated Adjusted EBITDA as a result of any exercise of the Cure Right, the pro forma adjustment to Consolidated Adjusted EBITDA arising therefrom shall be disregarded for purposes of determining (x) whether any financial ratio-based condition to the availability of any carve-out set forth in Article 6 of this Agreement has been satisfied or (y) the Required Excess Cash Flow Percentage, Applicable Rate or the Commitment Fee Rate, (vii) no Revolving Lender or Issuing Bank shall be required to make any Revolving Loan or issue any Letter of Credit from and after such time as the Administrative Agent has received the Notice of Intent to Cure unless and until the Cure Amount is actually received and (viii) the proceeds of any Cure Amount made during the Fiscal Quarter in respect of which the Cure Right was exercised shall not have previously been applied in reliance on the Available Amount or as an Excluded Contribution.

ARTICLE 7 EVENTS OF DEFAULT

Section 7.01. Events of Default. If any of the following events (each, an "Event of Default") occurs:

(a) Failure To Make Payments When Due. Failure by the Borrowers to pay (i) any installment of principal of any Loan when due, whether at stated maturity, by acceleration, by notice of voluntary prepayment, by mandatory prepayment or otherwise; or (ii) any interest on any Loan or any fee or any other amount due hereunder within five Business Days after the date due; or

(b) Default in Other Agreements. (i) Failure by any Borrower or any of its Restricted Subsidiaries to pay when due any principal of or interest on or any other amount payable in respect of one or more items of Indebtedness (other than Indebtedness referred to in clause (a) above) with an aggregate outstanding principal amount exceeding the Threshold Amount, in each case beyond the grace period, if any, provided therefor; or (ii) breach or default by any Borrower or any of its Restricted Subsidiaries with respect to any other term of (A) one or more items of Indebtedness with an aggregate outstanding principal amount exceeding the Threshold Amount or (B) any loan agreement, mortgage, indenture or other agreement relating to such item(s) of Indebtedness (other than, for the avoidance of doubt, with respect to Indebtedness consisting of Hedging Obligations, termination events or equivalent events pursuant to the terms of the relevant Hedge Agreement which are not the result of any default thereunder by any Loan Party or any Restricted Subsidiary), in each case beyond the grace period, if any, provided therefor, if the effect of such breach or default is to cause, or to permit the holder or holders of such Indebtedness (or a trustee or agent on behalf of such holder or holders) to cause, such Indebtedness to become or be declared due and payable (or redeemable) prior to its stated maturity or the stated maturity of any underlying obligation, as the case may be; provided that clause (ii) of this paragraph (b) shall not apply to secured Indebtedness that becomes due as a result of the voluntary sale or transfer of the property securing such Indebtedness if such sale or transfer is permitted hereunder; provided, further, that any failure described under clauses (i) or (ii) above is unremedied and is not waived by the holders of such Indebtedness prior to any termination of the Commitments or acceleration of the Loans pursuant to this Article 7; or

(c) Breach of Certain Covenants. Failure of any Loan Party, as required by the relevant provision, to perform or comply with any term or condition contained in Section 5.01(e), Section 5.02 (as it applies to the preservation of the existence of any Borrower) or Article 6; provided that, notwithstanding this clause (c), no breach or failure to comply with the terms of Section 6.12(a) will constitute an Event of Default with respect to any Term Loan unless and until the Required Revolving Lenders have accelerated the Revolving Loans, terminated the commitments under the Revolving Facility and demanded repayment of, or otherwise accelerated, the Indebtedness or other obligations under the Revolving Facility (the “Financial Covenant Standstill”); it being understood and agreed that (i) any breach or failure to comply with the terms of Section 6.12(a) is subject to cure as provided therein, and (ii) until the 10th Business Day after the day on which financial statements are required to be delivered under Section 5.01(a) or (b), as applicable, for any Fiscal Quarter in which any Borrower fails to comply with the terms of Section 6.12(a), if a Cure Right is then available, no Event of Default may arise under Section 6.12(a) until the 10th Business Day after the day on which financial statements are required to be delivered for the relevant Fiscal Quarter under Section 5.01(a) or (b), as applicable, and then only to the extent the Cure Amount has not been received on or prior to such date; provided, that no Revolving Lender or Issuing Bank shall be required to make any Revolving Loan or issue any Letter of Credit during such 10-Business Day period unless and until a Cure Amount in respect of the relevant breach is actually received; or

(d) Breach of Representations, Etc. Any representation, warranty or certification made or deemed made by any Loan Party in any Loan Document (including, for the avoidance of doubt, any Perfection Certificate or any Perfection Certificate Supplement) or in any certificate required to be delivered in connection herewith or therewith being untrue in any material respect as of the date made or deemed made and such incorrect representation or warranty if curable (including by a restatement of any relevant financial statements) shall remain incorrect for a period of 30 days after notice thereof from the Administrative Agent to the Parent Borrower; or

(e) Other Defaults Under Loan Documents. Default by any Loan Party in the performance of or compliance with any term contained herein or any of the other Loan Documents, other than any such term referred to in any other Section of this Article 7, which default has not been remedied or waived within 30 days after receipt by the Parent Borrower of written notice thereof from the Administrative Agent; or

(f) Involuntary Bankruptcy; Appointment of Receiver, Etc. (i) The entry by a court of competent jurisdiction of a decree or order for relief in respect of Holdings, the Buyer, any Borrower or any Significant Subsidiary in an involuntary case under any Debtor Relief Law now or hereafter in effect, which decree or order is not stayed; or any other similar relief shall be granted under any applicable federal, provincial, territorial, state or local Requirement of Law; or (ii) the commencement of an involuntary case against Holdings, the Buyer, any Borrower or any Significant Subsidiary under any Debtor Relief Law; the entry by a court having jurisdiction in the premises of a decree or order for the appointment of a receiver, receiver and manager, (preliminary) insolvency receiver, liquidator, sequestrator, trustee, administrator, custodian, monitor or other officer having similar powers over Holdings, the Buyer, any Borrower or any Significant Subsidiary, or over all or a substantial part of its property; or the involuntary appointment of an interim receiver, trustee or other custodian of Holdings, the Buyer, any Borrower or any Significant Subsidiary for all or a substantial part of its property, which remains undismissed, unvacated, unbounded or unstayed pending appeal for 60 consecutive days; or

(g) Voluntary Bankruptcy; Appointment of Receiver, Etc. (i) The entry against Holdings, the Buyer, any Borrower or any Significant Subsidiary of an order for relief, the commencement by Holdings, the Buyer, any Borrower or any Significant Subsidiary of a voluntary case under any Debtor Relief Law, or the consent by Holdings, the Buyer, any Borrower or any Significant Subsidiary to the entry of an order for relief in an involuntary case or to the conversion of an involuntary case to a voluntary case, under any Debtor Relief Law, or the consent by Holdings, the Buyer, any Borrower or any Significant Subsidiary to the appointment of or taking possession by a receiver, receiver and manager, (preliminary) insolvency receiver, liquidator, sequestrator, trustee, administrator, custodian, monitor or other like official for or in respect of itself or all or a substantial part of its property; (ii) the making by Holdings, the Buyer, any Borrower or any Significant Subsidiary of a general assignment for the benefit of creditors; or (iii) the admission by Holdings, the Buyer, any Borrower or any Significant Subsidiary in writing of their inability to pay their respective debts as such debts become due; or

(h) Judgments and Attachments. The entry or filing of one or more final money judgments, writs or warrants of attachment or similar process enforceable against Holdings, the Buyer, any Borrower or any of its Restricted Subsidiaries or any of their respective assets involving in the aggregate at any time an amount in excess of the Threshold Amount (in either case to the extent not (i) adequately covered by self-insurance (if applicable) or by insurance as to which the relevant third party insurance company has been notified and not denied coverage or (ii) otherwise indemnified by a creditworthy indemnitor), which judgment, writ, warrant or similar process remains unpaid, undischarged, unvacated, unbonded or unstayed pending appeal for a period of 60 days; or

(i) Employee Benefit Plans. The occurrence of one or more ERISA Events or there is or arises an Unfunded Pension Liability (taking into account only Pension Plans with positive Unfunded Pension Liability), which individually or in the aggregate result in liability of Holdings, the Buyer, any Borrower or any of its Restricted Subsidiaries in an aggregate amount which would reasonably be expected to result in a Material Adverse Effect; or

(j) Change of Control. The occurrence of a Change of Control; or

(k) Guaranties, Collateral Documents and Other Loan Documents. At any time after the execution and delivery thereof, (i) any material Loan Guaranty for any reason, other than the occurrence of the Termination Date, shall cease to be in full force and effect (other than in accordance with its terms) or is declared to be null and void or any Loan Guarantor shall repudiate in writing its obligations thereunder (other than as a result of the discharge of such Loan Guarantor in accordance with the terms thereof), (ii) this Agreement or any material Collateral Document ceases to be in full force and effect or shall be declared null and void or any Lien on Collateral created under any Collateral Document ceases to be perfected with respect to a material portion of the Collateral (other than solely by reason of (x) the failure of the Administrative Agent to maintain possession of any Collateral actually delivered to it or the failure of the Administrative Agent to file UCC (or equivalent) continuation statements, (y) a release of Collateral in accordance with the terms hereof or thereof or (z) the occurrence of the Termination Date or any other termination of such Collateral Document in accordance with the terms thereof) or (iii) any Loan Party contests in writing the validity or enforceability of any material provision of any Loan Document (or any Lien purported to be created by the Collateral Documents or any Loan Guaranty) or denies in writing that it has any further liability (other than by reason of the occurrence of the Termination Date), including with respect to future advances by the Lenders, under any Loan Document to which it is a party; it being understood and agreed that the failure of the Administrative Agent to maintain possession of any Collateral actually delivered to it or file any UCC (or equivalent) continuation statement shall not result in an Event of Default under this clause (k) or any other provision of any Loan Document; or

(l) Subordination. The Obligations ceasing (or the assertion in writing by any Loan Party that the Obligations cease) to constitute senior indebtedness under the subordination provisions of any document or instrument evidencing any applicable Junior Indebtedness in excess of the Threshold Amount or any such subordination provision being invalidated or otherwise ceasing, for any reason, to be valid, binding and enforceable obligations of the parties thereto;

then, and in every such event (other than (x) an event with respect to any Borrower described in clause (f) or (g) of this Article 7 or (y) any Event of Default arising under Section 6.12(a)), and at any time thereafter during the continuance of such event, the Administrative Agent may, and at the request of the Required Lenders shall, by notice to the Parent Borrower, take any of the following actions, at the same or different times: (i) terminate the Commitments, and thereupon such Commitments shall terminate immediately, (ii) declare the Loans then outstanding to be due and payable in whole (or in part, in which case any principal not so declared to be due and payable may thereafter be declared to be due and payable), and thereupon the principal of the Loans so declared to be due and payable, together with accrued interest thereon and all fees and other obligations of any Borrower accrued hereunder, shall become due and payable immediately, without presentment, demand, protest or other notice of any kind, all of which are hereby waived by the Parent Borrower and (iii) require that the Parent Borrower deposit in the LC Collateral Account an additional amount in Cash as reasonably requested by the Issuing Banks (not to exceed 100% of the relevant LC Obligations) to Cash collateralize the then outstanding LC Exposure with respect to any Borrower (minus the amount then on deposit in the LC Collateral Account); provided that (A) upon the occurrence of an event with respect to any Borrower described in clause (f) or (g) of this Article 7, any such Commitments shall automatically terminate and the principal of the Loans then outstanding, together with accrued interest thereon and all fees and other obligations of any Borrower accrued hereunder, shall automatically become due and payable, without presentment, demand, protest or other notice of any kind, all of which are hereby waived by the Parent Borrower, and the obligation of any Borrower to Cash collateralize the outstanding LC Obligations as aforesaid shall automatically become effective, in each case without further action of the Administrative Agent or any Lender and (B) during the continuance of any Event of Default arising under Section 6.12(a), (X) upon the request of the Required Revolving Lenders (but not the Required Lenders or any other Lender or group of Lenders), the Administrative Agent shall, by notice to the Parent Borrower, (1) terminate the Revolving Credit Commitments, and thereupon such Revolving Credit Commitments shall terminate immediately, (2) declare the Revolving Loans then outstanding to be due and payable in whole (or in part, in which case any principal not so declared to be due and payable may thereafter be declared to be due and payable), and thereupon the principal of the Revolving Loans so declared to be due and payable, together with accrued interest thereon and all fees and other obligations of any Borrower accrued hereunder, shall become due and payable immediately, without presentment, demand, protest or other notice of any kind, all of which are hereby waived by the Parent Borrower and (3) require that any Borrower deposit in the LC Collateral Account an additional amount in Cash as reasonably requested by the Issuing Banks (not to exceed 100% of the relevant LC Obligations) to Cash collateralize the then outstanding LC Exposure with respect to any Borrower (minus the amount then on deposit in the LC Collateral Account) and (Y) subject to the Financial Covenant Standstill, the Administrative Agent may, and at the request of the Required Lenders shall, by notice to the Parent Borrower, declare the Loans of the Borrowers then outstanding to be due and payable in whole (or in part, in which case any principal not so declared to be due and payable may thereafter be declared to be due and payable), and thereupon the principal of the Loans so declared to be due and payable, together with accrued interest thereon and all fees and other obligations of the Borrowers accrued hereunder, shall become due and payable immediately, without presentment, demand, protest or other notice of any kind, all of which are hereby waived by the Parent Borrower. Upon the occurrence and during the continuance of an Event of Default, the Administrative Agent may, and at the request of the Required Lenders shall, exercise any rights and remedies provided to the Administrative Agent under the Loan Documents or at law or equity, including all remedies provided under the UCC or equivalent Requirement of Law, as applicable.

ARTICLE 8 THE ADMINISTRATIVE AGENT

Each of the Lenders and the Issuing Banks hereby irrevocably appoints Jefferies (or any successor appointed pursuant hereto) as Administrative Agent and authorizes the Administrative Agent to take such actions on its behalf hereunder and under any other Loan Document, including execution of the other Loan Documents, and to exercise such powers as are delegated to the Administrative Agent by the terms of the Loan Documents, together with such actions and powers as are reasonably incidental thereto.

Any Person serving as Administrative Agent hereunder shall have the same rights and powers in its capacity as a Lender as any other Lender and may exercise the same as though it were not the Administrative Agent, and the term "Lender" or "Lenders" shall, unless otherwise expressly indicated, unless the context otherwise requires or unless such Person is in fact not a Lender, include each Person serving as Administrative Agent hereunder in its individual capacity. Such Person and its Affiliates may accept deposits from, lend money to, own securities of, act as the financial advisor or in any other advisory capacity for and generally engage in any kind of business with any Loan Party or any subsidiary of any Loan Party or other Affiliate thereof as if it were not the Administrative Agent hereunder and without any duty to account therefor to the Lenders. The Lenders acknowledge that, pursuant to such activities, the Administrative Agent or its Affiliates may receive information regarding any Loan Party or any of its Affiliates (including information that may be subject to confidentiality obligations in favor of such Loan Party or such Affiliate) and acknowledge that the Administrative Agent shall not be under any obligation to provide such information to them.

The Administrative Agent shall not have any duties or obligations except those expressly set forth herein and in the other Loan Documents. Without limiting the generality of the foregoing, (a) the Administrative Agent shall not be subject to any fiduciary or other implied duty, regardless of whether any Default or Event of Default exists, and the use of the term "agent" herein and in the other Loan Documents with reference to the Administrative Agent is not intended to connote any fiduciary or other implied (or express) obligation arising under agency doctrine of any applicable Requirements of Law; it being understood that such term is used merely as a matter of market custom, and is intended to create or reflect only an administrative relationship between independent contracting parties, (b) the Administrative Agent shall not have any duty to take any discretionary action or exercise any discretionary power, except discretionary rights and powers (1) that are expressly contemplated hereby or by the other Loan Documents and (2) that the Administrative Agent is required to exercise as directed in writing by the Required Lenders or Required Revolving Lenders (or such other number or percentage of the Lenders as shall be necessary under the relevant circumstances as provided in Section 9.02); provided that the Administrative Agent shall not be required to take any action that, in its opinion or the opinion of its counsel, may expose the Administrative Agent to liability or that is contrary to any Loan Document or applicable Requirements of Law, and (c) except as expressly set forth herein or in any other Loan Document, the Administrative Agent shall not have any duty to disclose, and shall not be liable for the failure to disclose, any information relating to any Borrower or any of its Affiliates that is communicated to or obtained by the Person serving as Administrative Agent or any of its Affiliates in any capacity. The Administrative Agent shall not be liable to the Lenders or any other Secured Party for any action taken or not taken by it with the consent or at the request of the Required Lenders or Required Revolving Lenders (or such other number or percentage of the Lenders as is necessary, or as the Administrative Agent believes in good faith shall be necessary, under the relevant circumstances as provided in Section 9.02) or in the absence of its own gross negligence or willful misconduct, as determined by the final judgment of a court of competent jurisdiction, in connection with its duties expressly set forth herein. The Administrative Agent shall not be deemed to have knowledge of any Default or Event of Default unless and until written notice thereof is given to the Administrative Agent by the Parent Borrower or any Lender, and the Administrative Agent shall not be responsible for or have any duty to ascertain or inquire into (i) any statement, warranty or representation made in or in connection with this Agreement or any other Loan Document, (ii) the contents of any certificate, report or other document delivered hereunder or in connection with this Agreement or any other Loan Document, (iii) the performance or observance of any covenant, agreement or other term or condition set forth in this Agreement or any other Loan Document or the occurrence of any Default or Event of Default, (iv) the validity, enforceability, effectiveness or genuineness of this Agreement or any other Loan Document or any other agreement, instrument or document, (v) the creation, perfection or priority of any Lien on the Collateral or the existence, value or sufficiency of the Collateral or to assure that the Liens granted to the Administrative Agent pursuant to this Agreement or any other Loan Document have been or will continue to be properly or sufficiently or lawfully created, perfected or enforced or are entitled to any particular priority, (vi) the satisfaction of any condition set forth in Article 4 or elsewhere in this Agreement or any other Loan Document, other than to confirm receipt of items expressly required to be delivered to the Administrative Agent, (vii) any property, book or record of any Loan Party or any Affiliate thereof or (viii) compliance by Affiliated Lenders with any term hereof relating to Affiliated Lenders.

Each Lender agrees that, except with the written consent of the Administrative Agent, it will not take any enforcement action hereunder or under any other Loan Document, accelerate the Obligations under any Loan Document, or exercise any right that it might otherwise have under applicable Requirements of Law or otherwise to credit bid at any foreclosure sale, UCC sale, any sale under Section 363 of the Bankruptcy Code or any other similar Disposition of Collateral (an “Insolvency Disposition”). Notwithstanding the foregoing, any Lender may take action to preserve or enforce its rights against a Loan Party where a deadline or limitation period is applicable that would, absent such action, bar enforcement of the Obligations held by such Lender, including the filing of a proof of claim in a case under the Bankruptcy Code.

Notwithstanding anything to the contrary contained herein or in any of the other Loan Documents, the Borrowers, the Administrative Agent and each Secured Party agree that (i) no Secured Party shall have any right individually to realize upon any of the Collateral or to enforce the Loan Guaranty; it being understood and agreed that all powers, rights and remedies hereunder may be exercised solely by the Administrative Agent on behalf of the Secured Parties in accordance with the terms hereof, and all powers, rights and remedies under the other Loan Documents may be exercised solely by the Administrative Agent, and (ii) in the event of a foreclosure by the Administrative Agent on any of the Collateral pursuant to a public or private sale or in the event of any other Disposition (including pursuant to an Insolvency Disposition), (A) the Administrative Agent, as agent for and representative of the Secured Parties, shall be entitled, for the purpose of bidding and making settlement or payment of the purchase price for all or any portion of the Collateral sold at any such sale, to use and apply all or any portion of the Obligations as a credit on account of the purchase price for any Collateral payable by the Administrative Agent at such Disposition and (B) the Administrative Agent or any Lender may be the purchaser or licensor of all or any portion of such Collateral at any such Disposition.

No holder of any Secured Hedging Obligation or Banking Services Obligation in its respective capacity as such shall have any rights in connection with the management or release of any Collateral or of the obligations of any Loan Party under this Agreement.

Each of the Lenders hereby irrevocably authorizes (and by entering into a Hedge Agreement with respect to any Secured Hedging Obligation and/or by entering into documentation in connection with respect to any Banking Services Obligation, each of the other Secured Parties hereby authorizes and shall be deemed to authorize) the Administrative Agent, on behalf of all Secured Parties, to take any of the following actions upon the instruction of the Required Lenders:

(a) consent to the Disposition of all or any portion of the Collateral free and clear of the Liens securing the Secured Obligations in connection with any Disposition pursuant to the applicable provisions of the Bankruptcy Code, including Section 363 thereof;

(b) credit bid all or any portion of the Secured Obligations, or purchase all or any portion of the Collateral (in each case, either directly or through one or more acquisition vehicles), in connection with any Disposition of all or any portion of the Collateral pursuant to the applicable provisions of the Bankruptcy Code, including Section 363 thereof;

(c) credit bid all or any portion of the Secured Obligations, or purchase all or any portion of the Collateral (in each case, either directly or through one or more acquisition vehicles), in connection with any Disposition of all or any portion of the Collateral pursuant to the applicable provisions of the UCC, including pursuant to Sections 9-610 or 9-620 of the UCC;

(d) credit bid all or any portion of the Secured Obligations, or purchase all or any portion of the Collateral (in each case, either directly or through one or more acquisition vehicles), in connection with any foreclosure or other Disposition conducted in accordance with applicable Requirements of Law following the occurrence of an Event of Default, including by power of sale, judicial action or otherwise; and/or

(e) estimate the amount of any contingent or unliquidated Secured Obligations of such Lender or other Secured Party;

it being understood that no Lender shall be required to fund any amount in connection with any purchase of all or any portion of the Collateral by the Administrative Agent pursuant to the foregoing clause (b), (c) or (d) without its prior written consent.

Each Secured Party agrees that the Administrative Agent is under no obligation to credit bid any part of the Secured Obligations or to purchase or retain or acquire any portion of the Collateral; provided that, in connection with any credit bid or purchase described under clause (b), (c) or (d) of the preceding paragraph, the Secured Obligations owed to all of the Secured Parties (other than with respect to contingent or unliquidated liabilities as set forth in the next succeeding paragraph) may be, and shall be, credit bid by the Administrative Agent on a ratable basis.

With respect to any contingent or unliquidated claim that is a Secured Obligation, the Administrative Agent is hereby authorized, but is not required, to estimate the amount thereof for purposes of any credit bid or purchase described in the second preceding paragraph so long as the estimation of the amount or liquidation of such claim would not unduly delay the ability of the Administrative Agent to credit bid the Secured Obligations or purchase the Collateral in the relevant Disposition. In the event that the Administrative Agent, in its sole and absolute discretion, elects not to estimate any such contingent or unliquidated claim or any such claim cannot be estimated without unduly delaying the ability of the Administrative Agent to consummate any credit bid or purchase in accordance with the second preceding paragraph, then any contingent or unliquidated claims not so estimated shall be disregarded, shall not be credit bid, and shall not be entitled to any interest in the portion or the entirety of the Collateral purchased by means of such credit bid.

Each Secured Party whose Secured Obligations are credit bid under clause (b), (c) or (d) of the third preceding paragraph is entitled to receive interests in the Collateral or any other asset acquired in connection with such credit bid (or in the Capital Stock of the acquisition vehicle or vehicles that are used to consummate such acquisition) on a ratable basis in accordance with the percentage obtained by dividing (x) the amount of the Secured Obligations of such Secured Party that were credit bid in such credit bid or other Disposition, by (y) the aggregate amount of all Secured Obligations that were credit bid in such credit bid or other Disposition.

In addition, in case of the pendency of any proceeding under any Debtor Relief Law or any other judicial proceeding relative to any Loan Party, each Secured Party agrees that the Administrative Agent (irrespective of whether the principal of any Loan or LC Disbursement is then due and payable as herein expressed or by declaration or otherwise and irrespective of whether the Administrative Agent has made any demand on the Parent Borrower) shall be entitled and empowered, by intervention in such proceeding or otherwise:

(i) to file and prove a claim for the whole amount of the principal and interest owing and unpaid in respect of the Loans or LC Disbursements and all other Obligations that are owing and unpaid and to file such other documents as may be necessary or advisable in order to have the claims of the Lenders, the Issuing Banks and the Administrative Agent (including any claim for the reasonable compensation, expenses, disbursements and advances of the Lenders, the Issuing Banks and the Administrative Agent and their respective agents and counsel and all other amounts to the extent due to the Lenders and the Administrative Agent under Sections 2.12 and 9.03) allowed in such judicial proceeding; and

(ii) to collect and receive any monies or other property payable or deliverable on any such claims and to distribute the same.

Any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Lender and each Issuing Bank to make such payments to the Administrative Agent and, in the event that the Administrative Agent consents to the making of such payments directly to the Lenders and the Issuing Banks, to pay to the Administrative Agent any amount due for the reasonable compensation, expenses, disbursements and advances of the Administrative Agent and its agents and counsel, and any other amount due to the Administrative Agent under Sections 2.12 and 9.03.

Nothing contained herein shall be deemed to authorize the Administrative Agent to authorize or consent to or accept or adopt on behalf of any Lender or any Issuing Bank any plan of reorganization, arrangement, adjustment or composition affecting the Secured Obligations or the rights of any Lender or any Issuing Bank or to authorize the Administrative Agent to vote in respect of the claim of any Lender or any Issuing Bank in any such proceeding.

The Administrative Agent shall be entitled to rely upon, and shall not incur any liability for relying upon, any notice, request, certificate, consent, statement, instrument, document or other writing (including any electronic message, Internet or intranet website posting or other distribution) that it believes to be genuine and to have been signed, sent or otherwise authenticated by the proper Person. The Administrative Agent also may rely upon any statement made to it orally or by telephone and believed by it to have been made by the proper Person and shall not incur any liability for relying thereon. In determining compliance with any condition hereunder to the making of a Loan, or the issuance of a Letter of Credit, that by its terms must be fulfilled to the satisfaction of a Lender or the applicable Issuing Bank, the Administrative Agent may presume that such condition is satisfactory to such Lender unless the Administrative Agent has received notice to the contrary from such Lender or Issuing Bank prior to the making of such Loan or the issuance of such Letter of Credit. The Administrative Agent may consult with legal counsel (who may be counsel for the Borrowers), independent accountants and other experts selected by it, and shall not be liable for any action taken or not taken by it in accordance with the advice of any such counsel, accountants or experts.

The Administrative Agent may perform any and all of its duties and exercise its rights and powers hereunder or under any other Loan Document by or through any one or more sub-agents appointed by it. The Administrative Agent and any such sub-agent may perform any and all of their respective duties and exercise their respective rights and powers through their respective Related Parties. The exculpatory provisions of this Article shall apply to any such sub-agent and to the Related Parties of the Administrative Agent and any such sub-agent and shall apply to their respective activities in connection with the syndication of the credit facilities provided for herein as well as activities as the Administrative Agent. The Administrative Agent shall not be responsible for the negligence or misconduct of any sub-agent except to the extent that a court of competent jurisdiction determines in a final and non-appealable judgment that the Administrative Agent acted with gross negligence or willful misconduct in the selection of such sub-agent.

Subject to the appointment and acceptance of a successor Administrative Agent as provided in this paragraph, the Administrative Agent may resign at any time by giving ten days' written notice to the Lenders, the Issuing Banks and the Parent Borrower. If the Administrative Agent is a Defaulting Lender or an Affiliate of a Defaulting Lender, in either case, other than as a result of a good faith dispute over whether a Loan, Letter of Credit or participation in a Letter of Credit is required to be made or funded under clause (a), (b) or (c) of the definition of "Defaulting Lender", either the Required Lenders or the Parent Borrower may, upon ten days' written notice, remove the Administrative Agent. Upon receipt of any such written notice of resignation or delivery of any such written notice of removal, the Required Lenders shall have the right, with the consent of the Parent Borrower (not to be unreasonably withheld or delayed), to appoint a successor Administrative Agent which shall be a commercial bank or trust company with offices in the US having combined capital and surplus in excess of \$1,000,000,000; provided that during the existence of an Event of Default under Section 7.01(a) or, with respect to any Borrower, Section 7.01(f) or (g), no consent of the Parent Borrower shall be required. If no successor has been appointed as provided above and has accepted such appointment within 30 days after the retiring Administrative Agent gives notice of its resignation or the Administrative Agent receives notice of removal, then (a) in the case of a retirement, the retiring Administrative Agent may (but shall not be obligated to), on behalf of the Lenders and the Issuing Banks, appoint a successor Administrative Agent meeting the qualifications set forth above (including, for the avoidance of doubt, the consent of the Parent Borrower) or (b) in the case of a removal, the Parent Borrower may, after consulting with the Required Lenders, appoint a successor Administrative Agent meeting the qualifications set forth above; provided that (x) in the case of a retirement, if the Administrative Agent notifies the Parent Borrower, the Lenders and the Issuing Banks that no qualifying Person has accepted such appointment or (y) in the case of a removal, the Parent Borrower notifies the Required Lenders that no qualifying Person has accepted such appointment, then, in each case, such resignation or removal shall nonetheless become effective in accordance with such notice and (i) the retiring or removed Administrative Agent shall be discharged from its duties and obligations hereunder and under any other Loan Document (except that in the case of any collateral security held by the Administrative Agent in its capacity as collateral agent for the Secured Parties for purposes of maintaining the perfection of the Lien on the Collateral securing the Secured Obligations, the retiring Administrative Agent shall continue to hold such collateral security until such time as a successor Administrative Agent is appointed) and (ii) all payments, communications and determinations required to be made by, to or through the Administrative Agent shall instead be made by or to each Lender and each Issuing Bank directly (and each Lender and each Issuing Bank will cooperate with the Parent Borrower to enable the Parent Borrower to take such actions), until such time as the Required Lenders or the Parent Borrower, as applicable, appoint a successor Administrative Agent, as provided above in this Article 8. Upon the acceptance of its appointment as Administrative Agent hereunder as a successor Administrative Agent, the successor Administrative Agent shall succeed to and become vested with all the rights, powers, privileges and duties of the retiring or removed Administrative Agent (other than any rights to indemnity payments owed to the retiring Administrative Agent), and the retiring (or retired) or removed Administrative Agent shall be discharged from its duties and obligations hereunder (other than its obligations under Section 9.13 hereof) and under each other Loan Document. The fees payable by the Parent Borrower to any successor Administrative Agent shall be the same as those payable to its predecessor unless otherwise agreed between the Parent Borrower and such successor Administrative Agent. After the Administrative Agent's resignation or removal hereunder, the provisions of this Article and Section 9.03 shall continue in effect for the benefit of such retiring or removed Administrative Agent, its sub-agents and their respective Related Parties in respect of any action taken or omitted to be taken by any of them while the relevant Person was acting as Administrative Agent (including for this purpose holding any collateral security following the retirement or removal of the Administrative Agent). Notwithstanding anything to the contrary herein, no Disqualified Institution may be appointed as a successor Administrative Agent.

Each Lender and each Issuing Bank acknowledges that it has, independently and without reliance upon the Administrative Agent or any other Lender or any of their Related Parties and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Agreement. Each Lender and each Issuing Bank also acknowledges that it will, independently and without reliance upon the Administrative Agent or any other Lender or any of their respective Related Parties and based on such documents and information as it shall from time to time deem appropriate, continue to make its own decisions in taking or not taking action under or based upon this Agreement, any other Loan Document or related agreement or any document furnished hereunder or thereunder. Except for notices, reports and other documents expressly required to be furnished to the Lenders and the Issuing Banks by the Administrative Agent herein, the Administrative Agent shall not have any duty or responsibility to provide any Lender or any Issuing Bank with any credit or other information concerning the business, prospects, operations, property, financial and other condition or creditworthiness of any of the Loan Parties or any of their respective Affiliates which may come into the possession of the Administrative Agent or any of its Related Parties.

Notwithstanding anything to the contrary herein, the Arrangers shall not have any right, power, obligation, liability, responsibility or duty under this Agreement, except in their respective capacities as the Administrative Agent, an Issuing Bank or a Lender hereunder, as applicable.

Each Secured Party irrevocably authorizes and instructs the Administrative Agent to, and the Administrative Agent shall:

(a) subordinate any Lien on any property granted to or held by the Administrative Agent under any Loan Document to the holder of any Lien on such property that is permitted by Sections 6.02(d), 6.02(e), 6.02(g), 6.02(l), 6.02(m), 6.02(n), Section 6.02(o) (other than any Lien on the Capital Stock of any Subsidiary Guarantor), 6.02(r), 6.02(u) (to the extent the relevant Lien is of the type to which the Lien of the Administrative Agent is otherwise required or, if requested by the Parent Borrower, permitted to be subordinated under this clause (a) pursuant to any of the other exceptions to Section 6.02 that are expressly included in this clause (a), 6.02(x), 6.02(y), 6.02(z)(i), 6.02(bb), 6.02(cc), 6.02(dd) (in the case of clause (ii), to the extent the relevant Lien covers cash collateral posted to secure the relevant obligation), 6.02(ee), 6.02(ff), 6.02(gg) and/or 6.02(hh) (and any Refinancing Indebtedness in respect of any thereof to the extent such Refinancing Indebtedness is permitted to be secured under Section 6.02(k)); provided, that the subordination of any Lien on any property granted to or held by the Administrative Agent shall only be required with respect to any Lien on such property that is permitted by Sections 6.02(l), 6.02(o), 6.02(r), 6.02(u), 6.02(bb) and/or 6.02(hh) to the extent that the Lien of the Administrative Agent with respect to such property is required to be subordinated to the relevant Permitted Lien in accordance with the documentation governing the Indebtedness that is secured by such Permitted Lien;

(b) enter into subordination, intercreditor and/or similar agreements with respect to Indebtedness (including any Acceptable Intercreditor Agreement and/or any amendment thereof) that is (i) required or, if requested by the Parent Borrower, permitted to be subordinated hereunder, (ii) secured by Liens, and with respect to which Indebtedness and/or Liens, this Agreement contemplates an intercreditor, subordination, collateral trust agreement or similar agreement and/or (iii) contemplates the entry into collateral allocation and/or loss sharing arrangements; and

(c) release any Lien on any property granted to or held by the Administrative Agent under any Loan Document if approved, authorized or ratified by the Required Lenders in accordance with Section 9.02.

Upon the request of the Administrative Agent at any time, the Required Lenders will confirm in writing the Administrative Agent's authority to release, share or subordinate its interest in particular types or items of property, or to release (or provide evidence of release of) any Loan Party from its obligations under the Loan Guaranty or its Lien on any Collateral pursuant to this Article 8 and Section 9.13. In each case specified in this Article 8 and Section 9.13, the Administrative Agent will (and each Lender, and each Issuing Bank hereby authorizes the Administrative Agent to), at the Borrowers' expense, execute and deliver to the applicable Loan Party such documents as such Loan Party may reasonably request to evidence the release of such item of Collateral from the assignment and security interest granted under the Collateral Documents, to subordinate and/or share its interest therein, or to release such Loan Party from its obligations under the Loan Guaranty, in each case in accordance with the terms of the Loan Documents and this Article 8 and Section 9.13; provided, that upon the request of the Administrative Agent, the Parent Borrower shall deliver a certificate of a Responsible Officer certifying that the relevant transaction has been consummated in compliance with the terms of this Agreement.

The Administrative Agent is authorized to enter into any Acceptable Intercreditor Agreement and any other intercreditor, subordination, collateral trust, collateral allocation, loss sharing or similar agreement contemplated hereby with respect to any (a) Indebtedness (i) that is (A) required or permitted to be subordinated hereunder and/or (B) secured by Liens and (ii) with respect to which Indebtedness and/or Liens, this Agreement contemplates an intercreditor, subordination or collateral trust or similar agreement and/or (b) Secured Hedging Obligations and/or Secured Banking Services Obligations, whether or not constituting Indebtedness (any such other intercreditor, subordination or collateral trust or similar agreement, an "Additional Agreement"), and the Secured Parties party hereto acknowledge that each Acceptable Intercreditor Agreement and each other Additional Agreement is binding upon them. Each Secured Party party hereto hereby (a) agrees that they will be bound by, and will not take any action contrary to, the provisions of any Acceptable Intercreditor Agreement or any Additional Agreement and (b) authorizes and instructs the Administrative Agent to enter into any Acceptable Intercreditor Agreement and/or any Additional Agreement and to subject the Liens on the Collateral securing the Secured Obligations to the provisions thereof. The foregoing provisions are intended as an inducement to the Secured Parties to extend credit to the Borrowers, and the Secured Parties are intended third-party beneficiaries of such provisions and the provisions of any Acceptable Intercreditor Agreement and/or any Additional Agreement.

The Administrative Agent shall not be responsible for or have a duty to ascertain or inquire into any representation or warranty regarding the existence, value or collectability of the Collateral, the existence, priority or perfection of the Administrative Agent's Lien thereon, or any certificate prepared by any Borrower or any of its Restricted Subsidiaries in connection therewith, nor shall the Administrative Agent be responsible or liable to the Lenders for any failure to monitor or maintain any portion of the Collateral.

To the extent that the Administrative Agent (or any Affiliate thereof) is not reimbursed and indemnified by the Borrowers in accordance with and to the extent required by Section 9.03(b), the Lenders will reimburse and indemnify the Administrative Agent (and any Affiliate thereof) in proportion to their respective Applicable Percentages (determined as if there were no Defaulting Lenders) for and against any and all liabilities, obligations, losses, damages, penalties, claims, actions, judgments, costs, expenses or disbursements of whatsoever kind or nature which may be imposed on, asserted against or incurred by the Administrative Agent (or any Affiliate thereof) in performing its duties hereunder or under any other Loan Document or in any way relating to or arising out of this Agreement or any other Loan Document; provided that no Lender shall be liable for any portion of such liabilities, obligations, losses, damages, penalties, claims, actions, judgments, suits, costs, expenses or disbursements resulting from the Administrative Agent's (or such affiliate's) gross negligence or willful misconduct (as determined by a court of competent jurisdiction in a final and non-appealable decision).

The Administrative Agent shall not be responsible or have any liability for, or have any duty to ascertain, inquire into, monitor or enforce, compliance with the provisions hereof relating to Disqualified Institutions. Without limiting the generality of the foregoing, the Administrative Agent shall not (x) be obligated to ascertain, monitor or inquire as to whether any Lender or Participant or prospective Lender or Participant is a Disqualified Institution or (y) have any liability with respect to or arising out of any assignment or participation of Loans or Commitments, or disclosure of confidential information, to any Disqualified Institution.

ARTICLE 9 MISCELLANEOUS

Section 9.01. Notices.

(a) Except in the case of notices and other communications expressly permitted to be given by telephone (and subject to paragraph (b) below), all notices and other communications provided for herein shall be in writing and shall be delivered by hand or overnight courier service, mailed by certified or registered mail or sent by facsimile or email, as follows:

- (i) if to any Loan Party, to such Loan Party in the care of the Parent Borrower at:

Certara Holdco, Inc.
100 Overlook Center, Suite 101
Princeton, NJ 08540
Attention: Andrew Schemick, Chief Financial Officer
Email: []
Telephone: []

- (ii) if to the Administrative Agent:

Jefferies Finance LLC
520 Madison Avenue
New York, NY 10022
Attention: Account Manager - Certara
Facsimile: []

- (iii) (A) if to Jefferies, as Issuing Bank:

Jefferies Finance LLC
520 Madison Avenue
New York, NY 10022
Attention: Account Manager - Certara
Facsimile: []

- (B) if to Golub Capital LLC, as Issuing Bank:

Golub Capital LLC
666 Fifth Avenue
New York, NY 10103
Attention: Loan Administration
Email: []

(C) if to any other Issuing Bank, such address as may be specified in the documentation pursuant to which such Issuing Bank is appointed in its capacity as such

- (iv) if to any Lender, to it at its address or facsimile number or email address set forth in its Administrative Questionnaire.

All such notices and other communications (A) sent by hand or overnight courier service, or mailed by certified or registered mail, shall be deemed to have been given when delivered in person or by courier service and signed for against receipt thereof or three Business Days after dispatch if sent by certified or registered mail, in each case, delivered, sent or mailed (properly addressed) to the relevant party as provided in this Section 9.01 or in accordance with the latest unrevoked direction from such party given in accordance with this Section 9.01 or (B) sent by facsimile shall be deemed to have been given when sent and when receipt has been confirmed by telephone; provided that notices and other communications sent by telecopier shall be deemed to have been given when sent (except that, if not given during normal business hours for the recipient, such notices or other communications shall be deemed to have been given at the opening of business on the next Business Day for the recipient). Notices and other communications delivered through electronic communications to the extent provided in clause (b) below shall be effective as provided in such clause (b).

(b) Notices and other communications to the Lenders hereunder may be delivered or furnished by electronic communications (including e-mail and Internet or Intranet websites) pursuant to procedures set forth herein or otherwise approved by the Administrative Agent. The Administrative Agent or the Parent Borrower (on behalf of any Loan Party) may, in its discretion, agree to accept notices and other communications to it hereunder by electronic communications pursuant to procedures set forth herein or otherwise approved by it; provided that approval of such procedures may be limited to particular notices or communications. All such notices and other communications (i) sent to an e-mail address shall be deemed received upon the sender's receipt of an acknowledgement from the intended recipient (such as by the "return receipt requested" function, as available, return e-mail or other written acknowledgement); provided that any such notice or communication not given during the normal business hours of the recipient shall be deemed to have been given at the opening of business on the next Business Day for the recipient and (ii) posted to an Internet or Intranet website shall be deemed received upon the deemed receipt by the intended recipient at its e-mail address as described in the foregoing clause (b)(i) of notification that such notice or communication is available and identifying the website address therefor.

(c) Any party hereto may change its address or facsimile number or other notice information hereunder by notice to the other parties hereto; it being understood and agreed that the Parent Borrower may provide any such notice to the Administrative Agent as recipient on behalf of itself, each Issuing Bank and each Lender.

Each of Holdings and the Parent Borrower hereby acknowledges that (a) the Administrative Agent will make available to the Lenders and each Issuing Bank materials and/or information provided by, or on behalf of, Holdings or any Borrower hereunder (collectively, the "Borrower Materials") by posting the Borrower Materials on Intralinks or another similar electronic system (the "Platform") and (b) certain of the Lenders may be "public-side" Lenders (i.e., Lenders that only wish to receive information and documentation that (x) is of a type that would be publicly available if Holdings and its Subsidiaries were public reporting companies, (y) is not material with respect to Holdings and its securities or (z) is publicly available (collectively, "Public Lender Information") (each, a "Public Lender"). Each of Holdings and the Parent Borrower hereby agrees that (i) all Borrower Materials that are to be made available to Public Lenders shall be clearly and conspicuously marked "PUBLIC" which, at a minimum, shall mean that the word "PUBLIC" shall appear prominently on the first page thereof, (ii) by marking Borrower Materials "PUBLIC," Holdings and the Parent Borrower shall be deemed to have authorized the Administrative Agent and the Lenders to treat such Borrower Materials as not containing any Private Lender Information (as defined below) (provided that to the extent such Borrower Materials constitute Confidential Information, they shall be treated as set forth in Section 9.13), (iii) all Borrower Materials marked "PUBLIC" are permitted to be made available through a portion of the Platform designated as "Public Investor" and (iv) the Administrative Agent shall be entitled to treat any Borrower Materials that are not marked "PUBLIC" as being suitable only for posting on a portion of the Platform not marked as "Public Investor." Notwithstanding the foregoing, the following Borrower Materials shall be deemed to be marked "PUBLIC," unless the Parent Borrower notifies the Administrative Agent promptly that any such document contains Private Lender Information (provided that the Parent Borrower has been notified of the proposed distribution within a reasonable time period prior thereto): (1) the Loan Documents, (2) any notification of changes in the terms of the Credit Facilities and (3) all information delivered pursuant to Section 5.01 (other than information delivered pursuant to Section 5.01(g) or (k)). "Private Lender Information" means any information that is not Public Lender Information.

Each Public Lender agrees to cause at least one individual at or on behalf of such Public Lender to at all times have selected the "Private Side Information" or similar designation on the content declaration screen of the Platform in order to enable such Public Lender or its delegate, in accordance with such Public Lender's compliance procedures and applicable law, including United States Federal and state securities laws, to make reference to information, documents and other materials that Holdings or the Parent Borrower is obligated to furnish to the Administrative Agent pursuant to the Loan Documents or to the Lenders under Article 5, including all notices, requests, financial statements, financial and other reports, certificates and other information materials (all such communications being referred to herein collectively as "Communications") that are not made available through the "Public Side Information" portion of the Platform and that may contain Private Lender Information.

THE PLATFORM IS PROVIDED "AS IS" AND "AS AVAILABLE." NEITHER THE ADMINISTRATIVE AGENT NOR ANY OF ITS RELATED PARTIES WARRANTS THE ACCURACY OR COMPLETENESS OF THE COMMUNICATIONS OR THE ADEQUACY OF THE PLATFORM AND EACH EXPRESSLY DISCLAIMS LIABILITY FOR ERRORS OR OMISSIONS IN THE COMMUNICATIONS. NO WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT OF THIRD-PARTY RIGHTS OR FREEDOM FROM VIRUSES OR OTHER CODE DEFECTS IS MADE BY THE ADMINISTRATIVE AGENT OR ANY OF ITS RELATED PARTIES IN CONNECTION WITH THE COMMUNICATIONS OR THE PLATFORM. IN NO EVENT SHALL THE ADMINISTRATIVE AGENT OR ANY OF ITS RELATED PARTIES HAVE ANY LIABILITY TO ANY LOAN PARTY, ANY LENDER OR ANY OTHER PERSON FOR DAMAGES OF ANY KIND, WHETHER OR NOT BASED ON STRICT LIABILITY AND INCLUDING DIRECT OR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES OR EXPENSES (WHETHER IN TORT, CONTRACT OR OTHERWISE) ARISING OUT OF ANY LOAN PARTY'S OR THE ADMINISTRATIVE AGENT'S TRANSMISSION OF COMMUNICATIONS THROUGH THE INTERNET, EXCEPT TO THE EXTENT THE LIABILITY OF ANY SUCH PERSON IS FOUND IN A FINAL RULING BY A COURT OF COMPETENT JURISDICTION TO HAVE RESULTED FROM SUCH PERSON'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT.

The Administrative Agent agrees that the receipt of the Communications by the Administrative Agent at its electronic mail address set forth above shall constitute effective delivery of the Communications to the Administrative Agent for purposes of the Loan Documents. Each Lender agrees that receipt of notice to it (as provided in the next sentence) specifying that the Communications have been posted to the Platform shall constitute effective delivery of the Communications to such Lender for purposes of the Loan Documents. Each Lender agrees to notify the Administrative Agent in writing (including by electronic communication) from time to time of such Lender's electronic mail address to which the foregoing notice may be sent by electronic transmission and that the foregoing notice may be sent to such e-mail address. Nothing herein shall prejudice the right of the Administrative Agent or any Lender to give any notice or other communication pursuant to any Loan Document in any other manner specified in such Loan Document.

Section 9.02. Waivers; Amendments.

(a) No failure or delay by the Administrative Agent, any Issuing Bank or any Lender in exercising any right or power hereunder or under any other Loan Document shall operate as a waiver thereof, nor shall any single or partial exercise of any such right or power, or any abandonment or discontinuance of steps to enforce such a right or power, preclude any other or further exercise thereof or the exercise of any other right or power. The rights and remedies of the Administrative Agent, the Issuing Banks and the Lenders hereunder and under any other Loan Document are cumulative and are not exclusive of any rights or remedies that they would otherwise have. No waiver of any provision of any Loan Document or consent to any departure by any party hereto therefrom shall in any event be effective unless the same is permitted by paragraph (b) of this Section 9.02, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. Without limiting the generality of the foregoing, to the extent permitted by applicable Requirements of Law, neither the making of any Loan nor the issuance of any Letter of Credit shall be construed as a waiver of any Default or Event of Default, regardless of whether the Administrative Agent, any Lender or any Issuing Bank may have had notice or knowledge of such Default or Event of Default at the time.

(b) Subject to clauses (A), (B), (C), (D) and (E) of this Section 9.02(b) and Sections 9.02(c) and (d) below, neither this Agreement nor any other Loan Document nor any provision hereof or thereof may be waived, amended or modified, except (i) in the case of this Agreement, pursuant to an agreement or agreements in writing entered into by the Parent Borrower and the Required Lenders (or the Administrative Agent with the consent of the Required Lenders) or (ii) in the case of any other Loan Document (other than any waiver, amendment or modification to effectuate any modification thereto expressly contemplated by the terms of such other Loan Document), pursuant to an agreement or agreements in writing entered into by the Administrative Agent and each Loan Party that is party thereto, with the consent of the Required Lenders; provided that, notwithstanding the foregoing:

(A) the consent of each Lender directly and adversely affected thereby (but not the consent of the Required Lenders) shall be required for any waiver, amendment or modification that:

(1) increases the Commitment of such Lender; it being understood that no amendment, modification or waiver of, or consent to departure from, any condition precedent, representation, warranty, covenant, Default, Event of Default, mandatory prepayment or mandatory reduction of the Commitments shall constitute an increase of any Commitment of such Lender;

(2) reduces the principal amount of any Loan owed to such Lender or reduces any amount due to such Lender on any Loan Installment Date; it being understood that no amendment, modification or waiver of, or consent to departure from, any condition precedent, representation, warranty, covenant, Default, Event of Default, mandatory prepayment or mandatory reduction of the Loans or other amounts shall constitute a reduction in the principal amount or any other amount due to any Lender;

(3) (x) extends the scheduled final maturity of any Loan or (y) postpones any Loan Installment Date or any Interest Payment Date with respect to any Loan held by such Lender or the date of any scheduled payment of any fee or premium payable to such Lender hereunder (in each case, other than any extension for administrative reasons agreed by the Administrative Agent); it being understood that no amendment, modification or waiver of, or consent to departure from, any condition precedent, representation, warranty, covenant, Default, Event of Default, mandatory prepayment or mandatory reduction of the Loans shall constitute such an extension or postponement;

(4) reduces the rate of interest (other than to waive any Default or Event of Default or obligation of any Borrower to pay interest to such Lender at the default rate of interest under Section 2.13(c), which shall only require the consent of the Required Lenders) or the amount of any fee or premium owed to such Lender; it being understood that no change in the definition of "First Lien Leverage Ratio" or any other ratio used in the calculation of the Applicable Rate or the Commitment Fee Rate, or in the calculation of any other interest, fee or premium due hereunder (including any component definition thereof) shall constitute a reduction in any rate of interest or fee hereunder;

(5) extends the expiry date of such Lender's Commitment; it being understood that no amendment, modification or waiver of, or consent to departure from, any condition precedent, representation, warranty, covenant, Default, Event of Default, mandatory prepayment or mandatory reduction of any Commitment shall constitute an extension of any Commitment of any Lender; and

(6) waives, amends or modifies the provisions of (x) Sections 2.18(b) or 2.18(c) in a manner that would by its terms alter the pro rata sharing of payments required thereby or (y) Section 2.18(b) in a manner that alters the order in which payments are applied to repay the Secured Obligations, in each case except in connection with any transaction permitted under Sections 2.21, 2.22, 2.23, 9.02(c) and/or 9.05(g) or as otherwise provided in this Section 9.02;

(B) no such agreement shall:

(1) change (x) any of the provisions of Section 9.02(a) or Section 9.02(b) or the definition of "Required Lenders" to reduce any voting percentage required to waive, amend or modify any right thereunder or make any determination or grant any consent thereunder, without the prior written consent of each Lender, or (y) the definition of "Required Revolving Lenders" without the prior written consent of each Revolving Lender (it being understood that neither the consent of the Required Lenders nor the consent of any other Lender shall be required in connection with any change to the definition of "Required Revolving Lenders");

(2) release all or substantially all of the Collateral from the Lien granted pursuant to the Loan Documents (except as otherwise permitted herein or in the other Loan Documents, including pursuant to Article 8), without the prior written consent of each Lender; or

(3) release all or substantially all of the value of the Guarantees under the Loan Guaranty (except as otherwise permitted herein or in the other Loan Documents, including pursuant to Article 8), without the prior written consent of each Lender;

(C) solely with the consent of the Required Revolving Lenders (but without the consent of the Required Lenders or any other Lender), any such agreement may (x) waive, amend or modify Section 6.12 (or the definition of "First Lien Leverage Ratio" or any component definition thereof, in each case, as any such definition is used solely for purposes of Section 6.12) (other than, in the case of Section 6.12(a), for purposes of determining compliance with such Section as a condition to taking any action under this Agreement), (y) waive, amend or modify any condition precedent set forth in Section 4.02 as it pertains to any Revolving Loan or Letter of Credit and/or (z) waive any Default or Event of Default resulting from any failure to satisfy any condition precedent set forth in Section 4.02 as it pertains to any Revolving Loan or Letter of Credit; and

(D) solely with the consent of each Issuing Bank and, in the case of clause (x), the Administrative Agent, any such agreement may (x) increase or decrease the Letter of Credit Sublimit or (y) waive, amend or modify any condition precedent set forth in Section 4.02 hereof as it pertains to the issuance of any Letter of Credit;

(E) no such agreement shall amend, modify or otherwise affect the rights or duties of the Administrative Agent or any Issuing Bank hereunder without the prior written consent of the Administrative Agent or such Issuing Bank, as the case may be.

(c) Notwithstanding the foregoing, this Agreement may be amended:

(i) with the written consent of the Parent Borrower and the Lenders providing the relevant Replacement Term Loans to permit the refinancing or replacement of all or any portion of the outstanding Term Loans under any Class (any such loans being refinanced or replaced, the "Replaced Term Loans") with one or more replacement term loans hereunder ("Replacement Term Loans") pursuant to a Refinancing Amendment; provided that:

(A) the aggregate principal amount of any Class of Replacement Term Loans shall not exceed the aggregate principal amount of the relevant Replaced Term Loans plus (1) any additional amount permitted to be incurred under Section 6.01 and, to the extent any such additional amount is secured, the related Lien is permitted under Section 6.02 and plus (2) the amount of accrued interest and premium (including tender premium) thereon and underwriting discounts, fees (including upfront fees and original issue discount), commissions and expenses associated therewith),

(B) any Class of Replacement Term Loans must have a final maturity date that is equal to or later than the final maturity date of, and have a Weighted Average Life to Maturity equal to or greater than the Weighted Average Life to Maturity of, the applicable Replaced Term Loans at the time of the relevant refinancing,

(C) any Class of Replacement Term Loans may be pari passu with or junior to any then-existing Class of Term Loans in right of payment and pari passu with or junior to such Class of Term Loans with respect to the Collateral or may be unsecured; provided that (x) any Class of Replacement Term Loans that is pari passu with, or junior to, any then-existing Class of Term Loan shall be subject to an Acceptable Intercreditor Agreement and may be, at the option of the Administrative Agent and the Parent Borrower, documented in a separate agreement or agreements,

(D) any Class of Replacement Term Loans that is secured may not be secured by any asset other than the Collateral,

(E) any Class of Replacement Term Loans that is guaranteed may not be guaranteed by any Person that is not a Loan Party,

(F) any Class of Replacement Term Loans that is pari passu with the Initial Term Loans in right of payment and security may participate on a pro rata basis or a less than pro rata basis (but not greater than a pro rata basis) in any mandatory prepayment in respect of the Initial Term Loans (and any Additional Term Loans then subject to ratable repayment requirements), in each case as agreed by the Parent Borrower and the Lenders providing the relevant Class of Replacement Term Loans,

(G) any Class of Replacement Term Loans may have pricing (including interest, fees, MFN terms, discounts, rate floors and premiums) and, subject to preceding clause (E), optional prepayment and redemption terms as the Parent Borrower and the lenders providing such Class of Replacement Term Loans may agree; and

(H) the terms and conditions of any Class of Replacement Term Loans (excluding pricing, interest, fees, MFN terms, discounts, rate floors, premiums, optional prepayment or redemption terms, security and maturity, subject to preceding clauses (B) through (G)) must be substantially identical to, or (taken as a whole) not materially more restrictive (as reasonably determined in good faith by the Parent Borrower) on the Borrowers and their respective Restricted Subsidiaries than those applicable to the relevant Replaced Term Loans (other than covenants or other provisions applicable only to periods after the Latest Term Loan Maturity Date (in each case, as of the date of incurrence of such Class of Replacement Term Loans)) (it being understood that to the extent that any financial maintenance covenant or other term is added for the benefit of the Lenders providing the relevant Class of Replacement Term Loans, the terms and conditions of such Replacement Term Loans will be deemed not to be more restrictive than the terms and conditions of the relevant Replaced Term Loans if such financial maintenance covenant or other term is also added for the benefit of all Classes of Loans remaining outstanding);

(ii) with the written consent of the Parent Borrower and the Lenders providing the relevant Replacement Revolving Facility to permit the refinancing or replacement of all or any portion of any Revolving Credit Commitment of any Class (any such Revolving Credit Commitment being refinanced or replaced, a "Replaced Revolving Facility") with a replacement revolving facility hereunder (a "Replacement Revolving Facility") pursuant to a Refinancing Amendment; provided that:

(A) the aggregate maximum amount of any Replacement Revolving Facility shall not exceed the aggregate maximum amount of the relevant Replaced Revolving Facility (plus (x) any additional amount permitted to be incurred under Section 6.01 and, to the extent any such additional amount is secured, the related Lien is permitted under Section 6.02 and plus (y) the amount of accrued interest and premium thereon, any committed but undrawn amounts and underwriting discounts, fees (including upfront fees and original issue discount), commissions and expenses associated therewith),

(B) no Replacement Revolving Facility may have a final maturity date (or require commitment reductions) prior to the final maturity date of the relevant Replaced Revolving Facility at the time of such refinancing or require scheduled amortization or mandatory commitment reduction prior to the final maturity date of the Initial Revolving Facility,

(C) any Replacement Revolving Facility may be pari passu with or junior to any then-existing Revolving Credit Commitment in right of payment and pari passu with or junior to any then-existing Revolving Credit Commitment with respect to the Collateral or may be unsecured; provided that any Replacement Revolving Facility that is pari passu with or junior to the Revolving Credit Commitment shall be subject to an Acceptable Intercreditor Agreement and may be, at the option of the Administrative Agent and the Parent Borrower, documented in a separate agreement or agreements,

- Collateral, (D) any Replacement Revolving Facility that is secured may not be secured by any assets other than the
- Loan Party, (E) any Replacement Revolving Facility that is guaranteed may not be guaranteed by any Person that is not a
- (F) any Replacement Revolving Facility shall be subject to the “ratability” provisions applicable to Extended Revolving Credit Commitments and Extended Revolving Loans set forth in the proviso to clause (i) of Section 2.23(a), *mutatis mutandis*, to the same extent as if fully set forth in this Section 9.02(c)(ii).
- (G) any Replacement Revolving Facility may have pricing (including interest, fees and premiums) and, subject to preceding clause (E), optional prepayment and redemption terms as the Parent Borrower and the lenders providing such Replacement Revolving Facility may agree,
- (H) the terms and conditions of any Replacement Revolving Facility (excluding pricing, interest, fees, rate floors, premiums, optional prepayment or redemption terms, security and maturity, subject to preceding clauses (B) through (G)) must be substantially identical to, or (taken as a whole) not materially more restrictive (as reasonably determined in good faith by the Parent Borrower) on the Borrowers and their respective Restricted Subsidiaries than those applicable to the Replaced Revolving Facility (other than covenants or other provisions applicable only to periods after the Latest Revolving Credit Maturity Date (in each case, as of the date of incurrence of the relevant Replacement Revolving Facility)) (it being understood that to the extent that any financial maintenance covenant or other term is added for the benefit of the Lenders providing the Replacement Revolving Facility, the terms and conditions of such Replacement Revolving Facility will be deemed not to be more restrictive than the terms and conditions of the Replaced Revolving Facility if such financial maintenance covenant or other term is also added for the benefit of any remaining Revolving Facility), and
- (I) the commitments in respect of the relevant Replaced Revolving Facility shall be terminated, and all loans outstanding thereunder and all fees then due and payable in connection therewith shall be paid in full, in each case on the date any Replacement Revolving Facility is implemented;

provided, further, that, in respect of each of sub-clauses (i) and (ii) of this clause (c), any Non-Debt Fund Affiliate and Debt Fund Affiliate shall (x) be permitted without the consent of the Administrative Agent to provide any Class of Replacement Term Loans, it being understood that in connection therewith, the relevant Non-Debt Fund Affiliate or Debt Fund Affiliate, as applicable, shall be subject to the restrictions applicable to such Person under Section 9.05 and (y) any Debt Fund Affiliate (but not any Non-Debt Fund Affiliate) may provide any Replacement Revolving Facility.

Each party hereto hereby agrees that this Agreement may be amended by the Parent Borrower, the Administrative Agent and the lenders providing the relevant Class of Replacement Term Loans or the Replacement Revolving Facility, as applicable, to the extent (but only to the extent) necessary to reflect the existence and terms of such Class of Replacement Term Loans or Replacement Revolving Facility, as applicable, incurred or implemented pursuant thereto (including any amendment necessary to treat the loans and commitments subject thereto as a separate “tranche” and “Class” of Loans and/or commitments hereunder). It is understood that any Lender approached to provide all or a portion of any Class of Replacement Term Loans or any Replacement Revolving Facility may elect or decline, in its sole discretion, to provide such Class of Replacement Term Loans or Replacement Revolving Facility.

(d) Notwithstanding anything to the contrary contained in this Section 9.02 or any other provision of this Agreement or any provision of any other Loan Document:

(i) the Parent Borrower and the Administrative Agent may, without the input or consent of any Lender, amend, supplement and/or waive any guaranty, collateral security agreement, pledge agreement and/or related document (if any) executed in connection with this Agreement to (A) comply with any Requirement of Law or the advice of counsel or (B) cause any such guaranty, collateral security agreement, pledge agreement or other document to be consistent with this Agreement and/or the relevant other Loan Documents,

(ii) the Parent Borrower and the Administrative Agent may, without the input or consent of any other Lender (other than the relevant Lenders providing Loans under such Sections), effect amendments to this Agreement and the other Loan Documents as may be necessary in the reasonable opinion of the Parent Borrower and the Administrative Agent to (1) effect the provisions of Sections 2.22, 2.23, 5.12, 5.17 and/or 9.02(c), or any other provision specifying that any waiver, amendment or modification may be made with the consent or approval of the Administrative Agent and/or (2) to add terms (including, without limitation, representations and warranties, conditions, prepayments, covenants or events of default), in connection with the addition of any Loan or Commitment hereunder, that are favorable to the then-existing Lenders, as reasonably determined by the Administrative Agent,

(iii) if the Administrative Agent and the Parent Borrower have jointly identified any ambiguity, mistake, defect, inconsistency, obvious error or any error or omission of a technical nature or any necessary or desirable technical change, in each case, in any provision of any Loan Document, then the Administrative Agent and the Parent Borrower shall be permitted to amend such provision solely to address such matter as reasonably determined by them acting jointly,

(iv) the Administrative Agent and the Parent Borrower may amend, restate, amend and restate or otherwise modify any Acceptable Intercreditor Agreement as provided therein,

(v) the Administrative Agent may amend the Commitment Schedule to reflect assignments entered into pursuant to Section 9.05, Commitment reductions or terminations pursuant to Section 2.09, implementations of Additional Commitments or incurrences of Additional Loans pursuant to Sections 2.22, 2.23 and/or 9.02(c) and reductions or terminations of any such Additional Commitments or Additional Loans,

(vi) no Defaulting Lender shall have any right to approve or disapprove any amendment, waiver or consent hereunder, except as permitted pursuant to Section 2.21(b) and except that the Commitment and any Additional Commitment of any Defaulting Lender may not be increased without the consent of such Defaulting Lender (it being understood that any Commitment or Loan held or deemed held by any Defaulting Lender shall be excluded from any vote hereunder that requires the consent of any Lender, except as expressly provided in Section 2.21(b)),

(vii) this Agreement may be amended (or amended and restated) with the written consent of the Required Lenders, the Administrative Agent and the Parent Borrower (i) to add one or more additional credit facilities to this Agreement and to permit any extension of credit from time to time outstanding thereunder and the accrued interest and fees in respect thereof to share ratably in the relevant benefits of this Agreement and the other Loan Documents and (ii) to include appropriately the Lenders holding such credit facilities in any determination of the Required Lenders on substantially the same basis as the Lenders prior to such inclusion,

(viii) [Reserved], and

(ix) any waiver, amendment or modification of this Agreement that by its terms affects the rights or duties under this Agreement of Lenders holding Loans or Commitments of a particular Class (but not the Lenders holding Loans or Commitments of any other Class) may be effected by an agreement or agreements in writing entered into solely by the Parent Borrower, the Administrative Agent and the requisite percentage in interest of the affected Class of Lenders that would be required to consent thereto under this Section if such Class of Lenders were the only Class of Lenders hereunder at the time.

Section 9.03. Expenses; Indemnity.

(a) The Parent Borrower shall pay (i) if the Closing Date occurs, all reasonable and documented out-of-pocket expenses incurred by each Arranger, the Administrative Agent and their respective Affiliates (but limited, in the case of legal fees and expenses, to the actual reasonable and documented out-of-pocket fees, disbursements and other charges of one firm of counsel and, if necessary, of one local counsel in any relevant jurisdiction to all such Persons, taken as a whole, and, solely in the case of an actual or potential conflict of interest, one additional counsel to each similarly situated group of affected Persons, taken as a whole, and, if reasonably necessary, one additional local counsel to each similarly situated group of affected Persons, taken as a whole, in each relevant jurisdiction) in connection with the syndication and distribution (including via the Internet or through a service such as Intralinks) of the Credit Facilities, the preparation, execution, delivery and administration of the Loan Documents and any related documentation, including in connection with any amendment, modification or waiver of any provision of any Loan Document (whether or not the transactions contemplated thereby are consummated, but only to the extent the preparation of any such amendment, modification or waiver was requested by the Parent Borrower and except as otherwise provided in a separate writing between the Parent Borrower, the relevant Arranger and/or the Administrative Agent) and (ii) all reasonable and documented out-of-pocket expenses incurred by the Administrative Agent, the Arrangers, the Issuing Banks or the Lenders or any of their respective Affiliates (but limited, in the case of legal fees and expenses, to the actual reasonable and documented out-of-pocket fees, disbursements and other charges of one firm of counsel and, if necessary, of one local counsel in any relevant jurisdiction to all such Persons, taken as a whole, and, solely in the case of an actual or potential conflict of interest, one additional counsel to each similarly situated group of affected Persons, taken as a whole, and, if reasonably necessary, one additional local counsel to each similarly situated group of affected Persons, taken as a whole, in each relevant jurisdiction) in connection with the enforcement, collection or protection of their respective rights in connection with the Loan Documents, including their respective rights under this Section, or in connection with the Loans made and/or Letters of Credit issued hereunder. Except to the extent required to be paid on the Closing Date, all amounts due under this paragraph (a) shall be payable by the Parent Borrower within 30 days of receipt by the Parent Borrower of an invoice setting forth such expenses in reasonable detail, together with backup documentation supporting the relevant reimbursement request.

(b) The Parent Borrower shall indemnify each Arranger, the Administrative Agent, each Issuing Bank and each Lender, and each Related Party of any of the foregoing Persons (each such Person being called an “Indemnitee”) against, and hold each Indemnitee harmless from, any and all losses, claims, damages and liabilities (but limited, in the case of legal fees and expenses, to the actual reasonable and documented out-of-pocket fees, disbursements and other charges of one firm of counsel and, if necessary, of one local counsel in any relevant jurisdiction to all Indemnitees, taken as a whole, and, solely in the case of an actual or potential conflict of interest, one additional counsel to each similarly situated group of affected Persons, taken as a whole, and, if reasonably necessary, one additional local counsel to each similarly situated group of affected Persons, taken as a whole, in each relevant jurisdiction) incurred by or asserted against any Indemnitee arising out of, in connection with, or as a result of (i) the execution or delivery of the Loan Documents or any agreement or instrument contemplated thereby, the performance by the parties hereto of their respective obligations thereunder or the consummation of the Transactions or any other transactions contemplated hereby or thereby and/or the enforcement of the Loan Documents, (ii) the use or the proposed use of the proceeds of the Loans or any Letter of Credit, (iii) any actual or alleged Release or presence of Hazardous Materials on, at, under or from any property currently or formerly owned, leased or operated by any Borrower, any of its Restricted Subsidiaries or any other Loan Party or any other Environmental Liability to the extent related to any Borrower, any of its Restricted Subsidiaries or any other Loan Party and/or (iv) any claim, litigation, investigation or proceeding relating to any of the foregoing, whether based on contract, tort or any other theory and regardless of whether any Indemnitee is a party thereto (and regardless of whether such matter is initiated by a third party or by any Borrower, any other Loan Party or any of their respective Affiliates); provided that such indemnity shall not, as to any Indemnitee, be available to the extent that any such loss, claim, damage, or liability (i) is determined by a final and non-appealable judgment of a court of competent jurisdiction to have resulted from the gross negligence, bad faith or willful misconduct of such Indemnitee, or to the extent such judgment finds that any such loss, claim, damage, or liability has resulted from such Person’s material breach of the Loan Documents or (ii) arises out of any claim, litigation, investigation or proceeding brought by such Indemnitee against another Indemnitee (other than any claim, litigation, investigation or proceeding that is brought by or against the Administrative Agent or any Arranger, acting in its capacity as the Administrative Agent or as an Arranger) that does not arise out of any act or omission of Sponsor, Holdings, any Borrower or any of their respective subsidiaries. Notwithstanding the foregoing, each Indemnitee shall be obligated to refund and return any and all amounts paid by the Parent Borrower pursuant to this Section 9.03(b) to such Indemnitee for any fees, expenses, or damages to the extent such Indemnitee is not entitled to payment thereof in accordance with the terms hereof. All amounts due under this paragraph (b) shall be payable by the Parent Borrower within 30 days (x) after receipt by the Parent Borrower of a written demand therefor, in the case of any indemnification obligations and (y) in the case of reimbursement of costs and expenses, after receipt by the Parent Borrower of an invoice setting forth such costs and expenses in reasonable detail, together with backup documentation supporting the relevant reimbursement request. This Section 9.03(b) shall not apply to Taxes other than any Taxes that represent losses, claims, damages or liabilities in respect of a non-Tax claim.

(c) The Parent Borrower shall not be liable for any settlement of any proceeding effected without the written consent of the Parent Borrower (which consent shall not be unreasonably withheld, delayed or conditioned (it being understood that the withholding of consent due to non-satisfaction of either of the conditions described in clauses (i) and (ii) of the following sentence (with “Parent Borrower” being substituted for “Indemnitee” in each such clause) shall be deemed reasonable)), but if any proceeding is settled with the written consent of the Parent Borrower, or if there is a final judgment against any Indemnitee in any such proceeding, the Parent Borrower agrees to indemnify and hold harmless each Indemnitee to the extent and in the manner set forth above. The Parent Borrower shall not, without the prior written consent of the affected Indemnitee (which consent shall not be unreasonably withheld, conditioned or delayed), effect any settlement of any pending or threatened proceeding in respect of which indemnity could have been sought hereunder by such Indemnitee unless (i) such settlement includes an unconditional release of such Indemnitee from all liability or claims that are the subject matter of such proceeding and (ii) such settlement does not include any statement as to any admission of fault or culpability of the relevant Indemnitee.

Section 9.04. Waiver of Claim. To the extent permitted by applicable Requirements of Law, no party to this Agreement shall assert, and each hereby waives, any claim against any other party hereto, any Loan Party and/or any Related Party of any thereof, on any theory of liability, for special, indirect, consequential or punitive damages (including, without limitation, any loss of profits, business or anticipated savings) (as opposed to direct or actual damages) arising out of, in connection with, or as a result of, this Agreement or any agreement or instrument contemplated hereby, the Transactions, any Loan or any Letter of Credit or the use of the proceeds thereof, except, in the case of any claim by any Indemnitee against the Parent Borrower, to the extent such damages are included in any claim by a third party unaffiliated with any of parties hereto that would otherwise be subject to indemnification pursuant to the terms of Section 9.03.

Section 9.05. Successors and Assigns.

(a) The provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns; provided that (i) except in a transaction permitted under Section 6.07(a), the Borrowers may not assign or otherwise transfer any of its rights or obligations hereunder without the prior written consent of each Lender (and any attempted assignment or transfer by the Borrowers without such consent shall be null and void) and (ii) no Lender may assign or otherwise transfer its rights or obligations hereunder except in accordance with the terms of this Section 9.05 (any attempted assignment or transfer not complying with the terms of this Section 9.05 shall be null and void). Nothing in this Agreement, expressed or implied, shall be construed to confer upon any Person (other than the parties hereto, their respective successors and permitted assigns, to the extent provided in paragraph (c) of this Section 9.05, Participants and, to the extent expressly contemplated hereby, the Related Parties of each of the Arrangers, the Administrative Agent, the Issuing Banks and the Lenders) any legal or equitable right, remedy or claim under or by reason of this Agreement.

(b) (i) Subject to the conditions set forth in paragraph (b)(ii) below, any Lender may assign to one or more Eligible Assignees all or a portion of its rights and obligations under this Agreement (including all or a portion of any Additional Loan or Additional Commitment added pursuant to Sections 2.22, 2.23 and/or 9.02(c), at the time owing to it) with the prior written consent of:

(A) the Parent Borrower (such consent not to be unreasonably withheld or delayed); provided, that (x) the Parent Borrower shall be deemed to have consented to any assignment of Term Loans unless it has objected thereto by written notice to the Administrative Agent within 15 Business Days after receipt of written notice thereof and (y) the consent of the Parent Borrower shall not be required for any assignment (1) of Term Loans or Term Commitments to any Term Lender, any Affiliate of any Term Lender or an Approved Fund, (2) of Term Loans or Term Commitments to the Sponsor, any Affiliate of the Sponsor or Holdings or any of its Subsidiaries, or (3) at any time when an Event of Default under Section 7.01(a) or Sections 7.01(f) or (g) (with respect to the Borrowers) exists;

(B) the Administrative Agent (such consent not to be unreasonably withheld or delayed); provided, that no consent of the Administrative Agent shall be required for any assignment to (1) another Lender, any Affiliate of a Lender or any Approved Fund or (2) the Sponsor, any Affiliate of the Sponsor or Holdings or any of its Subsidiaries in accordance with the terms of this Agreement; and

(C) in the case of any Revolving Credit Commitment, each Issuing Bank, not to be unreasonably withheld or delayed.

(ii) Assignments shall be subject to the following additional conditions:

(A) except in the case of any assignment to another Lender, any Affiliate of any Lender or any Approved Fund or any assignment of the entire remaining amount of the relevant assigning Lender's Loans or Commitments of any Class, the principal amount of Loans or Commitments of the assigning Lender subject to the relevant assignment (determined as of the date on which the Assignment and Assumption with respect to such assignment is delivered to the Administrative Agent and determined on an aggregate basis in the event of concurrent assignments to Related Funds or by Related Funds) shall not be less than (x) \$1,000,000, in the case of Term Loans and Term Commitments and (y) \$5,000,000, in the case of Revolving Loans and Revolving Credit Commitments, unless the Parent Borrower and the Administrative Agent otherwise consent;

(B) any partial assignment shall be made as an assignment of a proportionate part of all the relevant assigning Lender's rights and obligations under this Agreement;

(C) the parties to each assignment shall execute and deliver to the Administrative Agent an Assignment and Assumption via an electronic settlement system acceptable to the Administrative Agent (or, if previously agreed with the Administrative Agent, manually), and shall pay to the Administrative Agent a processing and recordation fee of \$3,500 (which fee may be waived or reduced in the sole discretion of the Administrative Agent);

(D) the relevant Eligible Assignee, if it is not a Lender, shall deliver on or prior to the effective date of such assignment, to the Administrative Agent (1) an Administrative Questionnaire and (2) any Internal Revenue Service form required under Section 2.17; and

(E) assignments of all or any portion of the Revolving Credit Commitment of a Lender that is also an Issuing Bank may be made; provided that, unless the Parent Borrower otherwise agrees, (1) the assignee (or any Lender with a Revolving Credit Commitment who agrees to act in such capacity) shall be or become an Issuing Bank and assume a ratable portion of such assignor's L/C Commitment and its rights and obligations in its capacity as Issuing Bank or (2) the assignor agrees, in its discretion, to retain all of its rights with respect to, and obligations to make or issue, Letters of Credit hereunder in which case the L/C Exposure of such assignor may exceed such assignor's Revolving Credit Commitment for purposes of Section 2.05(b) by an amount not to exceed the difference between the assignor's Revolving Credit Commitment prior to such assignment and the assignor's Revolving Credit Commitment following such assignment.

(iii) Subject to the acceptance and recording thereof pursuant to paragraph (b)(iv) of this Section 9.05, from and after the effective date specified in any Assignment and Assumption, the Eligible Assignee thereunder shall be a party hereto and, to the extent of the interest assigned pursuant to such Assignment and Assumption, have the rights and obligations of a Lender under this Agreement, and the assigning Lender thereunder shall, to the extent of the interest assigned by such Assignment and Assumption, be released from its obligations under this Agreement (and, in the case of an Assignment and Assumption covering all of the assigning Lender's rights and obligations under this Agreement, such Lender shall cease to be a party hereto but shall continue to be (A) entitled to the benefits of Sections 2.15, 2.16, 2.17 and 9.03 with respect to facts and circumstances occurring on or prior to the effective date of such assignment and (B) subject to its obligations thereunder and under Section 9.13). If any assignment by any Lender holding any Promissory Note is made after the issuance of such Promissory Note, the assigning Lender shall, upon the effectiveness of such assignment or as promptly thereafter as practicable, surrender such Promissory Note to the Administrative Agent for cancellation, and, following such cancellation, if requested by either the assignee or the assigning Lender, the applicable Borrower shall issue and deliver a new Promissory Note to such assignee and/or to such assigning Lender, with appropriate insertions, to reflect the new commitments and/or outstanding Loans of the assignee and/or the assigning Lender.

(iv) The Administrative Agent, acting for this purpose as a non-fiduciary agent of the Borrowers, shall maintain at one of its offices a copy of each Assignment and Assumption delivered to it and a register for the recordation of the names and addresses of the Lenders and their respective successors and assigns, and the commitment of, and principal amount and interest on the Loans and LC Disbursements owing to, each Lender or Issuing Bank pursuant to the terms hereof from time to time (the "Register"). Failure to make any such recordation, or any error in such recordation, shall not affect the Borrowers' obligations in respect of such Loans and LC Disbursements. The entries in the Register shall be conclusive, absent manifest error, and the Parent Borrower, the Administrative Agent, the Issuing Banks and the Lenders shall treat each Person whose name is recorded in the Register pursuant to the terms hereof as a Lender hereunder for all purposes of this Agreement, notwithstanding notice to the contrary. The Register shall be available for inspection by the Parent Borrower, each Issuing Bank and each Lender (but only as to its own holdings), at any reasonable time and from time to time upon reasonable prior notice. This Section 9.05(b) and Section 2.10 shall be construed so that all Loans are at all times maintained in "registered form" within the meaning of Sections 163(f), 871(h)(2) and 881(c)(2) of the Code and any related Treasury Regulation (or any other relevant or successor provisions of the Code or of such Treasury Regulation).

(v) Upon its receipt of a duly completed Assignment and Assumption executed by an assigning Lender and an Eligible Assignee, the Eligible Assignee's completed Administrative Questionnaire and any tax certification required by Section 9.05(b)(ii)(D)(2) (unless the assignee is already a Lender hereunder), the processing and recordation fee referred to in paragraph (b) of this Section 9.05, if applicable, and any written consent to the relevant assignment required by paragraph (b) of this Section 9.05, the Administrative Agent shall promptly accept such Assignment and Assumption and record the information contained therein in the Register. No assignment shall be effective for purposes of this Agreement unless it has been recorded in the Register as provided in paragraph (b) of this Section 9.05.

(vi) By executing and delivering an Assignment and Assumption, the assigning Lender and the Eligible Assignee thereunder shall be deemed to confirm and agree with each other and the other parties hereto as follows: (A) the assigning Lender warrants that it is the legal and beneficial owner of the interest being assigned thereby free and clear of any adverse claim and that the amount of its commitments, and the outstanding balances of its Loans, in each case without giving effect to any assignment thereof which has not become effective, are as set forth in such Assignment and Assumption, (B) except as set forth in clause (A) above, the assigning Lender makes no representation or warranty and assumes no responsibility with respect to any statement, warranty or representation made in or in connection with this Agreement, or the execution, legality, validity, enforceability, genuineness, sufficiency or value of this Agreement, any other Loan Document or any other instrument or document furnished pursuant hereto, or the financial condition of the Borrowers or any Restricted Subsidiary or the performance or observance by the Borrowers or any Restricted Subsidiary of any of its obligations under this Agreement, any other Loan Document or any other instrument or document furnished pursuant hereto, (C) the assignee represents and warrants that it is an Eligible Assignee, legally authorized to enter into such Assignment and Assumption and that it is not a Disqualified Institution or an Affiliate of a Disqualified Institution, (D) the assignee confirms that it has received a copy of this Agreement and any Acceptable Intercreditor Agreement, together with copies of the financial statements referred to in Section 4.01(c) or the most recent financial statements delivered pursuant to Section 5.01, as applicable, and such other documents and information as it has deemed appropriate to make its own credit analysis and decision to enter into such Assignment and Assumption, (E) the assignee will independently and without reliance upon the Administrative Agent, the Arrangers, the assigning Lender or any other Lender and based on such documents and information as it deems appropriate at the time, continue to make its own credit decisions in taking or not taking action under this Agreement, (F) if the assignee is a Foreign Lender, attached to such Assignment and Assumption is any documentation required to be delivered by it pursuant to the terms of this Agreement, duly completed and executed by the Assignee, (G) if the assignee is not already a Lender under this Agreement, attached to the Assignment and Assumption is a customary administrative questionnaire in the form provided by the Administrative Agent, (H) the assignee has attached to such Assignment and Assumption any tax documentation (including without limitation the IRS Forms, any FATCA documentation, and, if applicable, a U.S. Tax Compliance Certificate) required to be delivered by it pursuant to the terms of this Agreement, duly completed and executed by it, (I) the assignee appoints and authorizes the Administrative Agent to take such action as agent on its behalf and to exercise such powers under this Agreement as are delegated to or conferred upon the Administrative Agent, by the terms hereof, together with such powers as are reasonably incidental thereto; and (J) the assignee agrees that it will perform in accordance with their terms all the obligations which by the terms of this Agreement are required to be performed by it as a Lender.

(c) (i) Any Lender may, without the consent of the Parent Borrower, the Administrative Agent, any Issuing Bank or any other Lender, sell participations to any bank or other entity (other than to any Disqualified Institution (provided that the list of Disqualified Institutions (other than any “reasonably identifiable affiliate” (on the basis of such Affiliate’s name) included in the definition of “Disqualified Institution”) is made available to any Lender who specifically requests a copy thereof), any natural Person or, other than with respect to any participation to any Debt Fund Affiliate (any such participations to a Debt Fund Affiliate being subject to the limitation set forth in the first proviso of the last paragraph set forth in Section 9.05(g), as if the limitation applied to such participations), the Parent Borrower or any of its Affiliates) (a “Participant”) in all or a portion of such Lender’s rights and obligations under this Agreement (including all or a portion of its commitments and the Loans owing to it); provided that (A) such Lender’s obligations under this Agreement shall remain unchanged, (B) such Lender shall remain solely responsible to the other parties hereto for the performance of such obligations and (C) the Parent Borrower, the Administrative Agent, the Issuing Banks and the other Lenders shall continue to deal solely and directly with such Lender in connection with such Lender’s rights and obligations under this Agreement. Any agreement or instrument pursuant to which any Lender sells such a participation shall provide that such Lender shall retain the sole right to enforce this Agreement and to approve any amendment, modification or waiver of any provision of this Agreement; provided that such agreement or instrument may provide that such Lender will not, without the consent of the relevant Participant, agree to any amendment, modification or waiver described in (x) clause (A) of the first proviso to Section 9.02(b) that directly and adversely affects the Loans or commitments in which such Participant has an interest or (y) any of clauses (B)(1), (2) or (3) of the first proviso to Section 9.02(b). Subject to paragraph (c)(ii) of this Section, the Parent Borrower agrees that each Participant shall be entitled to the benefits of Sections 2.15, 2.16 and 2.17 (subject to the limitations and requirements of such Sections and Section 2.19) to the same extent as if it were a Lender and had acquired its interest by assignment pursuant to paragraph (b) of this Section (it being understood that the documentation required under Section 2.17(e) is delivered to the participating Lender, and if additional amounts are required to be paid pursuant to Section 2.17(a) or Section 2.17(b), to the Parent Borrower and the Administrative Agent). To the extent permitted by applicable Requirements of Law, each Participant also shall be entitled to the benefits of Section 9.09 as though it were a Lender; provided that such Participant shall be subject to Section 2.18(c) as though it were a Lender.

(ii) No Participant shall be entitled to receive any greater payment under Section 2.15, 2.16 or 2.17 than the participating Lender would have been entitled to receive with respect to the participation sold to such Participant, unless the sale of the participation to such Participant is made with the Parent Borrower's prior written consent expressly acknowledging that such Participant's entitlement to benefits under Sections 2.15, 2.16 and 2.17 is not limited to what the participating Lender would have been entitled to receive absent the participation and to the extent such entitlement to receive a greater payment results from a Change in Law that occurs after the Participant acquired the applicable participation.

Each Lender that sells a participation shall, acting solely for this purpose as a non-fiduciary agent of the Borrowers, maintain a register on which it enters the name and address of each Participant and its respective successors and registered assigns, and the principal and interest amounts of each Participant's interest in the Loans or other obligations under the Loan Documents (a "Participant Register"); provided that no Lender shall have any obligation to disclose all or any portion of any Participant Register (including the identity of any Participant or any information relating to any Participant's interest in any Commitment, Loan, Letter of Credit or any other obligation under any Loan Document) to any Person except to the extent that such disclosure is necessary to establish that such Commitment, Loan, Letter of Credit or other obligation is in registered form under Section 5f.103-1(c) of the US Treasury Regulations. The entries in the Participant Register shall be conclusive absent manifest error, and each Lender shall treat each Person whose name is recorded in the Participant Register as the owner of such participation for all purposes of this Agreement notwithstanding any notice to the contrary. For the avoidance of doubt, the Administrative Agent (in its capacity as Administrative Agent) shall have no responsibility for maintaining a Participant Register.

(d) (i) Any Lender may at any time pledge or assign a security interest in all or any portion of its rights under this Agreement (other than to any Disqualified Institution (provided that the list of Disqualified Institutions (other than any "reasonably identifiable affiliate" (on the basis of such Affiliate's name) included in the definition of "Disqualified Institution") is made available to any Lender who specifically requests a copy thereof) or any natural person) to secure obligations of such Lender, including without limitation any pledge or assignment to secure obligations to any Federal Reserve Bank or other central bank having jurisdiction over such Lender, and this Section 9.05 shall not apply to any such pledge or assignment of a security interest; provided that no such pledge or assignment of a security interest shall release any Lender from any of its obligations hereunder or substitute any such pledgee or assignee for such Lender as a party hereto.

(ii) No Lender may at any time enter into a total return swap, total rate of return swap, credit default swap or other derivative instrument under which any Secured Obligation is a reference obligation (any such swap or other derivative instrument, an "Obligations Derivative Instrument") with any counterparty that is a Disqualified Institution.

(e) Notwithstanding anything to the contrary contained herein, any Lender (a “Granting Lender”) may grant to a special purpose funding vehicle (an “SPC”), identified as such in writing from time to time by the Granting Lender to the Administrative Agent and the Parent Borrower, the option to provide to any Borrower all or any part of any Loan that such Granting Lender would otherwise be obligated to make to such Borrower pursuant to this Agreement; provided that (i) nothing herein shall constitute a commitment by any SPC to make any Loan, (ii) if an SPC elects not to exercise such option or otherwise fails to provide all or any part of such Loan, the Granting Lender shall be obligated to make such Loan pursuant to the terms hereof and (iii) in no event may any Lender grant any option to provide to any Borrower all or any part of any Loan that such Granting Lender would have otherwise been obligated to make to such Borrower pursuant to this Agreement to any Disqualified Institution. The making of any Loan by an SPC hereunder shall utilize the Commitment of the Granting Lender to the same extent, and as if, such Loan were made by such Granting Lender. Each party hereto hereby agrees that (A) neither the grant to any SPC nor the exercise by any SPC of such option shall increase the costs or expenses or otherwise increase or change the obligations of any Borrower under this Agreement (including its obligations under Section 2.15, 2.16 or 2.17) and no SPC shall be entitled to any greater amount under Section 2.15, 2.16 or 2.17 or any other provision of this Agreement or any other Loan Document than the Granting Lender would have been entitled to receive, unless the grant to such SPC is made with the prior written consent of the Parent Borrower expressly acknowledging that such SPC’s entitlement to benefits under Sections 2.15, 2.16 and 2.17 is not limited to what the Granting Lender would have been entitled to receive absent the grant to the SPC, (B) no SPC shall be liable for any indemnity or similar payment obligation under this Agreement (all liability for which shall remain with the Granting Lender) and (C) the Granting Lender shall for all purposes including approval of any amendment, waiver or other modification of any provision of the Loan Documents, remain the Lender of record hereunder. In furtherance of the foregoing, each party hereto hereby agrees (which agreement shall survive the termination of this Agreement) that, prior to the date that is one year and one day after the payment in full of all outstanding commercial paper or other senior indebtedness of any SPC, it will not institute against, or join any other Person in instituting against, such SPC any bankruptcy, reorganization, arrangement, insolvency or liquidation proceedings under the Requirements of Law of the US or any State thereof; provided that (x) such SPC’s Granting Lender is in compliance in all material respects with its obligations to the Borrowers hereunder and (y) each Lender designating any SPC hereby agrees to indemnify, save and hold harmless each other party hereto for any loss, cost, damage or expense arising out of its inability to institute such a proceeding against such SPC during such period of forbearance. In addition, notwithstanding anything to the contrary contained in this Section 9.05, any SPC may (1) with notice to, but without the prior written consent of, the Parent Borrower or the Administrative Agent and without paying any processing fee therefor, assign all or a portion of its interests in any Loan to the Granting Lender and (2) disclose on a confidential basis any non-public information relating to its Loans to any rating agency, commercial paper dealer or provider of any surety, guaranty or credit or liquidity enhancement to such SPC.

(f) If any assignment or participation under this Section 9.05 is made to any Disqualified Institution (other than any Bona Fide Debt Fund) without the Parent Borrower's prior written consent (any such person, a "Disqualified Person"), then the Parent Borrower may, at its sole expense and effort, upon notice to the applicable Disqualified Person and the Administrative Agent, (A) terminate any Commitment of such Disqualified Person and cause the Borrowers to repay all obligations of the Borrowers owing to such Disqualified Person, (B) in the case of any outstanding Term Loans held by such Disqualified Person, purchase such Term Loans by paying the lesser of (x) par and (y) the amount that such Disqualified Person paid to acquire such Term Loans, plus accrued interest thereon, accrued fees and all other amounts payable to it hereunder and/or (C) require such Disqualified Person to assign, without recourse (in accordance with and subject to the restrictions contained in this Section 9.05), all of its interests, rights and obligations under this Agreement to one or more Eligible Assignees; provided that (I) in the case of clause (B), the applicable Disqualified Person has received payment of an amount equal to the lesser of (1) par and (2) the amount that such Disqualified Person paid for the applicable Loans and participations in Letters of Credit, plus accrued interest thereon, accrued fees and all other amounts payable to it hereunder from any Borrower, (II) in the case of clauses (A) and (B), the Parent Borrower shall be liable to the relevant Disqualified Person under Section 2.16 if any Adjusted Eurocurrency Rate Loan owing to such Disqualified Person is repaid or purchased other than on the last day of the Interest Period relating thereto and (III) in the case of clause (C), the relevant assignment shall otherwise comply with this Section 9.05 (except that (x) no registration and processing fee required under this Section 9.05 shall be required with any assignment pursuant to this paragraph and (y) any Term Loan acquired by any Affiliated Lender pursuant to this paragraph will not be included in calculating compliance with the Affiliated Lender Cap for a period of 90 days following such transfer; provided that, to the extent the aggregate principal amount of Term Loans held by Affiliated Lenders exceeds the Affiliated Lender Cap on the 91st day following such transfer, then such excess amount shall either be (x) contributed to Holdings, the Parent Borrower or any of its subsidiaries and retired and cancelled immediately upon such contribution or (y) automatically cancelled)). Nothing in this Section 9.05(f) shall be deemed to prejudice any right or remedy that Holdings or the Borrowers may otherwise have at law or equity.

(g) Notwithstanding anything to the contrary contained herein, any Lender may, at any time, assign all or a portion of its rights and obligations under this Agreement in respect of its Term Loans to any Affiliated Lender on a non-pro rata basis (A) through Dutch Auction open to all Lenders holding the relevant Term Loans on a pro rata basis or (B) through open market purchases, in each case with respect to clauses (A) and (B), without the consent of the Administrative Agent; provided that:

(i) any Term Loans acquired by Holdings, the Borrowers or any of their respective Restricted Subsidiaries shall, to the extent permitted by applicable Requirements of Law, be retired and cancelled immediately upon the acquisition thereof; provided that upon any such retirement and cancellation, the aggregate outstanding principal amount of the Term Loans shall be deemed reduced by the full par value of the aggregate principal amount of the Term Loans so retired and cancelled, and each principal repayment installment with respect to the Term Loans pursuant to Section 2.10(a) shall be reduced on a pro rata basis by the full par value of the aggregate principal amount of Term Loans so cancelled;

(ii) any Term Loans acquired by any Non-Debt Fund Affiliate may (but shall not be required to) be contributed to Holdings, the Parent Borrower or any of its subsidiaries (it being understood that any Term Loans so contributed shall, to the extent permitted by applicable Requirements of Law, be retired and cancelled promptly upon such contribution); provided that upon any such cancellation, the aggregate outstanding principal amount of the Term Loans shall be deemed reduced, as of the date of such contribution, by the full par value of the aggregate principal amount of the Term Loans so contributed and cancelled, and each principal repayment installment with respect to the Term Loans pursuant to Section 2.10(a) shall be reduced pro rata by the full par value of the aggregate principal amount of Initial Term Loans so contributed and cancelled;

(iii) the relevant Affiliated Lender and assigning Lender shall have executed an Affiliated Lender Assignment and Assumption;

(iv) after giving effect to the relevant assignment and to all other assignments to all Affiliated Lenders, the aggregate principal amount of all Term Loans then held by all Affiliated Lenders shall not exceed 25% of the aggregate principal amount of the Term Loans then outstanding (after giving effect to any substantially simultaneous cancellations thereof) (the “Affiliated Lender Cap”); provided that each party hereto acknowledges and agrees that the Administrative Agent shall not be liable for any losses, damages, penalties, claims, demands, actions, judgments, suits, costs, expenses and disbursements of any kind or nature whatsoever incurred or suffered by any Person in connection with any compliance or non-compliance with this clause (g)(iv) or any purported assignment exceeding the Affiliated Lender Cap (it being understood and agreed that the Affiliated Lender Cap is intended to apply to any Loan made available to Affiliated Lenders by means other than formal assignment (e.g., as a result of an acquisition of another Lender (other than any Debt Fund Affiliate) by any Affiliated Lender or the provision of Additional Term Loans by any Affiliated Lender); provided, further, that to the extent that any assignment to any Affiliated Lender would result in the aggregate principal amount of Term Loans held by Affiliated Lenders exceeding the Affiliated Lender Cap (after giving effect to any substantially simultaneous cancellation thereof), the assignment of the relevant excess amount shall be null and void;

(v) in connection with any assignment effected pursuant to a Dutch Auction and/or open market purchase conducted by Holdings, the Parent Borrower or any of its Restricted Subsidiaries, (A) the relevant Person may not use the proceeds of any Revolving Loans to fund such assignment, (B) no Default or Event of Default exists at the time of acceptance of bids for the Dutch Auction or the entry into a binding agreement with respect to the relevant open market purchase, as applicable, and (C) such offer shall have been made to all Term Lenders with respect to the Class of Term Loans subject to such Dutch Auction; and

(vi) by its acquisition of Term Loans, each relevant Affiliated Lender shall be deemed to have acknowledged and agreed that:

(A) the Term Loans held by such Affiliated Lender shall be disregarded in both the numerator and denominator in the calculation of any Required Lender or other Lender vote (and the Term Loans held by such Affiliated Lender shall be deemed to be voted pro rata along with the other Lenders that are not Affiliated Lenders); provided that (x) such Affiliated Lender shall have the right to vote (and the Term Loans held by such Affiliated Lender shall not be so disregarded) with respect to any amendment, modification, waiver, consent or other action that requires the vote of all Lenders or all Lenders directly and adversely affected thereby, as the case may be, and (y) no amendment, modification, waiver, consent or other action shall (1) disproportionately affect such Affiliated Lender in its capacity as a Lender as compared to other Lenders of the same Class that are not Affiliated Lenders or (2) deprive any Affiliated Lender of its share of any payments which the Lenders are entitled to share on a pro rata basis hereunder, in each case without the consent of such Affiliated Lender; and

(B) such Affiliated Lender, solely in its capacity as an Affiliated Lender, will not be entitled to (i) attend (including by telephone) or participate in any meeting or discussion (or portion thereof) solely among the Administrative Agent and any Lender or solely among Lenders and, in each case, to which the Loan Parties and their representatives are not invited, or (ii) receive any information or material prepared by the Administrative Agent or any Lender or any communication by or among the Administrative Agent and one or more Lenders, except to the extent such information or materials have been made available by the Administrative Agent or any Lender to any Loan Party or its representatives (and in any case, other than the right to receive notices of Borrowings, prepayments and other administrative notices in respect of its Term Loans required to be delivered to Lenders pursuant to Article 2);

(vii) no Affiliated Lender shall be required to represent or warrant that, as of the date of any such purchase or assignment, it is not in possession of material non-public information with respect to Holdings, the Parent Borrower and/or any subsidiary thereof and/or their respective securities in connection with any assignment permitted by this Section 9.05(g); and

(viii) in any proceeding under any Debtor Relief Law, the interest of any Affiliated Lender in any Term Loan will be deemed to be voted in the same proportion as the vote of Lenders that are not Affiliated Lenders on the relevant matter and each Affiliated Lender hereby acknowledges, agrees and consents that if, for any reason, its vote to accept or reject any plan pursuant to the U.S. Bankruptcy Code is not deemed to have been so voted, then such vote will be (i) deemed not to be in good faith and (ii) “designated” pursuant to Section 1126(e) of the U.S. Bankruptcy Code such that the vote is not counted in determining whether the applicable class has accepted or rejected such plan in accordance with Section 1126(c) of the U.S. Bankruptcy Code; provided that each Affiliated Lender will be entitled to vote its interest in any Term Loan for any plan of reorganization or other arrangement with respect to which the relevant vote being sought proposes to treat the interest of such Affiliated Lender in such Term Loan in a manner that is less favorable to such Affiliated Lender than the proposed treatment of Term Loans held by other Term Lenders.

Notwithstanding anything to the contrary contained herein, any Lender may, at any time, assign all or a portion of its rights and obligations under this Agreement in respect of its Term Loans and/or Term Commitments to any Debt Fund Affiliate, and any Debt Fund Affiliate may, from time to time, purchase Loans and/or Commitments (x) on a non-pro rata basis through Dutch Auctions open to all applicable Lenders or (y) on a non-pro rata basis through open market purchases without the consent of the Administrative Agent, in each case, notwithstanding the requirements set forth in subclauses (i) through (viii) of this clause (g); provided that the Loans and Commitments held by all Debt Fund Affiliates shall not account for more than 49.9% of the amounts included in determining whether the Required Lenders have (A) consented to any amendment, modification, waiver, consent or other action with respect to any of the terms of any Loan Document or any departure by any Loan Party therefrom, (B) otherwise acted on any matter related to any Loan Document or (C) directed or required the Administrative Agent or any Lender to undertake any action (or refrain from taking any action) with respect to or under any Loan Document; it being understood and agreed that the portion of the Loan and/or Commitments that accounts for more than 49.9% of the relevant Required Lender action shall be deemed to be voted pro rata along with other Lenders that are not Debt Fund Affiliates. Any Loans acquired by any Debt Fund Affiliate may (but shall not be required to) be contributed to Holdings, the Parent Borrower or any of its subsidiaries for purposes of cancelling such Indebtedness (it being understood that any Loans so contributed shall be retired and cancelled immediately upon thereof); provided that upon any such cancellation, the aggregate outstanding principal amount of the relevant Class of Loans shall be deemed reduced, as of the date of such contribution, by the full par value of the aggregate principal amount of the Loans so contributed and cancelled, and each principal repayment installment with respect to the Term Loans pursuant to Section 2.10(a) shall be reduced pro rata by the full par value of the aggregate principal amount of any applicable Term Loans so contributed and cancelled.

Section 9.06. Survival. All covenants, agreements, representations and warranties made by the Loan Parties in the Loan Documents and in the certificates or other instruments delivered in connection with or pursuant to this Agreement or any other Loan Document shall be considered to have been relied upon by the other parties hereto and shall survive the execution and delivery of the Loan Documents and the making of any Loan and issuance of any Letter of Credit regardless of any investigation made by any such other party or on its behalf and notwithstanding that the Administrative Agent may have had notice or knowledge of any Default or Event of Default or incorrect representation or warranty at the time any credit is extended hereunder, and shall continue in full force and effect until the Termination Date. The provisions of Sections 2.15, 2.16, 2.17, 9.03 and 9.13 and Article 8 shall survive and remain in full force and effect regardless of the consummation of the transactions contemplated hereby, the repayment of the Loans, the expiration or termination of the Letters of Credit and the Revolving Credit Commitment, the occurrence of the Termination Date or the termination of this Agreement or any provision hereof but in each case, subject to the limitations set forth in this Agreement.

Section 9.07. Counterparts; Integration; Effectiveness. This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. This Agreement, the other Loan Documents and the Fee Letters and any separate letter agreements with respect to fees payable to the Administrative Agent constitute the entire agreement among the parties relating to the subject matter hereof and supersede any and all previous agreements and understandings, oral or written, relating to the subject matter hereof. This Agreement shall become effective when it has been executed by Holdings, the Borrowers and the Administrative Agent and when the Administrative Agent has received counterparts hereof which, when taken together, bear the signatures of each of the other parties hereto, and thereafter shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns. Delivery of an executed counterpart of a signature page to this Agreement by facsimile or by email as a “.pdf” or “.tif” attachment shall be effective as delivery of a manually executed counterpart of this Agreement.

Section 9.08. Severability. To the extent permitted by applicable Requirements of Law, any provision of any Loan Document held to be invalid, illegal or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity, illegality or unenforceability without affecting the validity, legality and enforceability of the remaining provisions thereof; and the invalidity of a particular provision in a particular jurisdiction shall not invalidate such provision in any other jurisdiction.

Section 9.09. Right of Setoff. At any time when an Event of Default exists, upon the written consent of the Administrative Agent and each Issuing Bank, each Lender and each of their respective Affiliates is hereby authorized at any time and from time to time, to the fullest extent permitted by applicable Requirements of Law, to set off and apply any and all deposits (general or special, time or demand, provisional or final) at any time held and other obligations (in any currency) at any time owing by the Administrative Agent, such Issuing Bank or such Lender to or for the credit or the account of any Loan Party against any and all of the Secured Obligations then due and owing held by the Administrative Agent, such Issuing Bank, such Lender or their respective Affiliates, irrespective of whether or not the Administrative Agent, such Issuing Bank or such Lender shall have made any demand under the Loan Documents and although such obligations are owed to a branch or office of such Lender or Issuing Bank different than the branch or office holding such deposit or obligation on such Indebtedness. Any applicable Lender or Issuing Bank shall promptly notify the Parent Borrower and the Administrative Agent of such set-off or application; provided that any failure to give or any delay in giving such notice shall not affect the validity of any such set-off or application under this Section. The rights of each Lender, each Issuing Bank, the Administrative Agent and each of their respective Affiliates under this Section are in addition to other rights and remedies (including other rights of setoff) which such Lender, such Issuing Bank, the Administrative Agent or their respective Affiliates may have.

Section 9.10. Governing Law; Jurisdiction; Consent to Service of Process.

(a) THIS AGREEMENT AND THE OTHER LOAN DOCUMENTS (OTHER THAN AS EXPRESSLY SET FORTH IN ANY OTHER LOAN DOCUMENT) AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS AGREEMENT AND THE OTHER LOAN DOCUMENTS (OTHER THAN AS EXPRESSLY SET FORTH IN ANY OTHER LOAN DOCUMENT), WHETHER IN TORT, CONTRACT (AT LAW OR IN EQUITY) OR OTHERWISE, SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK; PROVIDED, THAT (I) THE INTERPRETATION OF THE DEFINITION OF "CLOSING DATE MATERIAL ADVERSE EFFECT" AND THE DETERMINATION OF WHETHER A CLOSING DATE MATERIAL ADVERSE EFFECT HAS OCCURRED, (II) THE DETERMINATION OF THE ACCURACY OF ANY SPECIFIED ACQUISITION AGREEMENT REPRESENTATION AND WHETHER AS A RESULT OF ANY INACCURACY THEREOF THE INITIAL BORROWER OR ITS APPLICABLE AFFILIATE HAS A RIGHT TO TERMINATE ITS OR THEIR OBLIGATIONS UNDER THE ACQUISITION AGREEMENT OR DECLINE TO CONSUMMATE THE ACQUISITION AND (III) THE DETERMINATION OF WHETHER THE ACQUISITION HAS BEEN CONSUMMATED IN ACCORDANCE WITH THE TERMS OF THE ACQUISITION AGREEMENT AND, IN ANY CASE, ANY CLAIM OR DISPUTE ARISING OUT OF ANY SUCH INTERPRETATION OR DETERMINATION OR ANY ASPECT THEREOF, SHALL IN EACH CASE BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF DELAWARE REGARDLESS OF THE LAWS THAT MIGHT OTHERWISE GOVERN UNDER APPLICABLE PRINCIPLES OF CONFLICTS OF LAWS.

(b) EACH PARTY HERETO HEREBY IRREVOCABLY AND UNCONDITIONALLY SUBMITS, FOR ITSELF AND ITS PROPERTY, TO THE EXCLUSIVE JURISDICTION OF ANY US FEDERAL OR NEW YORK STATE COURT SITTING IN THE BOROUGH OF MANHATTAN, IN THE CITY OF NEW YORK (OR ANY APPELLATE COURT THEREFROM) OVER ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO ANY LOAN DOCUMENT AND AGREES THAT ALL CLAIMS IN RESPECT OF ANY SUCH ACTION OR PROCEEDING SHALL (EXCEPT AS PERMITTED BELOW) BE HEARD AND DETERMINED IN SUCH NEW YORK STATE OR, TO THE EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, FEDERAL COURT; PROVIDED THAT WITH RESPECT TO ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THE ACQUISITION AGREEMENT OR THE TRANSACTIONS CONTEMPLATED THEREBY WHICH DOES NOT INVOLVE ANY CLAIMS AGAINST THE ADMINISTRATIVE AGENT, THE ARRANGERS, THE ISSUING BANKS, THE LENDERS OR ANY INDEMNIFIED PERSON, THIS SENTENCE SHALL NOT OVERRIDE ANY JURISDICTION PROVISION IN THE ACQUISITION AGREEMENT. EACH PARTY HERETO AGREES THAT SERVICE OF ANY PROCESS, SUMMONS, NOTICE OR DOCUMENT BY REGISTERED MAIL ADDRESSED TO SUCH PERSON SHALL BE EFFECTIVE SERVICE OF PROCESS AGAINST SUCH PERSON FOR ANY SUIT, ACTION OR PROCEEDING BROUGHT IN ANY SUCH COURT. EACH PARTY HERETO AGREES THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY APPLICABLE REQUIREMENTS OF LAW. EACH PARTY HERETO AGREES THAT THE ADMINISTRATIVE AGENT RETAINS THE RIGHT TO BRING PROCEEDINGS AGAINST ANY LOAN PARTY IN THE COURTS OF ANY OTHER JURISDICTION SOLELY IN CONNECTION WITH THE EXERCISE OF ITS RIGHTS UNDER ANY COLLATERAL DOCUMENT.

(c) EACH PARTY HERETO HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT IT MAY LEGALLY AND EFFECTIVELY DO SO, ANY OBJECTION WHICH IT MAY NOW OR HEREAFTER HAVE TO THE LAYING OF VENUE OF ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT IN ANY COURT REFERRED TO IN PARAGRAPH (B) OF THIS SECTION. EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, ANY CLAIM OR DEFENSE OF AN INCONVENIENT FORUM TO THE MAINTENANCE OF SUCH ACTION, SUIT OR PROCEEDING IN ANY SUCH COURT.

(d) TO THE EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF ANY AND ALL PROCESS UPON IT AND AGREES THAT ALL SUCH SERVICE OF PROCESS MAY BE MADE BY REGISTERED MAIL (OR ANY SUBSTANTIALLY SIMILAR FORM OF MAIL) DIRECTED TO IT AT ITS ADDRESS FOR NOTICES AS PROVIDED FOR IN SECTION 9.01. EACH PARTY HERETO HEREBY WAIVES ANY OBJECTION TO SUCH SERVICE OF PROCESS AND FURTHER IRREVOCABLY WAIVES AND AGREES NOT TO PLEAD OR CLAIM IN ANY ACTION OR PROCEEDING COMMENCED HEREUNDER OR UNDER ANY LOAN DOCUMENT THAT SERVICE OF PROCESS WAS INVALID AND INEFFECTIVE. NOTHING IN THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT WILL AFFECT THE RIGHT OF ANY PARTY TO THIS AGREEMENT TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY APPLICABLE REQUIREMENTS OF LAW.

Section 9.11. Waiver of Jury Trial. EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY SUIT, ACTION, PROCEEDING OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY) DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT, ANY OTHER LOAN DOCUMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY. EACH PARTY HERETO (a) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HERETO HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (b) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION.

Section 9.12. Headings. Article and Section headings and the Table of Contents used herein are for convenience of reference only, are not part of this Agreement and shall not affect the construction of, or be taken into consideration in interpreting, this Agreement.

Section 9.13. Confidentiality. Each of the Administrative Agent, each Lender, each Issuing Bank and each Arranger agrees (and each Lender agrees to cause its SPC, if any) to maintain the confidentiality of the Confidential Information (as defined below), except that Confidential Information may be disclosed (a) to its Affiliates and its and their respective directors, officers, managers, members, accountants, agents, employees, independent auditors, or other experts and advisors, including accountants, legal counsel and other advisors (collectively, the “Representatives”) on a “need to know” basis solely in connection with the transactions contemplated hereby or in connection with the administration, evaluation or monitoring of the Commitments and/or Loans of the relevant Person hereunder and who are informed of the confidential nature of the Confidential Information and are or have been advised of their obligation to keep the Confidential Information of this type confidential; provided that such Person shall be responsible for its Affiliates’ and its and their respective Representatives’ compliance with this paragraph with respect to any information provided to the applicable Representative by the relevant disclosing Person; provided, further, that unless the Parent Borrower otherwise consents, no such disclosure shall be made by the Administrative Agent, any Issuing Bank, any Arranger, any Lender or any Affiliate or Representative thereof to any Affiliate or Representative of the Administrative Agent, any Issuing Bank, any Arranger, or any Lender that is a Disqualified Institution (other than, if applicable, any senior employee who is required, in accordance with industry regulations or the relevant Disqualified Institution’s internal policies and procedures, to act in a supervisory capacity and the internal legal, compliance, risk management, credit or investment committee members of the relevant Disqualified Institution), (b) to the extent compelled by legal process in, or reasonably necessary to, the defense of such legal, judicial or administrative proceeding, in any legal, judicial or administrative proceeding or otherwise as required by applicable Requirements of Law (in which case such Person shall, (i) to the extent permitted by applicable Requirements of Law, inform the Parent Borrower promptly in advance thereof and (ii) use commercially reasonable efforts to ensure that any such information so disclosed is accorded confidential treatment), (c) upon the demand or request of any regulatory or governmental authority (including any self-regulatory body and including the National Insurance Commissioners Association) purporting to have jurisdiction over such Person or its Affiliates (in which case such Person shall, except with respect to any audit or examination conducted by bank accountants or any Governmental Authority or regulatory or self-regulatory authority exercising examination or regulatory authority, to the extent permitted by applicable Requirements of Law, (i) inform the Parent Borrower promptly in advance thereof and (ii) use commercially reasonable efforts to ensure that any information so disclosed is accorded confidential treatment), (d) to any other party to this Agreement, (e) subject to an acknowledgment and agreement by the relevant recipient that the Confidential Information is being disseminated on a confidential basis (on substantially the terms set forth in this paragraph or as otherwise reasonably acceptable to the Parent Borrower and the Administrative Agent, including as set forth in the Information Memorandum) in accordance with the standard syndication process of the Arrangers or market standards for dissemination of the relevant type of information, which shall in any event require “click through” or other affirmative action on the part of the recipient to access the Confidential Information and acknowledge its confidentiality obligations in respect thereof (with the disclosing party, to the extent such recipient’s compliance is within its control, being responsible for such compliance), to (i) any Eligible Assignee of or Participant in, or any prospective Eligible Assignee of or prospective Participant in, any of its rights or obligations under this Agreement, including any SPC (in each case other than a Disqualified Institution), (ii) any pledgee referred to in Section 9.05, (iii) any actual or prospective, direct or indirect contractual counterparty (or its advisors) to any Derivative Transaction (including any credit default swap, total return swap or total rate of return swap) or similar derivative product to which any Loan Party is a party and (iv) subject to the Parent Borrower’s prior approval of the information to be disclosed (not to be unreasonably withheld or delayed), to Moody’s or S&P on a confidential basis in connection with obtaining or maintaining ratings as required under Section 5.13, (f) with the prior written consent of the Parent Borrower, (g) to the extent the Confidential Information becomes publicly available other than as a result of a breach of this Section by such Person, its Affiliates or their respective Representatives, (h) to any rating agency when required by it or the CUSIP Service Bureau or any similar agency in connection with the issuance or monitoring of CUSIP numbers or other market identifiers with respect to the Credit Facilities provided hereunder and (i) to market data collectors, similar services providers to the lending industry, and service providers to the Administrative Agent and the Lenders in connection with the administration and management of this Agreement and the other Loan Documents. For purposes of this Section, “Confidential Information” means all information relating to Holdings, the Borrowers and/or any of their subsidiaries and their respective businesses or the Transactions (including any information obtained by the Administrative Agent, any Issuing Bank, any Lender or any Arranger, or any of their respective Affiliates or Representatives, based on a review of any books and records relating to Holdings, the Borrowers and/or any of their subsidiaries and their respective Affiliates from time to time, including prior to the date hereof) other than any such information that is publicly available to the Administrative Agent or any Arranger, Issuing Bank, or Lender on a non-confidential basis prior to disclosure by Holdings, the Parent Borrower or any of its subsidiaries. For the avoidance of doubt, in no event shall any disclosure of any Confidential Information be made to Person that is a Disqualified Institution at the time of disclosure.

Section 9.14. No Fiduciary Duty. Each of the Administrative Agent, the Arrangers, each Lender, each Issuing Bank and their respective Affiliates (collectively, solely for purposes of this paragraph, the “Lenders”), may have economic interests that conflict with those of the Loan Parties, their stockholders and/or their respective Affiliates. Each Loan Party agrees that nothing in the Loan Documents or otherwise will be deemed to create an advisory, fiduciary or agency relationship or fiduciary or other implied duty between any Lender, on the one hand, and such Loan Party, its respective stockholders or its respective affiliates, on the other. Each Loan Party acknowledges and agrees that: (i) the transactions contemplated by the Loan Documents (including the exercise of rights and remedies hereunder and thereunder) are arm’s-length commercial transactions between the Lenders, on the one hand, and the Loan Parties, on the other, and (ii) in connection therewith and with the process leading thereto, (x) no Lender, in its capacity as such, has assumed an advisory or fiduciary responsibility in favor of any Loan Party, its respective stockholders or its respective affiliates with respect to the transactions contemplated hereby (or the exercise of rights or remedies with respect thereto) or the process leading thereto (irrespective of whether any Lender has advised, is currently advising or will advise any Loan Party, its respective stockholders or its respective Affiliates on other matters) or any other obligation to any Loan Party except the obligations expressly set forth in the Loan Documents and (y) each Lender, in its capacity as such, is acting solely as principal and not as the agent or fiduciary of such Loan Party, its respective management, stockholders, creditors or any other Person. Each Loan Party acknowledges and agrees that such Loan Party has consulted its own legal, tax and financial advisors to the extent it deemed appropriate and that it is responsible for making its own independent judgment with respect to such transactions and the process leading thereto.

Section 9.15. Several Obligations. The respective obligations of the Lenders hereunder are several and not joint and the failure of any Lender to make any Loan, issue any Letter of Credit or perform any of its obligations hereunder shall not relieve any other Lender from any of its obligations hereunder.

Section 9.16. Anti-Money Laundering Legislation.

(a) Each Lender that is subject to the requirements of the USA PATRIOT Act or any other applicable anti-money laundering, anti-terrorist financing, government sanction and “know your client” Requirement of Law (collectively, “AML Legislation”) and the Administrative Agent (for itself and not on behalf of any Lender) hereby notifies the Loan Parties that pursuant to the requirements of the AML Legislation, it is required to obtain, verify and record information that identifies each Loan Party, which information includes the name and address of such Loan Party and other information that will allow such Lender or the Administrative Agent to identify such Loan Party in accordance with the such AML Legislation. The Parent Borrower shall promptly provide and cause its subsidiaries that are Loan Parties to provide such information as may be reasonably requested by any Lender or the Administrative Agent (for itself and not on behalf of any Lender), or any prospective assignee of any Lender or the Administrative Agent, in order to comply with such AML Legislation, whether now or hereafter in existence. This notice is given in accordance with the requirements of the AML Legislation and is effective as to the Lenders and the Administrative Agent.

(b) If, upon the written request of any Lender, the Administrative Agent has ascertained the identity of the Borrowers or any other Loan Party or any authorized signatory of such Person for the purposes of applicable AML Legislation on such Lender’s behalf, then the Administrative Agent:

(i) shall be deemed to have done so as an agent for such Lender, and this Agreement shall constitute a “written agreement” in such regard between such Lender and the Administrative Agent within the meaning of applicable AML Legislation; and

(ii) shall provide to such Lender copies of all information obtained in such regard without any representation or warranty as to its accuracy or completeness.

(c) Notwithstanding anything to the contrary in this Section 9.16, each of the Lenders agrees that the Administrative Agent has no obligation to ascertain the identity of the Borrowers or any other Loan Party or any authorized signatory of such Person, on behalf of any Lender, or to confirm the completeness or accuracy of any information it obtains from any such person or any such authorized signatory in doing so.

Section 9.17. Disclosure of Agent Conflicts. Each Loan Party, each Issuing Bank and each Lender hereby acknowledge and agree that the Administrative Agent and/or its Affiliates from time to time may hold investments in, make other loans to or have other relationships with any of the Loan Parties and their respective Affiliates.

Section 9.18. Appointment for Perfection; Release of Liens and Guarantees.

(a) Each Lender hereby appoints each other Lender and each Issuing Bank as its agent for the purpose of perfecting Liens for the benefit of the Administrative Agent, the Issuing Banks and the Lenders, in assets which, in accordance with the Article 9 of the UCC or any other applicable Requirement of Law can be perfected only by possession. If any Lender or Issuing Bank (other than the Administrative Agent) obtains possession of any Collateral, such Lender, Issuing Bank shall notify the Administrative Agent thereof and, promptly upon the Administrative Agent's request therefor shall deliver such Collateral to the Administrative Agent or otherwise deal with such Collateral in accordance with the Administrative Agent's instructions.

(b) The Liens on any property granted to or held by the Administrative Agent under any Loan Document (x) shall be automatically released (i) upon the occurrence of the Termination Date, (ii) upon the sale or transfer of such property in connection with any Disposition permitted under the Loan Documents to a Person that is not a Loan Party, (iii) upon such property becoming an Excluded Asset, (iv) if the property subject to such Lien is owned by a Subsidiary Guarantor, upon the release of such Subsidiary Guarantor from its Loan Guaranty otherwise in accordance with the Loan Documents and (y) shall be released by the Administrative Agent as expressly set forth in Article 8 in connection with the approval, authorization or ratification in writing by the Required Lenders approving such release (or the release of a Subsidiary Guarantor owning such property) in accordance with Section 9.02.

(c) Holdings, any Borrower and any Subsidiary Guarantor shall be automatically released from all its obligations under the Loan Documents (including its Loan Guaranty) (i) in the case of any Subsidiary Guarantor, upon the consummation of any permitted transaction or series of related transactions if as a result thereof such Subsidiary Guarantor ceases to be a Restricted Subsidiary or, upon request by the Parent Borrower, becomes an Excluded Subsidiary (including upon the effectiveness of any approval, authorization or ratification in writing by the Required Lenders approving such release in accordance with Section 9.02) and/or (ii) upon the occurrence of the Termination Date.

Section 9.19. Interest Rate Limitation. Notwithstanding anything herein to the contrary, if at any time the interest rate applicable to any Loan or Letter of Credit, together with all fees, charges and other amounts which are treated as interest on such Loan or Letter of Credit under applicable Requirements of Law (collectively the "Charged Amounts"), shall exceed the maximum lawful rate (the "Maximum Rate") which may be contracted for, charged, taken, received or reserved by the Lender or Issuing Bank holding such Loan or Letter of Credit in accordance with applicable Requirements of Law, the rate of interest payable in respect of such Loan or Letter of Credit hereunder, together with all Charged Amounts payable in respect thereof, shall be limited to the Maximum Rate and, to the extent lawful, the interest and Charged Amounts that would have been payable in respect of such Loan or Letter of Credit but were not payable as a result of the operation of this Section shall be cumulated and the interest and Charged Amounts payable to such Lender or Issuing Bank in respect of other Loans or Letters of Credit shall be increased (but not above the Maximum Rate therefor) until such cumulated amount, together with interest thereon at the Federal Funds Effective Rate to the date of repayment, have been received by such Lender or Issuing Bank.

Section 9.20. Acceptable Intercreditor Agreements. REFERENCE IS MADE TO EACH ACCEPTABLE INTERCREDITOR AGREEMENT (IF ANY). EACH LENDER AND ISSUING BANK HEREUNDER AGREES THAT IT WILL BE BOUND BY AND WILL TAKE NO ACTIONS CONTRARY TO THE PROVISIONS OF ANY ACCEPTABLE INTERCREDITOR AGREEMENT AND AUTHORIZES AND INSTRUCTS THE ADMINISTRATIVE AGENT TO ENTER INTO EACH ACCEPTABLE INTERCREDITOR AGREEMENT IN THE CAPACITY OTHERWISE PERMITTED HEREUNDER AND ON BEHALF OF SUCH LENDER OR ISSUING BANK. THE PROVISIONS OF THIS SECTION 9.20 ARE NOT INTENDED TO SUMMARIZE ALL RELEVANT PROVISIONS OF ANY ACCEPTABLE INTERCREDITOR AGREEMENT. REFERENCE MUST BE MADE TO EACH ACCEPTABLE INTERCREDITOR AGREEMENT TO UNDERSTAND ALL TERMS AND CONDITIONS THEREOF. EACH LENDER AND ISSUING BANK IS RESPONSIBLE FOR MAKING ITS OWN ANALYSIS AND REVIEW OF EACH ACCEPTABLE INTERCREDITOR AGREEMENT AND THE TERMS AND PROVISIONS THEREOF, AND NEITHER THE ADMINISTRATIVE AGENT NOR ANY OF ITS AFFILIATES MAKES ANY REPRESENTATION TO ANY LENDER OR ISSUING BANK AS TO THE SUFFICIENCY OR ADVISABILITY OF THE PROVISIONS CONTAINED IN ANY ACCEPTABLE INTERCREDITOR AGREEMENT).

Section 9.21. Conflicts. Notwithstanding anything to the contrary contained herein or in any other Loan Document, in the event of any conflict or inconsistency between this Agreement and any other Loan Document, the terms of this Agreement shall govern and control.

Section 9.22. Effectiveness of the Closing Date Assumption and Joint and Several Obligations.

(a) Effective upon the consummation of the Acquisition, the Initial Borrower hereby assigns all rights and obligations (including the Obligations) of the Initial Borrower under this Agreement and the Fee Letters to each of the Target and Certara USA and each of the Target and Certara USA, effective upon the consummation of the Acquisition, hereby jointly and severally assume all the rights and obligations (including the Obligations) of the Initial Borrower under this Agreement and the Fee Letters and agrees that thereafter it shall be a "Borrower" under, and for all purposes of, this Agreement, the Fee Letters and the other Loan Documents and the Initial Borrower shall no longer be a "Borrower" under this Agreement, the Fee Letter or the other Loan Documents. From and after the Closing Date Assumption, the Initial Borrower is hereby released from all the Obligations of the "Initial Borrower" and a "Borrower" under this Agreement, the Fee Letters and the other Loan Documents (it being understood, for the avoidance of doubt, that the Initial Borrower shall become a Loan Guarantor effective upon the Closing Date Assumption).

(b) The Borrowers (other than the Initial Borrower) shall have no rights or obligations hereunder until the consummation of the Acquisition and the Closing Date Assumption and any representations and warranties of the Borrowers (other than the Initial Borrower) hereunder shall not become effective until such time. Upon consummation of the Acquisition and the Closing Date Assumption, the Borrowers (other than the Initial Borrower) shall succeed to all the rights and obligations of the Initial Borrower under this Agreement and the other Loan Documents to which it is a party and all representations and warranties of the Borrowers (other than the Initial Borrower) shall become effective as of the date hereof, without any further action by any Person.

(c) From and after the Closing Date Assumption, the Borrowers shall have joint and several liability in respect of all Obligations hereunder and under any other Loan Document to which any Borrower is a party, without regard to any defense (other than the defense that payment in full has been made), setoff or counterclaim which may at any time be available to or be asserted by any other Loan Party against the Lenders, or by any other circumstance whatsoever (with or without notice to or knowledge of the Borrowers) which constitutes, or might be construed to constitute, an equitable or legal discharge of the Borrowers' liability hereunder, in bankruptcy or in any other instance, and the Obligations of the Borrowers hereunder shall not be conditioned or contingent upon the pursuit by the Lenders or any other person at any time of any right or remedy against the Borrowers or against any other person which may be or become liable in respect of all or any part of the Loan Obligations or against any Collateral or Guarantee therefor or right of offset with respect thereto. The Borrowers hereby acknowledge that this Agreement is the independent and several obligation of each Borrower (regardless of which Borrower shall have delivered a request for borrowings under Section 2.03) and may be enforced against each Borrower separately, whether or not enforcement of any right or remedy hereunder has been sought against any other Borrower. Each Borrower hereby expressly waives, with respect to any of the Loans made to any other Borrower hereunder and any of the amounts owing hereunder by such other Loan Parties in respect of such Loans, diligence, presentment, demand of payment, protest and all notices whatsoever, and any requirement that the Administrative Agent or any Lender exhaust any right, power or remedy or proceed against such other Loan Parties under this Agreement or any other agreement or instrument referred to herein or against any other person under any other guarantee of, or security for, any of such amounts owing hereunder.

Section 9.23. Acknowledgement and Consent to Bail-In of EEA Financial Institutions. Notwithstanding anything to the contrary in any Loan Document or in any other agreement, arrangement or understanding among any such parties, each party hereto acknowledges that any liability of any EEA Financial Institution arising under any Loan Document, to the extent such liability is unsecured, may be subject to the write-down and conversion powers of an EEA Resolution Authority and agrees and consents to, and acknowledges and agrees to be bound by:

- (a) the application of any Write-Down and Conversion Powers by an EEA Resolution Authority to any such liabilities arising hereunder which may be payable to it by any party hereto that is an EEA Financial Institution; and
- (b) the effects of any Bail-In Action on any such liability, including, if applicable:
 - (i) a reduction in full or in part or cancellation of any such liability;
 - (ii) a conversion of all, or a portion of, such liability into shares or other instruments of ownership in such EEA Financial Institution, its parent entity, or a bridge institution that may be issued to it or otherwise conferred on it, and that such shares or other instruments of ownership will be accepted by it in lieu of any rights with respect to any such liability under this Agreement or any other Loan Document; or
 - (iii) the variation of the terms of such liability in connection with the exercise of the write-down and conversion powers of any EEA Resolution Authority.

[Signature Pages Follow]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed by their respective authorized officers as of the day and year first above written.

EQT AVATAR INTERMEDIATE, INC., as Holdings

By: /s/ Jason Howard

Name: Jason Howard

Title: President

By: /s/ Robert Bradburn

Name: Robert Bradburn

Title: Vice President and Secretary

EQT AVATAR HOLDINGS, INC., as the Initial Borrower (in its capacity as the Initial Borrower prior to giving effect to the Closing Date Assumption)

By: /s/ Jason Howard

Name: Jason Howard

Title: President

By: /s/ Robert Bradburn

Name: Robert Bradburn

Title: Vice President and Secretary

CERTARA HOLDCO, INC., as the Parent Borrower (in its capacity as the Parent Borrower after giving effect to the Closing Date Assumption)

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: CFO and Treasurer

CERTARA USA, INC., as the Co-Borrower (in its capacity as the Co-Borrower after giving effect to the Closing Date Assumption)

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: CFO and Treasurer

JEFFERIES FINANCE LLC individually, as Administrative Agent, as an Issuing Bank and as a Lender

By: /s/ Jason Kennedy

Name: Jason Kennedy

Title: Managing Director

GOLUB CAPITAL LLC, individually, as an Issuing Bank and a Lender

By: /s/ Robert G. Tuchscherer

Name: Robert G. Tuchscherer

Title: Managing Director

GC FINANCE OPERATIONS LLC, individually, as a Lender

By: GC ADVISORS LLC, its Manager

By: /s/ Robert G. Tuchscherer

Name: Robert G. Tuchscherer

Title: Managing Director

[Signature Page to Project Avatar Credit Agreement]

Schedule 1.01(a)
Commitment Schedule

Initial Term Loan Commitments

Term Lender	Initial Term Loan Commitment
Jefferies Finance LLC	\$ 250,000,000
Total	\$ 250,000,000

Revolving Credit Commitments

Revolving Lender	Initial Revolving Credit Commitment
Jefferies Finance LLC	\$ 15,000,000
GC Finance Operations LLC	\$ 5,000,000
Total	\$ 20,000,000

Schedule 1.01(b)
Dutch Auction Procedures

“Dutch Auction” means an auction (an “Auction”) conducted by any Person (any such Person, the “Auction Party”) in order to purchase Term Loans, in accordance with the following procedures and subject to the Credit Agreement; provided that no Auction Party shall initiate any Auction unless (I) at least five Business Days have passed since the consummation of the most recent purchase of Term Loans pursuant to an Auction conducted hereunder; or (II) at least three Business Days have passed since the date of the last Failed Auction (as defined below) which was withdrawn pursuant to clause (c)(i) below:

(a) Notice Procedures. In connection with any Auction, the Auction Party will provide notification to the Auction Agent (as defined below) (for distribution to the relevant Lenders) of the Term Loans that will be the subject of the Auction (an “Auction Notice”). Each Auction Notice shall be in a form reasonably acceptable to the Auction Agent and shall (i) specify the maximum aggregate principal amount of the Term Loans subject to the Auction, in a minimum amount of \$10,000,000 and whole increments of \$1,000,000 in excess thereof (or, in any case, such lesser amount of such Term Loans then outstanding or which is otherwise reasonably acceptable to the Auction Agent and the Administrative Agent (if different from the Auction Agent)) (the “Auction Amount”), (ii) specify the discount to par (which may be a range (the “Discount Range”) of percentages of the par principal amount of the Term Loans subject to such Auction), that represents the range of purchase prices that the Auction Party would be willing to accept in the Auction, (iii) be extended, at the sole discretion of the Auction Party, to (x) each Lender and/or (y) each Lender with respect to any Term Loan on an individual Class basis and (iv) remain outstanding through the Auction Response Date. The Auction Agent will promptly provide each appropriate Lender with a copy of the Auction Notice and a form of the Return Bid to be submitted by a responding Lender to the Auction Agent (or its delegate) by no later than 5:00 p.m. on the date specified in the Auction Notice (or such later date as the Auction Party may agree with the reasonable consent of the Auction Agent) (the “Auction Response Date”).

(b) Reply Procedures. In connection with any Auction, each Lender holding the relevant Term Loans subject to such Auction may, in its sole discretion, participate in such Auction and may provide the Auction Agent with a notice of participation (the “Return Bid”) which shall be in a form reasonably acceptable to the Auction Agent, and shall specify (i) a discount to par (that must be expressed as a price at which it is willing to sell all or any portion of such Term Loans) (the “Reply Price”), which (when expressed as a percentage of the par principal amount of such Term Loans) must be within the Discount Range, and (ii) a principal amount of such Term Loans, which must be in whole increments of \$1,000,000 (or, in any case, such lesser amount of such Term Loans of such Lender then outstanding or which is otherwise reasonably acceptable to the Auction Agent) (the “Reply Amount”). Lenders may only submit one Return Bid per Auction, but each Return Bid may contain up to three bids only one of which may result in a Qualifying Bid. In addition to the Return Bid, the participating Lender must execute and deliver, to be held in escrow by the Auction Agent, an Assignment and Assumption with the dollar amount of the Term Loans to be assigned to be left in blank, which amount shall be completed by the Auction Agent (but in no such event shall the amount be in excess of the principal amount of Term Loans such Lender has indicated it is willing to sell) in accordance with the final determination of such Lender’s Qualifying Bid pursuant to clause (c) below. Any Lender whose Return Bid is not received by the Auction Agent by the Auction Response Date shall be deemed to have declined to participate in the relevant Auction with respect to all of its Term Loans.

(c) Acceptance Procedures. Based on the Reply Prices and Reply Amounts received by the Auction Agent prior to the applicable Auction Response Date, the Auction Agent, in consultation with the Auction Party, will determine the applicable price (the “Applicable Price”) for the Auction, which will be the lowest Reply Price for which the Auction Party can complete the Auction at the Auction Amount; provided that, in the event that the Reply Amounts are insufficient to allow the Auction Party to complete a purchase of the entire Auction Amount (any such Auction, a “Failed Auction”), the Auction Party shall either, at its election, (i) withdraw the Auction or (ii) complete the Auction at an Applicable Price equal to the highest Reply Price. The Auction Party shall purchase the relevant Term Loans (or the respective portions thereof) from each Lender with a Reply Price that is equal to or lower than the Applicable Price (“Qualifying Bids”) at the Applicable Price; provided that if the aggregate proceeds required to purchase all Term Loans subject to Qualifying Bids would exceed the Auction Amount for such Auction, the Auction Party shall purchase such Term Loans at the Applicable Price ratably based on the principal amounts of such Qualifying Bids (subject to rounding requirements specified by the Auction Agent in its discretion). If a Lender has submitted a Return Bid containing multiple bids at different Reply Prices, only the bid with the lowest Reply Price that is equal to or less than the Applicable Price will be deemed to be the Qualifying Bid of such Lender (e.g., a Reply Price of \$100 with a discount to par of 2.00%, when compared to an Applicable Price of \$100 with a 1.00% discount to par, will not be deemed to be a Qualifying Bid, while, however, a Reply Price of \$100 with a discount to par of 2.50% would be deemed to be a Qualifying Bid). The Auction Agent shall promptly, and in any case within five Business Days following the Auction Response Date with respect to an Auction, notify (I) the Borrower of the respective Lenders’ responses to such solicitation, the effective date of the purchase of Term Loans pursuant to such Auction, the Applicable Price, and the aggregate principal amount of the Term Loans and the tranches thereof to be purchased pursuant to such Auction, (II) each participating Lender of the effective date of the purchase of Term Loans pursuant to such Auction, the Applicable Price, and the aggregate principal amount and the tranches of Term Loans to be purchased at the Applicable Price on such date, (III) each participating Lender of the aggregate principal amount and the tranches of the Term Loans of such Lender to be purchased at the Applicable Price on such date and (IV) if applicable, each participating Lender of any rounding and/or proration pursuant to the second preceding sentence. Each determination by the Auction Agent of the amounts stated in the foregoing notices to the Borrower and Lenders shall be conclusive and binding for all purposes absent manifest error.

(d) Additional Procedures.

(i) Once initiated by an Auction Notice, the Auction Party may not withdraw an Auction other than a Failed Auction (other than with the reasonable consent of the Auction Agent). Furthermore, in connection with any Auction, upon submission by a Lender of a Qualifying Bid, such Lender (each, a “Qualifying Lender”) will be obligated to sell the entirety or its allocable portion of the Reply Amount, as the case may be, at the Applicable Price.

(ii) To the extent not expressly provided for herein, each purchase of Term Loans pursuant to an Auction shall be consummated pursuant to procedures consistent with the provisions in this definition, established by the Auction Agent acting in its reasonable discretion and as reasonably agreed by the Borrower.

(iii) In connection with any Auction, the Borrower and the Lenders acknowledge and agree that the Auction Agent may require as a condition to any Auction, the payment of customary fees and expenses by the Auction Party in connection therewith as agreed between the Auction Party and the Auction Agent.

(iv) Notwithstanding anything in any Loan Document to the contrary, for purposes of this definition, each notice or other communication required to be delivered or otherwise provided to the Auction Agent (or its delegate) shall be deemed to have been given upon the Auction Agent's (or its delegate's) actual receipt during normal business hours of such notice or communication; provided that any notice or communication actually received outside of normal business hours shall be deemed to have been given as of the opening of business on the next Business Day.

(v) The Borrower and the Lenders acknowledge and agree that the Auction Agent may perform any and all of its duties under this definition by itself or through any Affiliate of the Auction Agent and expressly consent to any such delegation of duties by the Auction Agent to such Affiliate and the performance of such delegated duties by such Affiliate. The exculpatory provisions pursuant to this Agreement shall apply to each Affiliate of the Auction Agent and its respective activities in connection with any purchase of Term Loans provided for in this definition as well as activities of the Auction Agent.

“Auction Agent” means (a) the Administrative Agent or any of its Affiliates or (b) any other financial institution or advisor engaged by the Borrower (whether or not an Affiliate of the Administrative Agent) to act as an arranger in connection with any Dutch Auction; provided, that the Borrower shall not designate the Administrative Agent as the Auction Agent without the prior written consent of the Administrative Agent (it being understood that the Administrative Agent shall be under no obligation to agree to act as the Auction Agent); provided, further, that neither Holdings nor any of its subsidiaries may act as the Auction Agent.

Schedule 1.01(d)
Administrative Agent's Office

Administrative Agent's Office

(for payments and Requests for Credit Extensions)

Jefferies Finance LLC
520 Madison Avenue
New York, NY 10022
Attention: Account Manager – Certara
Email: []
Facsimile: []

Administrative Agent's Office

(for notices under all Loan Documents excluding Collateral Documents)

Jefferies Finance LLC
520 Madison Avenue
New York, NY 10022
Attention: Account Manager – Certara
Email: []
Facsimile: []

Administrative Agent's Office

(for notices under the Collateral Documents)

Jefferies Finance LLC
520 Madison Avenue
New York, NY 10022
Attention: Account Manager – Certara
Email: []
Facsimile: []

Administrative Agent's Bank Account Details

Bank Name	Deutsche Bank Trust Company Americas
City and State	New York, NY
ABA Routing Number	[]
Account Name	Global Loan Services
Account Number	[]
Re	Avatar

Schedule 2.01
LC Commitments

Issuing Bank	LC Commitment
Jefferies Finance LLC	\$ 7,500,000
Golub Capital LLC	\$ 2,500,000
Total	\$ 10,000,000

Schedule 3.13
Subsidiaries

Parent	Subsidiary	Type of Organization	Jurisdiction of Organization / Formation	# of Shares Owned	Total Shares Outstanding	Certificate No.
EQT Avatar Intermediate, Inc.	EQT Avatar Holdings, Inc.	Corporation	Delaware	100 shares of voting common stock	100 shares of voting common stock	2
EQT Avatar Holdings, Inc.	Certara Holdco, Inc.	Corporation	Delaware	50 shares of voting common stock	50 shares of voting common stock	2
Certara Holdco, Inc.	Certara Holding, Inc.	Corporation	Delaware	50 shares of voting common stock	50 shares of voting common stock	2
Certara Holding, Inc.	Certara USA, Inc.	Corporation	Delaware	1,750,000 shares of voting common stock	1,750,000 shares of voting common stock	A-16
Certara Holding, Inc.	Certara S.à r.l.	Société à responsabilité limitée	Luxembourg			Uncertificated
Certara S.à r.l.	Certara Spain, S.L.	Sociedad de Responsabilidad Limitada	Spain			Uncertificated
Certara Spain, S.L.	Tripos Investments, L.L.C.	Limited Liability Company	Delaware			Uncertificated
Certara Spain, S.L.	MBDD US, LLC	Limited Liability Company	Delaware			Uncertificated
Certara Spain, S.L.	Certara, L.P.	Limited Partnership	Delaware			Uncertificated
Certara, L.P.	Certara, LP - Sucursal em Portugal	Sucursal	Portugal			Uncertificated

Certara Spain, S.L.	MBDD UK, LLC	Limited Liability Company	Delaware			Uncertificated
MBDD UK, LLC	Certara UK Holdings, Ltd.	Private Limited by Shares	United Kingdom	1 ordinary share	1 ordinary share	3
Certara UK Holdings, Ltd.	Simcyp Ltd	Private Limited by Shares	United Kingdom	54,020 A Ordinary shares	54,020 A Ordinary shares	60
				18,000 B Ordinary Shares	18,000 B Ordinary Shares	61
				18,802 C Ordinary shares	18,802 C Ordinary shares	62
Simcyp Ltd	Xenologiq Ltd	Private Limited by Shares	United Kingdom			Uncertificated
Certara UK Holdings, Ltd.	Certara G.K.	Godo Kaisha	Japan			Uncertificated
Certara Spain, S.L. (99%)	Certara Software India Private Ltd	Private Limited Company	India			Uncertificated
Certara UK Holdings, Ltd. (1%)						
Certara Spain, S.L.	Pharsight International France S.à r.l.	Société à responsabilité limitée	France			Uncertificated
Certara Spain, S.L.	Certara Canada Corporation	Corporation	Canada			Uncertificated
Certara USA, Inc.	Synchrogenix Information Strategies, LLC	Limited Liability Company	Delaware			Uncertificated

Synchrogenix Information Strategies, LLC	Synchrogenix Europe Limited	Private Limited by Shares	United Kingdom	66 ordinary shares 34 ordinary shares	66 ordinary shares 34 ordinary shares	4 5
Synchrogenix Information Strategies, LLC	Synchrogenix Philippines Inc.	Corporation	Philippines			N/A
Certara USA, Inc.	Certara Australia Pty Ltd	Proprietary Limited Company	Australia	34 ordinary shares 66 ordinary shares	34 ordinary shares 66 ordinary shares	1 2
Certara USA, Inc.	Quantitative Solutions, Inc.	Corporation	California	1,000 shares of voting common stock 333 shares of non-voting common stock	1,000 shares of voting common stock 333 shares of non-voting common stock	VC 3 NVC 3
Quantitative Solutions, Inc.	Quantitative Solutions LLC	Limited Liability Company	Delaware			Uncertificated
Quantitative Solutions LLC (1%) Quantitative Solutions, Inc. (99%)	Quantitative Solutions LP	Limited Partnership	California			Uncertificated
Quantitative Solutions LP	Quantitative Solutions Cöoperatief U.A.	Cooperative with Excluded Liability	Netherlands			Uncertificated
Quantitative Solutions Cöoperatief U.A.	Quantitative Solutions B.V.	Private Limited Liability Company	Netherlands			Uncertificated

Schedule 5.10
Unrestricted Subsidiaries

None.

Schedule 6.01
Existing Indebtedness

1. Master Lease Agreement No. 16905 Supplement No. 1 between EMC Corporation and Arsenal MBDD Holdco, Inc. effective as of August 1, 2016.
2. Lease Schedule No. UK1462-2 between EMC Computer Systems (UK) Limited and Simcyp Limited effective as of August 1, 2016.
3. Lease Schedule No. UK1462-3 between EMC Computer Systems (UK) Limited and Simcyp Limited effective as of August 1, 2016.
4. Lease between Arsenal MBDD Holdco, Inc. and CIT Bank, N.A. effective as of June 27, 2016, and restated November 10, 2016.

Schedule 6.02
Existing Liens

1. Master Lease Agreement No. 16905 Supplement No. 1 between EMC Corporation and Arsenal MBDD Holdco, Inc. effective as of August 1, 2016.
2. Lease Schedule No. UK1462-2 between EMC Computer Systems (UK) Limited and Simcyp Limited effective as of August 1, 2016.
3. Lease Schedule No. UK1462-3 between EMC Computer Systems (UK) Limited and Simcyp Limited effective as of August 1, 2016
4. Lease between Arsenal MBDD Holdco, Inc. and CIT Bank, N.A. effective as of June 27, 2016, and restated November 10, 2016.

Schedule 6.06
Existing Investments

None.

Schedule 6.07
Certain Dispositions

None.

Schedule 9.01
Borrower's Website for Electronic Delivery

www.Certara.com

[FORM OF]
ASSIGNMENT AND ASSUMPTION

This Assignment and Assumption (the “Assignment and Assumption”) is dated as of the Effective Date set forth below and is entered into by and between the Assignor identified in item 1 below (the “Assignor”) and the Assignee identified in item 2 below (the “Assignee”). Capitalized terms used but not defined herein shall have the meanings given to them in the Credit Agreement identified below (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Credit Agreement”), receipt of a copy of which is hereby acknowledged by the Assignee. The Standard Terms and Conditions for Assignment and Assumption set forth in Annex I attached hereto (the “Standard Terms and Conditions”) are hereby agreed to and incorporated herein by reference and made a part of this Assignment and Assumption as if set forth herein in full.

For an agreed consideration, the Assignor hereby irrevocably sells and assigns to the Assignee, and the Assignee hereby irrevocably purchases and assumes from the Assignor, subject to and in accordance with the Standard Terms and Conditions and the Credit Agreement, as of the Effective Date inserted by the Administrative Agent below, the interest in and to (i) all of the Assignor’s rights and obligations in its capacity as a Lender under the Credit Agreement and any other documents or instruments delivered pursuant thereto to the extent related to the amount and percentage interest identified below of all of such outstanding rights and obligations of the Assignor under the respective Classes identified below (including any Letters of Credit included in such Classes) and (ii) to the extent permitted to be assigned under applicable Requirements of Law, all claims, suits, causes of action and any other right of the Assignor (in its capacity as a Lender) against any Person, whether known or unknown, arising under or in connection with the Credit Agreement, any other documents or instruments delivered pursuant thereto or the loan transactions governed thereby or in any way based on or related to any of the foregoing, including contract claims, tort claims, malpractice claims, statutory claims and all other claims at law or in equity related to the rights and obligations sold and assigned pursuant to clause (i) above (the rights and obligations sold and assigned by the Assignor to the Assignee pursuant to clauses (i) and (ii) above being referred to herein collectively as the “Assigned Interest”). Such sale and assignment is (i) subject to acceptance and recording thereof in the Register by the Administrative Agent pursuant to Section 9.05(b)(v) of the Credit Agreement, (ii) without recourse to the Assignor and (iii) except as expressly provided in this Assignment and Assumption, without representation or warranty by the Assignor.

1. Assignor:

2. Assignee:

[and is an Affiliate/Approved Fund of [identify Lender]¹]

3. Borrowers: Certara Holdco, Inc. and Certara USA, Inc.

4. Administrative Agent: Jefferies Finance LLC, as administrative agent under the Credit Agreement

5. Credit Agreement: That certain Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the “Initial Borrower”), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the “Parent Borrower”), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the “Co-Borrower” and, together with the Initial Borrower and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the “Administrative Agent”), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks.

¹ Select as applicable.

6. Assigned Interest:

Aggregate Amount of Commitment/Loans	Class of Loans Assigned ²	Amount of Commitment/Loans Assigned ³	Percentage Assigned of Commitment/Loans under Relevant Class ⁴	CUSIP Number
\$		\$	%	
\$		\$	%	
\$		\$	%	

Effective Date: [●] [●], 20[●] [TO BE INSERTED BY THE ADMINISTRATIVE AGENT AND WHICH SHALL BE THE EFFECTIVE DATE OF RECORDATION OF TRANSFER IN THE REGISTER THEREFOR].

7. **THE PARTIES HERETO ACKNOWLEDGE THAT (A) IN THE EVENT OF ANY ASSIGNMENT TO ANY DISQUALIFIED INSTITUTION (OTHER THAN A BONA FIDE DEBT FUND) WITHOUT OBTAINING THE REQUIRED CONSENT OF THE PARENT BORROWER OR, TO THE EXTENT THE PARENT BORROWER'S CONSENT IS REQUIRED UNDER SECTION 9.05 OF THE CREDIT AGREEMENT, TO ANY OTHER PERSON, THE PARENT BORROWER SHALL BE ENTITLED TO PURSUE THE REMEDIES DESCRIBED IN SECTION 9.05 OF THE CREDIT AGREEMENT AND (B) CERTAIN OTHER TRANSACTIONS WITH DISQUALIFIED INSTITUTIONS (AND AFFILIATES THEREOF (OTHER THAN BONA FIDE DEBT FUNDS)) ARE SUBJECT TO THE LIMITATIONS, RIGHTS AND REMEDIES PRESCRIBED IN SECTION 9.05 OF THE CREDIT AGREEMENT.**

[Signature Page Follows]

² If Revolving Credit Commitments are to be assigned by a Lender that is also an Issuing Bank, then (1) the assignee shall be or become an Issuing Bank and assume a ratable portion of such assignor's L/C Commitment and its rights and obligations in its capacity as Issuing Bank or (2) the assignor shall agree, in its discretion, to retain all of its rights with respect to, and obligations to make or issue, Letters of Credit in which case the L/C Exposure of such assignor may exceed such assignor's Revolving Credit Commitment by an amount not to exceed the difference between the assignor's Revolving Credit Commitment prior to such assignment and the assignor's Revolving Credit Commitment following such assignment.

³ Not to be less than (x) \$1,000,000 in the case of Term Loans and Term Commitments and (y) \$5,000,000 in the case of Revolving Loans and Revolving Credit Commitments unless the Parent Borrower and the Administrative Agent otherwise consent.

⁴ Set forth, to at least 9 decimals, as a percentage of the Commitment/Loans of all Lenders thereunder.

The terms set forth in this Assignment and Assumption are hereby agreed to:

ASSIGNOR

[NAME OF ASSIGNOR]

By: _____
Name:
Title:

- **ASSIGNEE HAS EXAMINED THE LIST OF DISQUALIFIED INSTITUTIONS AND (I) REPRESENTS AND WARRANTS THAT (A) IT IS NOT IDENTIFIED ON SUCH LIST AND (B) IT IS NOT AN AFFILIATE OF ANY INSTITUTION IDENTIFIED ON SUCH LIST [(OTHER THAN, IN THE CASE OF THIS CLAUSE (B), A BONA FIDE DEBT FUND)]⁵ AND (II) ACKNOWLEDGES THAT CERTAIN TRANSACTIONS WITH DISQUALIFIED INSTITUTIONS (AND AFFILIATES THEREOF (OTHER THAN BONA FIDE DEBT FUNDS)) SHALL BE SUBJECT TO SECTION 9.05 OF THE CREDIT AGREEMENT.⁶**

ASSIGNEE

[NAME OF ASSIGNEE]

By: _____
Name:
Title:

⁵ Insert bracketed language if Assignee is a Bona Fide Debt Fund.

⁶ To be completed by Assignee.

[Consented to and]⁷ Accepted:

JEFFERIES FINANCE LLC, as Administrative Agent

By: _____
Name:
Title:

By: _____
Name:
Title:

[ISSUING BANK]⁸

By: _____
Name:
Title:

[Consented to:]⁹

CERTARA HOLDCO, INC., as the Parent Borrower

By: _____
Name:
Title:

⁷ Insert only if the Administrative Agent's consent is required pursuant to Section 9.05(b)(i)(B) of the Credit Agreement. Consent of the Administrative Agent shall not be unreasonably withheld or delayed.

⁸ To be added only with respect to an assignment under the Revolving Facility.

⁹ To be added only if the consent of the Parent Borrower is required by Section 9.05(b)(i)(A) of the Credit Agreement.

STANDARD TERMS AND CONDITIONS FOR
ASSIGNMENT AND ASSUMPTION1. *Representations and Warranties.*

1.1 **Assignor.** The Assignor (a) represents and warrants that (i) it is the legal and beneficial owner of the Assigned Interest, (ii) the Assigned Interest is free and clear of any lien, encumbrance or other adverse claim, (iii) its Commitment, and the outstanding balances of its Loans, in each case without giving effect to assignments thereof which have not become effective, are as set forth herein, (iv) it has full power and authority, and has taken all action necessary, to execute and deliver this Assignment and Assumption and to consummate the transactions contemplated hereby and (v) it is not a Defaulting Lender; and (b) makes no representation or warranty and assumes no responsibility with respect to (i) any statements, warranties or representations made in or in connection with the Credit Agreement, any other Loan Document or any other instrument or document furnished pursuant thereto (other than this Assignment and Assumption) or any collateral thereunder, (ii) the execution, legality, validity, enforceability, genuineness, sufficiency or value of the Loan Documents, any instrument or document furnished pursuant thereto or any collateral thereunder, (iii) the financial condition of the Borrowers, any of their Restricted Subsidiaries or Affiliates or any other Person obligated in respect of any Loan Document or (iv) the performance or observance by Holdings, the Borrowers, any of their Restricted Subsidiaries or Affiliates or any other Person of any of their respective obligations under any Loan Document or any instrument or document furnished pursuant thereto.

1.2 **Assignee.** The Assignee (a) represents and warrants that (i) it is an Eligible Assignee and has full power and authority, and has taken all action necessary, to execute and deliver this Assignment and Assumption and to consummate the transactions contemplated hereby and to become a Lender under the Credit Agreement, (ii) it satisfies the requirements, if any, specified in the Credit Agreement that are required to be satisfied by it in order to acquire the Assigned Interest and become a Lender, (iii) from and after the Effective Date, it shall be bound by the provisions of the Credit Agreement and the other Loan Documents as a Lender thereunder and, to the extent of the Assigned Interest, shall have the obligations of a Lender thereunder and (iv) it has received a copy of the Credit Agreement, together with copies of the most recent financial statements referred to in Section 4.01(c) or the most recent financial statements delivered pursuant to Section 5.01 thereof, as applicable, and such other documents and information as it has deemed appropriate to make its own credit analysis and decision to enter into this Assignment and Assumption and to purchase the Assigned Interest on the basis of which it has made such analysis and decision independently and without reliance on the Administrative Agent, the Arrangers or any other Lender, (v) it has examined the list of Disqualified Institutions and it is not (A) a Disqualified Institution or (B) an Affiliate of a Disqualified Institution [(other than, in the case of this clause (B), a Bona Fide Debt Fund)]¹⁰, (vi) if it is a Foreign Lender, attached to this Assignment and Assumption is any documentation required to be delivered by it pursuant to the terms of the Credit Agreement, duly completed and executed by the Assignee, (vii) if it is not already a Lender under the Credit Agreement, attached to the Assignment and Assumption is a customary administrative questionnaire in the form provided by the Administrative Agent and (viii) it has attached to this Assignment and Assumption any tax documentation (including without limitation the IRS Forms, any FATCA documentation, and, if applicable, a U.S. Tax Compliance Certificate) required to be delivered by it pursuant to the terms of the Credit Agreement, duly completed and executed by it and (b) agrees that (i) it will, independently and without reliance on the Administrative Agent, the Arrangers, the Assignor or any other Lender, and based on such documents and information as it deems appropriate at the time, continue to make its own credit decisions in taking or not taking action under the Loan Documents, (ii) it appoints and authorizes the Administrative Agent to take such action on its behalf and to exercise such powers and discretion under the Credit Agreement, the other Loan Documents or any other instrument or document furnished pursuant hereto or thereto as are delegated to or otherwise conferred upon the Administrative Agent by the terms thereof, together with such powers as are reasonably incidental thereto, and (iii) it will perform in accordance with their terms all of the obligations which by the terms of the Loan Documents are required to be performed by it as a Lender.

¹⁰ Insert bracketed language if Assignee is a Bona Fide Debt Fund and not otherwise identified on the list of Disqualified Institutions.

2. **Payments.** From and after the Effective Date, the Administrative Agent shall make all payments in respect of the Assigned Interest (including payments of principal, interest, fees and other amounts) to the Assignor for amounts which have accrued to but excluding the Effective Date and to the Assignee for amounts which have accrued from and after the Effective Date.

3. **Effect of Assignment.** From and after the Effective Date, (i) the Assignee shall be a party to the Credit Agreement and, to the extent provided in this Assignment and Assumption, have the rights and obligations of a Lender thereunder and under the other Loan Documents and (ii) in the case where the Assigned Interest covers all of the Assignor's rights and obligations under the Credit Agreement, the Assignor shall cease to be a party thereto but shall continue to be entitled to the benefits of Sections 2.15, 2.16, 2.17 and 9.03 of the Credit Agreement with respect to facts and circumstances occurring on or prior to the Effective Date and subject to its obligations hereunder and under Section 9.13 of the Credit Agreement.

4. **General Provisions.** This Assignment and Assumption shall be binding upon, and inure to the benefit of, the parties hereto and their respective successors and permitted assigns. This Assignment and Assumption may be executed in any number of counterparts, which together shall constitute one instrument. Delivery of an executed counterpart of a signature page of this Assignment and Assumption by facsimile or by email as a ".pdf" or ".tif" attachment shall be effective as delivery of a manually executed counterpart of this Assignment and Assumption. THIS ASSIGNMENT AND ASSUMPTION SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK.

[FORM OF]
AFFILIATED LENDER
ASSIGNMENT AND ASSUMPTION

This Affiliated Lender Assignment and Assumption (the “Affiliated Lender Assignment and Assumption”) is dated as of the Effective Date set forth below and is entered into by and between the Assignor identified below in item 1 (the “Assignor”) and the Assignee identified below (the “Assignee”). Capitalized terms used but not defined herein shall have the meanings given to them in the Credit Agreement identified below (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Credit Agreement”), receipt of a copy of which is hereby acknowledged by the Assignee. The Standard Terms and Conditions for Affiliated Lender Assignment And Assumption set forth in Annex I hereto (the “Standard Terms and Conditions”) are hereby agreed to and incorporated herein by reference and made a part of this Affiliated Lender Assignment and Assumption as if set forth herein in full.

For an agreed consideration, the Assignor hereby irrevocably sells and assigns to the Assignee, and the Assignee hereby irrevocably purchases and assumes from the Assignor, subject to and in accordance with the Standard Terms and Conditions and the Credit Agreement, as of the Effective Date inserted by the Administrative Agent below, the interest in and to (i) all of the Assignor’s rights and obligations in its capacity as a Term Lender under the Credit Agreement and any other documents or instruments delivered pursuant thereto to the extent related to the amount and percentage interest identified below of all of such outstanding rights and obligations of the Assignor under the respective Classes of Term Loans identified below and (ii) to the extent permitted to be assigned under applicable Requirements of Law, all claims, suits, causes of action and any other right of the Assignor (in its capacity as a Term Lender) against any Person, whether known or unknown, arising under or in connection with the Credit Agreement, any other documents or instruments delivered pursuant thereto or the loan transactions governed thereby or in any way based on or related to any of the foregoing, including contract claims, tort claims, malpractice claims, statutory claims and all other claims at law or in equity related to the rights and obligations sold and assigned pursuant to clause (i) above (the rights and obligations sold and assigned by Assignor to the Assignee pursuant to clauses (i) and (ii) above being referred to herein collectively as the “Assigned Interest”). Such sale and assignment is (i) subject to acceptance and recording thereof in the Register by the Administrative Agent pursuant to Section 9.05(b)(v) of the Credit Agreement, (ii) without recourse to the Assignor and (iii) except as expressly provided in this Affiliated Lender Assignment and Assumption, without representation or warranty by the Assignor.

1. Assignor: [●]
2. Assignee: [●] and is an Affiliated Lender [that is a Non-Debt Fund Affiliate / Holdings, a Borrower or a subsidiary thereof].
3. Borrowers: Certara Holdco, Inc. and Certara USA, Inc.
4. Administrative Agent: Jefferies Finance LLC, as administrative agent under the Credit Agreement
5. Credit Agreement: That certain Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the “Initial Borrower”), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the “Parent Borrower”), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the “Co-Borrower” and, together with the Initial Borrower and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the “Administrative Agent”), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks.

6. Assigned Interest:

Aggregate Amount of Commitment/Loans	Class of Loans Assigned	Amount of Commitment/Loans Assigned ¹¹	Percentage Assigned of Commitment/Loans under Relevant Class ¹²	CUSIP Number
\$		\$	%	
\$		\$	%	
\$		\$	%	

7. THE PARTIES HERETO ACKNOWLEDGE THAT ANY ASSIGNMENT TO AN AFFILIATED LENDER WHICH RESULTS IN THE AGGREGATE PRINCIPAL AMOUNT OF TERM LOANS THEN HELD BY ALL AFFILIATED LENDERS EXCEEDING THE AFFILIATED LENDER CAP (AFTER GIVING EFFECT TO ANY SUBSTANTIALLY SIMULTANEOUS CANCELLATION OF TERM LOANS) SHALL BE NULL AND VOID WITH RESPECT TO THE AMOUNT IN EXCESS OF THE AFFILIATED LENDER CAP (SUBJECT TO SECTION 9.05(E) OF THE CREDIT AGREEMENT).

Effective Date: [●] [●], 20[●] [TO BE INSERTED BY THE ADMINISTRATIVE AGENT AND WHICH SHALL BE THE EFFECTIVE DATE OF RECORDATION OF TRANSFER IN THE REGISTER THEREFOR].

[Signature Page Follows]

¹¹ Not to be less than \$1,000,000 unless the Parent Borrower and the Administrative Agent otherwise consent.

¹² Set forth, to at least 9 decimals, as a percentage of the Commitment/Loans of all Lenders thereunder.

The terms set forth in this Affiliated Lender Assignment and Assumption are hereby agreed to:

ASSIGNOR

[NAME OF ASSIGNOR]

By: _____
Name:
Title:

ASSIGNEE

[NAME OF ASSIGNEE]

By: _____
Name:
Title:

[Consented to:]¹³

CERTARA HOLDCO, INC., as the Parent Borrower

By: _____
Name:
Title:

Accepted:

JEFFERIES FINANCE LLC, as Administrative Agent

By: _____
Name:
Title:

By: _____
Name:
Title:

¹³ To be added only if the consent of the Parent Borrower is required by Section 9.05(b)(i)(A) of the Credit Agreement.

STANDARD TERMS AND CONDITIONS FOR
AFFILIATED LENDER ASSIGNMENT AND ASSUMPTION1. *Representations and Warranties.*

1.1 **Assignor.** The Assignor (a) represents and warrants that (i) it [is an Affiliated Lender and]¹⁴ is the legal and beneficial owner of the Assigned Interest, (ii) the Assigned Interest is free and clear of any lien, encumbrance or other adverse claim, (iii) its Commitment in respect of Term Loans, and the outstanding balances of its Term Loans, in each case without giving effect to assignments thereof which have not become effective, are as set forth herein, (iv) it has full power and authority, and has taken all action necessary, to execute and deliver this Affiliated Lender Assignment and Assumption and to consummate the transactions contemplated hereby and (v) it is not a Defaulting Lender; and (b) makes no representation or warranty and assumes no responsibility with respect to (i) any statements, warranties or representations made in or in connection with the Credit Agreement, any other Loan Document or any other instrument or document furnished pursuant thereto (other than this Affiliated Lender Assignment and Assumption) or any collateral thereunder, (ii) the execution, legality, validity, enforceability, genuineness, sufficiency or value of the Loan Documents or any collateral thereunder, (iii) the financial condition of the Borrowers, any of their Restricted Subsidiaries or Affiliates or any other Person obligated in respect of any Loan Document or (iv) the performance or observance by Holdings, the Borrowers, any of their Restricted Subsidiaries or Affiliates or any other Person of any of their respective obligations under any Loan Document.

[The Assignor acknowledges and agrees that in connection with this Affiliated Lender Assignment and Assumption, (1) the applicable Affiliated Lender or its Affiliates may have, and later may come into possession of, material non-public information with respect to Holdings, the Borrowers and/or any subsidiary thereof and/or their respective securities (“MNPI”), (2) the Assignor has independently, without reliance on the applicable Affiliated Lender, the Investors, Holdings, the Borrowers, any of their respective subsidiaries, the Administrative Agent, the Arrangers or any of their respective Affiliates, made its own analysis and determination to participate in such assignment notwithstanding the Assignor’s lack of knowledge of the MNPI, (3) none of the applicable Affiliated Lenders, the Investors, Holdings, the Borrowers, any of their respective subsidiaries, the Administrative Agent, the Arrangers or any of their respective Affiliates shall have any liability to the Assignor, and the Assignor hereby waives and releases, to the extent permitted by applicable Requirements of Law, any claims it may have against the applicable Affiliated Lender, the Investors, Holdings, the Borrowers, each of their respective subsidiaries, the Administrative Agent, the Arrangers and their respective Affiliates, under applicable Requirements of Law or otherwise, with respect to the nondisclosure of the MNPI and (4) the MNPI may not be available to the Administrative Agent, the Arrangers or the other Lenders.]¹⁵

¹⁴ Insert when Assignor is the Affiliated Lender.

¹⁵ Insert when Assignee is the Affiliated Lender.

¹⁶ Insert when Assignee is an Affiliated Lender.

1.2 *Assignee.* The Assignee (a) represents and warrants that (i) it [is an Affiliated Lender and]¹⁶ has full power and authority, and has taken all action necessary, to execute and deliver this Affiliated Lender Assignment and Assumption and to consummate the transactions contemplated hereby and to become a Lender under the Credit Agreement, (ii) it satisfies the requirements, if any, specified in the Credit Agreement that are required to be satisfied by it in order to acquire the Assigned Interest and become a Lender, (iii) from and after the Effective Date, it shall be bound by the provisions of the Credit Agreement and the other Loan Documents as a Lender (including as an Affiliated Lender) thereunder and, to the extent of the Assigned Interest, shall have the obligations of a Lender (including as an Affiliated Lender) thereunder, (iv) it has received a copy of the Credit Agreement, together with copies of the most recent financial statements referred to in Section 4.01(c) or delivered pursuant to Section 5.01 thereof, as applicable, and such other documents and information as it has deemed appropriate to make its own credit analysis and decision to enter into this Affiliated Lender Assignment and Assumption and to purchase the Assigned Interest on the basis of which it has made such analysis and decision independently and without reliance on the Administrative Agent, the Arrangers or any other Lender, [(vi) after giving effect to this Affiliated Lender Assignment and Assumption and subject to the provisions of Section 9.05(f), the aggregate principal amount of all Term Loans then held by all Affiliated Lenders does not exceed the Affiliated Lender Cap (after giving effect to any substantially simultaneous cancellations thereof)]¹⁷, [(vii) in the case of Holdings, the Borrowers or any of their Restricted Subsidiaries, (1) no Indebtedness incurred under the Revolving Facility has been utilized to fund the purchase of the Assigned Interest, (2) no Event of Default exists at the time of acceptance of bids for any Dutch Auction or the entry into a binding agreement with respect to any open market purchase and (3) the Term Loans in respect of such Assigned Interest shall, to the extent permitted by applicable Requirement of Law, be retired and cancelled immediately after the Effective Date;]¹⁸ [(viii)] if it is a Foreign Lender, attached to this Assignment and Assumption is any documentation required to be delivered by it pursuant to the terms of the Credit Agreement, duly completed and executed by the Assignee, [(ix)] if it is not already a Lender under the Credit Agreement, attached to this Affiliated Lender Assignment and Assumption is a customary administrative questionnaire in the form provided by the Administrative Agent and [(x)] it has attached to this Affiliated Lender Assignment and Assumption any tax documentation (including without limitation the IRS Forms, any FATCA documentation, and, if applicable, a U.S. Tax Compliance Certificate) required to be delivered by it pursuant to the terms of the Credit Agreement, duly completed and executed by it and (b) agrees that (i) it will, independently and without reliance on the Administrative Agent, the Arrangers, the Assignor or any other Lender, and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking action under the Loan Documents, (ii) it appoints and authorizes the Administrative Agent to take such action on its behalf and to exercise such powers and discretion under the Credit Agreement, the other Loan Documents or any other instrument or document furnished pursuant hereto or thereto as are delegated to or otherwise conferred upon the Administrative Agent, by the terms thereof, together with such powers as are reasonably incidental thereto, and (iii) it will perform in accordance with their terms all of the obligations which by the terms of the Loan Documents are required to be performed by it as a Lender [The Assignee agrees that, solely in its capacity as an Affiliated Lender, it will not be entitled to (a) attend (including by telephone) or participate in any meeting or discussion (or portion thereof) among the Administrative Agent or any Lender or among Lenders to which the Loan Parties or their representatives are not invited, (b) receive any information or material prepared by the Administrative Agent or any Lender or any communication by or among the Administrative Agent and one or more Lenders, except to the extent such information or materials have been made available by the Administrative Agent or any Lender to any Loan Party or its representatives (and in any case, other than the right to receive notices of Borrowings, prepayments and other administrative notices in respect of its Term Loans required to be delivered to Lenders pursuant to Article 2 of the Credit Agreement) and (c) agrees that it shall at all times be subject to any restrictions set forth in the Credit Agreement applicable to it as an Affiliate Lender.]¹⁹

[The Assignee acknowledges and agrees that in connection with this assignment, (1) the applicable Affiliated Lender or its Affiliates may have, and later may come into possession of, material non-public information with respect to Holdings, the Borrowers and/or any subsidiary thereof and/or their respective securities (“MNPI”), (2) such Assignee has independently, without reliance on the applicable Affiliated Lender, the Investors, Holdings, the Borrowers, any of their respective subsidiaries, the Administrative Agent, the Arrangers or any of their respective Affiliates, made its own analysis and determination to participate in such assignment notwithstanding such Assignee’s lack of knowledge of the MNPI, (3) none of the applicable Affiliated Lender, the Investors, Holdings, the Borrowers, any of their respective subsidiaries, the Administrative Agent, the Arrangers or any of their respective Affiliates shall have any liability to the Assignee, and the Assignee hereby waives and releases, to the extent permitted by applicable Requirements of Law, any claims it may have against the applicable Affiliated Lender, the Investors, Holdings, the Borrowers, each of their respective subsidiaries, the Administrative Agent, the Arrangers and their respective Affiliates, under applicable Requirements of Law or otherwise, with respect to the nondisclosure of the MNPI and (4) the MNPI may not be available to the Administrative Agent, the Arrangers or the other Lenders.]²⁰

¹⁷ Insert if Assignee is an Affiliated Lender.

¹⁸ Insert if Assignee is an Affiliated Lender.

¹⁹ Insert if Assignee is an Affiliated Lender.

²⁰ Insert when Assignor is an Affiliated Lender.

2. **Payments.** From and after the Effective Date, the Administrative Agent shall make all payments in respect of the Assigned Interest (other than Assigned Interests assigned to Holdings, the Borrowers or any of their Restricted Subsidiaries) (including payments of principal, interest, fees and other amounts) to the Assignor for amounts which have accrued to but excluding the Effective Date and to the Assignee for amounts which have accrued from and after the Effective Date.

3. **Effect of Assignment.** From and after the Effective Date, (i) the Assignee shall be a party to the Credit Agreement and, to the extent provided in this Affiliated Lender Assignment and Assumption, have the rights and obligations of a Lender thereunder and under the other Loan Documents and (ii) in the case where the Assigned Interest covers all of the Assignor's rights and obligations under the Credit Agreement, the Assignor shall cease to be a party thereto but shall continue to be entitled to the benefits of Sections 2.15, 2.16, 2.17 and 9.03 of the Credit Agreement with respect to facts and circumstances occurring on or prior to the Effective Date and subject to its obligations hereunder and under Section 9.13 of the Credit Agreement.

4. **General Provisions.** This Affiliated Lender Assignment and Assumption shall be binding upon, and inure to the benefit of, the parties hereto and their respective successors and permitted assigns. This Affiliated Lender Assignment and Assumption may be executed in any number of counterparts, which together shall constitute one instrument. Delivery of an executed counterpart of a signature page of this Affiliated Lender Assignment and Assumption by facsimile or by email as a “.pdf” or “.tif” attachment shall be effective as delivery of a manually executed counterpart of this Affiliated Lender Assignment and Assumption. THIS AFFILIATED LENDER ASSIGNMENT AND ASSUMPTION SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK.

[FORM OF]
BORROWING REQUEST

Jefferies Finance LLC,
as Administrative Agent for the Lenders
party to the Credit Agreement referred to below

Jefferies Finance LLC
520 Madison Avenue
New York, NY 10022
Attention: Account Manager - Certara
Facsimile: []
Email: []

[•] [•], 20[•]²¹

Ladies and Gentlemen:

Reference is hereby made to that certain Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the “Initial Borrower”), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the “Parent Borrower”), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the “Co-Borrower” and, together with the Initial Borrower and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the “Administrative Agent”), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks. Terms defined in the Credit Agreement are used herein with the same meanings unless otherwise defined herein.

The Borrower[s] identified in item A below hereby give you notice pursuant to Section 2.03 of the Credit]Agreement that [it][they] request[s] the Borrowings under the Credit Agreement to be made on [•] [•], 20[•], and in that connection set[s] forth below the terms on which the Borrowings are requested to be made:

- (A) Borrower[s]: [EQT Avatar Holdings, Inc.][Certara Holdco, Inc. and Certara USA, Inc.]²²
- (B) Date of Borrowing (which shall be a Business Day) [•]

²¹ The Administrative Agent must be notified in writing or by telephone (with such telephonic notification to be promptly confirmed in writing), which must be received by the Administrative Agent (by hand delivery, fax or other electronic transmission (including “.pdf” or “.tif”)) not later than (i) 1:00 p.m. three Business Days prior to the requested day of any Borrowing (or one Business Day in the case of any Adjusted Eurocurrency Rate Borrowing to be made on the Closing Date) and (ii) 12:00 p.m. on the requested date of any Borrowing of ABR Loans (or, in each case, such later time as is acceptable to the Administrative Agent); provided, however, that if the applicable Borrower wishes to request Adjusted Eurocurrency Rate Loans having an Interest Period of other than one, two, three or six months in duration as provided in the definition of “Interest Period,” (A) the applicable notice from the Parent Borrower must be received by the Administrative Agent not later than 1:00 p.m. four Business Days prior to the requested date of the relevant Borrowing (or such later time as is acceptable to the Administrative Agent), whereupon the Administrative Agent shall give prompt notice to the appropriate Lenders of such request and determine whether the requested Interest Period is available to them and (B) not later than 12:00 p.m. three Business Days before the requested date of the relevant Borrowing, the Administrative Agent shall notify the Parent Borrower whether or not the requested Interest Period is available to the appropriate Lenders.

²² Select as applicable

- (C) Aggregate Amount of Borrowing [●]
- (D) Type of Borrowing²³ [●]
- (E) Class of Borrowing [●]
- (F) [Interest Period²⁴ (in the case of an Adjusted Eurocurrency Rate Borrowing)] [●]
- (G) Amount, Account Number and Location

Wire Transfer Instructions:

Amount	\$[●]
Bank:	[●]
ABA No.:	[●]
Account No.:	[●]
Account Name:	[●]

[The undersigned hereby certifies that the following statements are true on the date hereof, and will be true on the date of the Borrowing:

(A) The representations and warranties of the Loan Parties set forth in the Credit Agreement and the other Loan Documents are true and correct in all material respects on and as of the date of the Borrowing with the same effect as though such representations and warranties had been made on and as of the date of such Borrowing; provided that to the extent that any representation and warranty specifically refers to an earlier date or period, it is true and correct in all material respects as of such earlier date or period.

(B) At the time of and immediately after giving effect to the Borrowing, no Default or Event of Default has occurred and is continuing.]²⁵

[Signature Page Follows]

²³ State whether an Adjusted Eurocurrency Rate Borrowing or ABR Borrowing. If no Type of Borrowing is specified, then the requested Borrowing shall be an ABR Borrowing.

²⁴ Must be a period contemplated by the definition of "Interest Period". If no Interest Period is specified, then the Interest Period shall be of one-month's duration.

²⁵ Include bracketed language only for Borrowings after Closing Date other than (A) Incremental Loans made in connection with any acquisition or similar investment and/or (B) any Credit Extension under any Refinancing Amendment and/or Extension Amendment unless the lenders in respect thereof have required satisfaction of such conditions in the applicable Incremental Amendment, Refinancing Amendment or Extension Amendment.

[EQT AVATAR HOLDINGS, INC., as the Initial Borrower][CERTARA
HOLDCO, INC., as the Parent Borrower]²⁶

By: _____
Name:
Title:

²⁶ Select as applicable

[FORM OF]
COMPLIANCE CERTIFICATE

[•] [•], 20[•]

To: The Administrative Agent²⁷ and each of the Lenders parties to the Credit Agreement described below

This Compliance Certificate is furnished pursuant to that certain Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the “Initial Borrower”), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the “Parent Borrower”), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the “Co-Borrower” and, together with the Initial Borrower and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the “Administrative Agent”), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks. Unless otherwise defined herein, capitalized terms used in this Compliance Certificate have the meanings ascribed thereto in the Credit Agreement.

THE UNDERSIGNED HEREBY CERTIFIES, AS A RESPONSIBLE OFFICER OF THE PARENT BORROWER, IN SUCH CAPACITY AND NOT IN AN INDIVIDUAL CAPACITY, THAT:

1. I am the duly elected [•] of the Parent Borrower and a Responsible Officer of the Parent Borrower;
2. I have reviewed the terms of the Credit Agreement and I have made, or have caused to be made under my supervision, a review in reasonable detail of the transactions and conditions of the Parent Borrower and its Restricted Subsidiaries, on a consolidated basis, during the [Fiscal Quarter][Fiscal Year] covered by the attached financial statements;
3. **[The attached financial statements fairly present, in all material respects, in accordance with GAAP, the consolidated financial condition of the Parent Borrower as at the dates indicated and its consolidated income and cash flows for the periods indicated, subject to the absence of footnotes and changes resulting from audit and normal year-end adjustments; it being understood that no financial statements delivered pursuant to Section 5.01(a) of the Credit Agreement are required to reflect any purchase accounting adjustments relating to the Acquisition or any other acquisition consummated after the Closing Date until after the delivery of financial statements pursuant to Section 5.01(b) of the Credit Agreement which include such adjustments.]**²⁸
4. **[Except as described in the disclosure set forth below, the][The] examinations described in paragraph 2 did not disclose, and I have no knowledge of the existence of any condition or event which constitutes a Default or Event of Default that exists as of the date of this Compliance Certificate [and the disclosure set forth below specifies, in reasonable detail, the nature of any such condition or event and any action taken or proposed to be taken with respect thereto.]**

²⁷ Jefferies Finance LLC
520 Madison Avenue
New York, NY 10022
Attention: Account Manager - Certara
Facsimile: []
Email: []

²⁸ Include to the extent the relevant Compliance Certificate is delivered in connection with unaudited quarterly financials.

5. **[Schedule 1 attached hereto sets forth reasonably detailed calculations of Excess Cash Flow for such Fiscal Year.]**²⁹

6. **[Attached as Schedule 2 hereto is a list of the subsidiaries of the Parent Borrower that identifies each subsidiary as a Restricted Subsidiary or an Unrestricted Subsidiary as of the date hereof.]**³⁰ **[There is no change in the list of Restricted Subsidiaries and Unrestricted Subsidiaries since the later of the Closing Date and the date of the last Compliance Certificate.]**

7. **[Attached as Schedule 3 hereto is a summary of the pro forma adjustments necessary to eliminate the accounts of Unrestricted Subsidiaries from the attached financial statements.]**³¹

8. **[Attached as Schedule 4 hereto are calculations in reasonable detail demonstrating compliance with the covenant set forth in Section 6.12(a) of the Credit Agreement.]**³²

9. **[Attached as Schedule 5 hereto is consolidating financial information summarizing in reasonable detail the information regarding the Parent Company to which the attached financial statements relate, on the one hand, and the information relating to the Parent Borrower, on the other hand.]**³³

10. **[The Expected Cost Savings included in the calculation of Consolidated Adjusted EBITDA for the period covered by the attached financial statements are, in my good faith determination, reasonably identifiable and factually supportable.]**³⁴

[Signature Page Follows]

²⁹ Only required to the extent the relevant Compliance Certificate is delivered in connection with audited annual financial statements (commencing with the Fiscal Year ending on December 31, 2018).

³⁰ Only required if a subsidiary has been designated as an Unrestricted Subsidiary since delivery of the last Compliance Certificate.

³¹ Only required if a subsidiary of the Borrower is or has been designated as an Unrestricted Subsidiary at the time of delivery of the applicable Compliance Certificate.

³² Only required to the extent the Revolving Facility Test Condition is satisfied on the last day of the relevant Test Period.

³³ Only required if the attached financial statements are prepared at the level of a Parent Company.

³⁴ Only required to the extent amounts are added back to Consolidated Net Income in reliance on clause (d) of the definition of "Consolidated Adjusted EBITDA" for the relevant period.

The foregoing certifications, together with the information set forth in the Schedules hereto and the financial statements delivered with this Compliance Certificate in support hereof, are made and delivered as of the date first written above.³⁵

CERTARA HOLDCO, INC.

By: _____
Name:
Title:

³⁵ Please note the deadlines for satisfaction of the following requirements correspond with the delivery of each Compliance Certificate (unless otherwise indicated):

1. The delivery of documents and deliverables required under Section 4.02(a) of the Security Agreement relating to any (i) certificated Securities and/or (ii) Tangible Chattel Paper and/or Instruments having a face amount in excess of \$5,000,000, in each case acquired during the Fiscal Quarter covered by the attached financial statements. **NOTE:** If any Loan Party acquires (i) certificated Securities and/or (ii) Tangible Chattel Paper and/or Instruments having a face amount in excess of \$5,000,000 during the fourth Fiscal Quarter of any Fiscal Year, the documents and deliverables required under Section 4.02(a) of the Security Agreement must be delivered within 60 days after the end of such Fiscal Quarter.
2. The delivery of documents and deliverables required under Section 4.03(c) of the Security Agreement relating to any (i) registration of (or any application for registration of) any Patent, Design, Trademark or Copyright with the United States Patent and Trademark Office or the United States Copyright Office, as applicable, filed or acquired during the Fiscal Quarter covered by the attached financial statements or (ii) receipt of any exclusive Copyright License during the Fiscal Quarter covered by the attached financial statements. **NOTE:** If any Loan Party acquires any registration (or files any application for registration) of any Patent, Design, Trademark or Copyright with the United States Patent and Trademark Office or the United States Copyright Office, as applicable, or receives any exclusive Copyright License during the fourth Fiscal Quarter of any Fiscal Year, the documents and deliverables required under Section 4.03(c) of each Security Agreement must be delivered within 60 days after the end of such Fiscal Quarter.
3. The delivery of the documents required under Section 4.04 of the Security Agreement relating to any Commercial Tort Claim acquired by a Loan Party with an individual value (as reasonably estimated by the Borrower) in excess of \$5,000,000 acquired after the Closing Date. **NOTE:** If any Loan Party acquires any Commercial Tort Claim with an individual value (as reasonably estimated by the Borrower) in excess of \$5,000,000 during the fourth Fiscal Quarter of any Fiscal Year, the documents and deliverables required under Section 4.04 of the Security Agreement must be delivered within 60 days after the end of such Fiscal Quarter.
4. To the extent the relevant Compliance Certificate is delivered in connection with audited annual financial statements, delivery of the Perfection Certificate Supplement required by Section 5.01(i) of the Credit Agreement.
5. The delivery of the documents required to be delivered under Section 5.12(a) of the Credit Agreement as a result of (i) the formation or acquisition after the Closing Date of any Restricted Subsidiary (other than an Excluded Subsidiary), (ii) the designation of any Unrestricted Subsidiary as a Restricted Subsidiary (other than an Excluded Subsidiary), and/or (iii) any Restricted Subsidiary that was an Excluded Subsidiary ceasing to be an Excluded Subsidiary, in each case during the Fiscal Quarter covered by the attached financial statements. **NOTE:** upon the taking of any action or the occurrence of any event described in clauses (i) through (iii), during the fourth Fiscal Quarter of any Fiscal Year, the documents required to be delivered under Section 5.12(a) of the Credit Agreement must be delivered within 60 days after the end of such Fiscal Quarter.

[Calculation of Excess Cash Flow]

Schedule 1 to Exhibit C

Restricted Subsidiaries and Unrestricted Subsidiaries

Schedule 2 to Exhibit C

[Summary of Pro Forma Adjustments]

Schedule 3 to Exhibit C

[First Lien Leverage Ratio]

Schedule 4 to Exhibit C

[Consolidating Information Relating to Parent Company]

Schedule 5 to Exhibit C

[FORM OF]
INTEREST ELECTION REQUEST

Jefferies Finance LLC
as Administrative Agent for the Lenders referred to below

Jefferies Finance LLC
520 Madison Avenue
New York, NY 10022
Attention: Account Manager - Certara
Facsimile: []
Email: []

[●] [●], 20[●]³⁶

Ladies and Gentlemen:

Reference is hereby made to that certain Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the “Initial Borrower”), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the “Parent Borrower”), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the “Co-Borrower” and, together with the Initial Borrower and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the “Administrative Agent”), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks. Terms defined in the Credit Agreement are used herein with the same meanings unless otherwise defined herein.

The undersigned hereby gives you notice pursuant to Section 2.08 of the Credit Agreement of an interest rate election, and in that connection sets forth below the terms thereof:

(A) [on **insert applicable date**] (which is a Business Day), the undersigned will convert \$[●]³⁷ of the aggregate outstanding principal amount of the [Term][Revolving] Loans, bearing interest at the [ABR][Adjusted Eurocurrency] Rate, into a **Adjusted Eurocurrency Rate**[ABR] Loan **and, in the case of an Adjusted Eurocurrency Rate Loan, having an Interest Period of [●] month(s)**³⁸; and[.]]

³⁶ The Administrative Agent must be notified in writing or by telephone (with such telephonic notification to be promptly confirmed in writing), which must be received by the Administrative Agent (by hand delivery, fax or other electronic transmission (including “.pdf” or “.tif”)) not later than (i) 1:00 p.m. three Business Days prior to the requested day of any continuation of Adjusted Eurocurrency Rate Loans or any conversion of ABR Loans to Adjusted Eurocurrency Rate Loans and (iii) 12:00 p.m. on the requested date of any conversion to ABR Loans (or, in each case, such later time as is acceptable to the Administrative Agent); provided, however, that if the applicable Borrower wishes to request Adjusted Eurocurrency Rate Loans having an Interest Period of other than one, two, three or six months in duration as provided in the definition of “Interest Period,” (A) the applicable notice from the Parent Borrower must be received by the Administrative Agent not later than 1:00 p.m. four Business Days prior to the requested date of the relevant conversion or continuation (or such later time as is acceptable to the Administrative Agent), whereupon the Administrative Agent shall give prompt notice to the appropriate Lenders of such request and determine whether the requested Interest Period is available to them and (B) not later than 12:00 p.m. three Business Days before the requested date of the relevant conversion or continuation, the Administrative Agent shall notify the Parent Borrower whether or not the requested Interest Period is available to the appropriate Lenders.

³⁷ Subject to Section 2.02(c) of the Credit Agreement.

³⁸ Must be a period contemplated by the definition of “Interest Period”.

(B) [on **[insert applicable date]** (which is a Business Day), the undersigned will continue [\$] [●] of the aggregate outstanding principal amount of the **[Term][Revolving]** Loans bearing interest at the Adjusted Eurocurrency Rate, as Adjusted Eurocurrency Rate Loans having an Interest Period of [●] month(s)³⁹.

[Signature Page Follows]

³⁹ Must be a period contemplated by the definition of "Interest Period".

CERTARA HOLDCO, INC., as the Parent Borrower

By: _____
Name:
Title:

[FORM OF]
PERFECTION CERTIFICATE

[•] [•], 20[•]

Reference is hereby made to:

(i) that certain Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the “Initial Borrower”), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the “Parent Borrower”), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the “Co-Borrower” and, together with the Initial Borrower and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the “Administrative Agent”), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks, and

(ii) that certain Pledge and Security Agreement, dated as of August [15], 2017 (the “Security Agreement”), by and among the Loan Parties from time to time party thereto and the Administrative Agent.

Capitalized terms used but not defined herein have the meanings assigned to such terms in the Credit Agreement or Security Agreement, as applicable.

As used herein, the term “Company” means each Loan Party party to the Security Agreement as of the date hereof.

As of the date hereof, the undersigned hereby represents and warrants to the Administrative Agent as follows:

1. Names. (a) The exact legal name of each Company, as such name appears in its respective Organizational Documents filed with the relevant office of such Company's jurisdiction of organization or formation is set forth in Schedule 1(a). Each Company is the type of entity disclosed next to its name in Schedule 1(a). Also set forth in Schedule 1(a) is the Federal Taxpayer Identification Number, if any, of each Company and the jurisdiction of organization or formation of each Company.

(b) Except as otherwise disclosed in Schedule 1(c) or Schedule 1(d), set forth in Schedule 1(b) hereto is (i) any other legal name that any Company has had, together with the date of the relevant change, in the past five years and (ii) all other names used by such Company on any filings with the Internal Revenue Service.

(c) Set forth in Schedule 1(c) is a list of the information required by Section 1(a) of this certificate for any other Person (i) to which any Company became the successor by amalgamation, merger, consolidation or acquisition or (ii) that has been liquidated into, or transferred all or substantially all of its assets to, any Company, at any time within the past five years.

(d) Except as set forth in Schedule 1(d), or as otherwise disclosed in Schedule 1(c), no Company has changed its jurisdiction of organization or form of entity at any time during the past four months.

2. Locations. The chief executive office of each Company is currently located at the address set forth in Schedule 2 hereto.

3. Stock Ownership and Other Equity Interests. Attached hereto as Schedule 3 is a true and correct list of all of the issued and outstanding stock, partnership interests, limited liability company membership interests or other equity interests owned by any Company constituting Pledged Stock, the beneficial owners of such stock, partnership interests, membership interests or other equity interests and the percentage of the total issued and outstanding stock, partnership interests, membership interests or other equity interests of the relevant issuer represented thereby.

4. Instruments and Tangible Chattel Paper. Attached hereto as Schedule 4 is a true and correct list of all Instruments (other than checks to be deposited in the ordinary course of business) and Tangible Chattel Paper, in each case having a face amount exceeding \$5,000,000, held by any Company as of the date hereof, including the names of the obligors, the amounts owing and the due dates.

5. Intellectual Property. (a) Attached hereto as Schedule 5(a) is a schedule setting forth all of each Company's Patents, Designs (if applicable) and Trademarks registered with and published by (or applied for in) the United States Patent and Trademark Office (excluding, for the avoidance of doubt, any Patent or Trademark that has expired or been abandoned, but including Trademarks that would constitute Collateral upon the filing of a "Statement of Use" or an "Amendment to Allege Use" with respect thereto), as applicable, including the name of the registered owner and the registration or publication number (or, if applicable, the applicant and the application number) of each such Patent, Design (if applicable) and Trademark.

(b) Attached hereto as Schedule 5(b) is a schedule setting forth (i) all of each Company's Copyrights registered with (or applied for in) the United States Copyright Office (excluding, for the avoidance of doubt, any Copyright that has expired or been abandoned), including the name of the registered owner and the registration number (or, if applicable, the applicant and the application number) of each such Copyright and (ii) all of each Company's exclusive Copyright Licenses.

6. Commercial Tort Claims. Attached hereto as Schedule 6 is a true and correct list of all Commercial Tort Claims with an individual value of at least \$5,000,000 (as reasonably estimated by the Borrowers), held by any Company, including a brief description thereof.

7. UCC Filings. Attached hereto as Schedule 7, with respect to each Company, is the UCC filing office or county recorder's office in which a UCC filing is required to be made to perfect the Administrative Agent's security interest in the Collateral.

Notwithstanding anything to the contrary herein, it is understood and agreed that the Collateral will not in any event include any Excluded Asset.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned has hereunto signed this Perfection Certificate as of the date first written of above.

EQT AVATAR INTERMEDIATE, INC., as Holdings

By: _____
Name: [●]
Title: [●]

EQT AVATAR HOLDINGS, INC., as the Initial Borrower

By: _____
Name: [●]
Title: [●]

CERTARA HOLDCO, INC., as the Parent Borrower

By: _____
Name: [●]
Title: [●]

CERTARA USA, INC., as the Co-Borrower

By: _____
Name: [●]
Title: [●]

SCHEDULE 1(A)

LEGAL NAMES

Legal Name	Jurisdiction	Type	Federal Taxpayer Identification Number

SCHEDULE 1(B)

A. PRIOR ORGANIZATIONAL NAMES

Company	Prior Legal Name	Date of Change

B. OTHER NAMES USED ON IRS FILINGS

Company	Other Name

SCHEDULE 1(C)

PREDECESSOR ENTITIES

Company	Action	Legal Name of Predecessor Entity	Jurisdiction of Organization of Predecessor Entity	Date

SCHEDULE 1(D)

CHANGES IN JURISDICTION OR FORM: OTHER NAMES

Company	Current Jurisdiction of Organization/Form	Prior Jurisdiction of Organization/Form	Date of Change

SCHEDULE 2

CHIEF EXECUTIVE OFFICE

Company	Address

SCHEDULE 3

PLEDGED STOCK

Issuer	Holder	Certificate No.	No. Shares/Interest	% of Issued and Outstanding Shares

SCHEDULE 4

INSTRUMENTS AND TANGIBLE CHATTEL PAPER

1. Promissory Notes/Instruments:

Obligee	Obligor	Principal Amount	Maturity

2. Tangible Chattel Paper:

SCHEDULE 5(A)

PATENTS, DESIGNS AND TRADEMARKS

PATENTS

REGISTERED OWNER	SERIAL NUMBER	TITLE

PATENT APPLICATIONS

APPLICANT	APPLICATION NO.	TITLE

TRADEMARKS

REGISTERED OWNER	REGISTRATION NUMBER	TRADEMARK

TRADEMARK APPLICATIONS

APPLICANT	APPLICATION NO.	TRADEMARK

DESIGNS

REGISTERED OWNER	SERIAL NUMBER	DESCRIPTION

DESIGN APPLICATIONS

APPLICANT	APPLICATION NO.	DESCRIPTION

SCHEDULE 5(B)

COPYRIGHTS

COPYRIGHTS

REGISTERED OWNER	REGISTRATION NUMBER	TITLE

COPYRIGHT APPLICATIONS

APPLICANT	APPLICATION NUMBER	TITLE

EXCLUSIVE COPYRIGHT LICENSES

SCHEDULE 6

COMMERCIAL TORT CLAIMS

SCHEDULE 7

UCC FILINGS

Company	Filing Office

[FORM OF]
PERFECTION CERTIFICATE SUPPLEMENT

[•] [•], 20[•]

Reference is hereby made to:

(i) that certain Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the “Initial Borrower”), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the “Parent Borrower”), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the “Co-Borrower”) and, together with the Initial Borrower and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the “Administrative Agent”), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks,

(ii) that certain Pledge and Security Agreement, dated as of August [15], 2017 (as amended, restated, amended and restated, supplemented or otherwise modified and in effect on the date hereof, the “Security Agreement”), by and among the Loan Parties from time to time party thereto and the Administrative Agent, and

(iii) the Perfection Certificate, dated as of the Closing Date (as supplemented by any perfection certificate and/or perfection certificate supplement delivered prior to the date hereof, the “Prior Perfection Certificate”), executed by the Loan Parties signatory thereto.

Capitalized terms used but not defined herein have the meanings assigned to such terms in the Credit Agreement or Security Agreement, as applicable.

As used herein, the term “Company” means the Loan Parties party to the Security Agreements as of the date hereof.

As of the date hereof, the undersigned hereby represents and warrants to the Administrative Agent as follows:

1. Names. Except as set forth on Schedule 1 hereto, (a) the exact legal name of each Company, as such name appears in its respective Organizational Documents filed with the relevant office of such Company's jurisdiction of organization or formation set forth in Schedule 1(a) to the Prior Perfection Certificate, (b) each Company is the type of entity disclosed next to its name in Schedule 1(a) to the Prior Perfection Certificate and (c) the Federal Taxpayer Identification Number, if any, of each Company and the jurisdiction of organization or formation of each Company are set forth in Schedule 1(a) to the Prior Perfection Certificate.

2. Locations. Except as set forth in Schedule 2 hereto, the chief executive office of [**each**][**the**] Company is currently located at the addresses set forth in Schedule 2(a) to the Prior Perfection Certificate.

3. Stock Ownership and Other Equity Interests. Except as set forth in Schedule 3 hereto, Schedule 3 to the Prior Perfection Certificate sets forth a true and correct list of the issued and outstanding stock, partnership interests, limited liability company membership interests or other equity interests owned by [**any**][**the**] Company constituting Pledged Stock, the beneficial owners of such stock, partnership interests, membership interests or other equity interests and the percentage of the total issued and outstanding stock, partnership interests, membership interests or other equity interests of the relevant issuer represented thereby.

4. Instruments and Tangible Chattel Paper. Except as set forth on Schedule 4 hereto, Schedule 4 to the Prior Perfection Certificate sets forth a true and correct list of all Instruments (other than checks to be deposited in the ordinary course of business) and Tangible Chattel Paper, in each case having a face amount exceeding \$5,000,000, held by any Company as of the date hereof, including the names of the obligors, the amounts owing and the due dates.

5. Intellectual Property. (a) Except as set forth on Schedule 5(a) hereto, Schedule 5(a) to the Prior Perfection Certificate sets forth all of each Company's Patents, Designs (if applicable) and Trademarks registered with and published by (or applied for in) by the United States Patent and Trademark Office (excluding, for the avoidance of doubt, any Patent or Trademark that has expired or been abandoned, but including Trademarks that would constitute Collateral upon the filing of a "Statement of Use" or an "Amendment to Allege Use" with respect thereto), as applicable, including the name of the registered owner and the registration or publication number (or, if applicable, the applicant and the application number) of each such Patent, Design (if applicable) and Trademark.

(b) Except as set forth on Schedule 5(b) hereto, Schedule 5(b) to the Prior Perfection Certificate sets forth all of (i) each Company's Copyrights registered with (or applied for in) the United States Copyright Office (excluding, for the avoidance of doubt, any Copyright that has expired or been abandoned), including the name of the registered owner and the registration number (or, if applicable, the applicant and the application number) of each such Copyright and (ii) each Company's exclusive Copyright Licenses.

6. Commercial Tort Claims. Except as set forth on Schedule 6 hereto, Schedule 6 to the Prior Perfection Certificate sets forth all Commercial Tort Claims with an individual value of at least \$5,000,000 (as reasonably estimated by the Borrower), held by **[any][the]** Company, including a brief description thereof.

Notwithstanding anything to the contrary herein, it is understood and agreed that the Collateral will not, in any event, include any Excluded Asset.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned has signed this Perfection Certificate as of the date first written of above.

CERTARA HOLDCO, INC., as the Parent Borrower

By: _____

Name: [●]

Title: [●]

SCHEDULE 1

LEGAL NAMES

Legal Name	Jurisdiction	Type	Federal Taxpayer Identification Number

SCHEDULE 2

CHIEF EXECUTIVE OFFICE

Company	Address

SCHEDULE 3

PLEDGED STOCK

Issuer	Holder	Certificate No.	No. Shares/Interest	% of Issued and Outstanding Shares

SCHEDULE 4

INSTRUMENTS AND TANGIBLE CHATTEL PAPER

1. Promissory Notes/Instruments:

Obligee	Obligor	Principal Amount	Maturity

2. Tangible Chattel Paper:

SCHEDULE 5(A)

PATENTS, DESIGNS AND TRADEMARKS

PATENTS

REGISTERED OWNER	SERIAL NUMBER	TITLE

PATENT APPLICATIONS

APPLICANT	APPLICATION NO.	TITLE

TRADEMARKS

REGISTERED OWNER	REGISTRATION NUMBER	TRADEMARK

TRADEMARK APPLICATIONS

APPLICANT	APPLICATION NO.	TRADEMARK

DESIGNS

REGISTERED OWNER	SERIAL NUMBER	DESCRIPTION

DESIGN APPLICATIONS

APPLICANT	APPLICATION NO.	DESCRIPTION

SCHEDULE 5(B)

COPYRIGHTS

COPYRIGHTS

REGISTERED OWNER	REGISTRATION NUMBER	TITLE

COPYRIGHT APPLICATIONS

APPLICANT	APPLICATION NUMBER	TITLE

EXCLUSIVE COPYRIGHT LICENSES

SCHEDULE 6

COMMERCIAL TORT CLAIMS

[FORM OF]
PROMISSORY NOTE

[\$●]

New York, New York
[●] [●], 20[●]

FOR VALUE RECEIVED, the undersigned, [EQT AVATAR HOLDINGS, INC.][CERTARA HOLDCO, INC. and CERTARA USA, INC.]⁴⁰, a Delaware corporation (the "Borrower"), hereby promises to pay on demand to [●] (the "Lender") or its registered permitted assign, at the office of Jefferies Finance LLC ("Jefferies") at [Lender Address], [Term] [Revolving] Loans in the principal amount of \$[●] or such lesser amount as is outstanding from time to time, on the dates and in the amounts set forth in that certain Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation ("Holdings"), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the "Initial Borrower"), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the "Parent Borrower"), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the "Co-Borrower") and, together with the Initial Borrower and the Parent Borrower, each a "Borrower" and collectively the "Borrowers"), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the "Administrative Agent"), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks, in Dollars. The Borrower[s] also promise[s] to pay interest from the date of such Loans on the principal amount thereof from time to time outstanding, in like currency, at such office, in each case, in the manner and at the rate or rates per annum and payable on the dates provided in the Credit Agreement. Terms used but not defined herein shall have the meanings assigned to such terms in the Credit Agreement.

The Borrower[s] promise[s] to pay interest on any overdue principal and, to the extent permitted by applicable Requirements of Law, overdue interest from the relevant due dates, in each case, in the manner, at the rate or rates and under the circumstances provided in the Credit Agreement.

The Borrower[s] hereby waive[s] diligence, presentment, demand, protest and notice of any kind to the extent possible under any applicable Requirements of Law. The non-exercise by the holder hereof of any of its rights hereunder in any particular instance shall not constitute a waiver thereof in that or any subsequent instance.

All Borrowings evidenced by this promissory note and all payments and prepayments of the principal hereof and interest hereon and the respective dates thereof shall be endorsed by the holder hereof on the schedules attached hereto and made a part hereof or on a continuation thereof which shall be attached hereto and made a part hereof, or otherwise recorded by such holder in its internal records; provided, however, that the failure of the holder hereof to make such a notation or any error in such notation shall not affect the obligations of the Borrower[s] under this Note.

This promissory note is one of the promissory notes referred to in the Credit Agreement that, among other things, contains provisions for the acceleration of the maturity hereof upon the happening of certain events, for optional and mandatory prepayment of the principal hereof prior to the maturity hereof and for the amendment or waiver of certain provisions of the Credit Agreement, all upon the terms and conditions therein specified. This promissory note is entitled to the benefit of the Credit Agreement, and the obligations hereunder are guaranteed and secured as provided therein and in the other Loan Documents referred to in the Credit Agreement.

If any assignment by the Lender holding this promissory note occurs after the date of the issuance hereof, the Lender agrees that it shall, upon the effectiveness of such assignment or as promptly thereafter as practicable, surrender this promissory note to the Administrative Agent for cancellation.

THE ASSIGNMENT OF THIS PROMISSORY NOTE AND ANY RIGHTS WITH RESPECT THERETO ARE SUBJECT TO THE PROVISIONS OF THE CREDIT AGREEMENT, INCLUDING THE PROVISIONS GOVERNING THE REGISTER AND THE PARTICIPANT REGISTER.

⁴⁰ Select as applicable

THIS PROMISSORY NOTE AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER, SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

[Remainder of Page Intentionally Left Blank]

[EQT AVATAR HOLDINGS, INC.][CERTARA HOLDCO, INC. and
CERTARA USA, INC.]⁴¹

By: _____
Name:
Title:

⁴¹ Select as applicable

LOANS, CONVERSIONS AND REPAYMENTS OF ABR LOANS

Date	Amount of ABR Loans	Amount Converted to ABR Loans	Amount of Principal of ABR Loans Repaid	Amount of ABR Loans Converted to Adjusted Eurocurrency Rate Loans	Unpaid Principal Balance of ABR Loans	Notation Made By

Schedule A to Note

LOANS, CONTINUATIONS, CONVERSIONS AND REPAYMENTS OF ADJUSTED EUROCURRENCY RATE LOANS

Date	Amount of Adjusted Eurocurrency Rate Loans	Amount Converted to Adjusted Eurocurrency Rate Loans	Interest Period and Adjusted Eurocurrency Rate with Respect Thereto	Amount of Principal of Adjusted Eurocurrency Rate Loans Repaid	Amount of Adjusted Eurocurrency Rate Loans Converted to ABR Loans	Unpaid Principal Balance of Adjusted Eurocurrency Rate Loans	Notation Made By

Schedule B to Note

**[FORM OF]
PLEDGE AND SECURITY AGREEMENT**

PLEDGE AND SECURITY AGREEMENT

THIS PLEDGE AND SECURITY AGREEMENT (as it may be amended, restated, amended and restated, supplemented or otherwise modified from time to time, this "Security Agreement") is entered into as of August 15, 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation ("Holdings"), EQT Avatar Holdings, Inc., a Delaware corporation ("Buyer" or the "Initial Borrower"), Certara Holdco, Inc., a Delaware corporation (the "Parent Borrower"), Certara USA, Inc., a Delaware corporation (the "Co-Borrower" and, together with the Initial Borrower (prior to the consummation of the Closing Date Assumption (as defined in the Credit Agreement referred to below)) and the Parent Borrower, each a "Borrower" and collectively the "Borrowers"), the Subsidiary Parties (as defined below) from time to time party hereto (the foregoing, collectively, the "Grantors") and Jefferies Finance LLC ("Jefferies"), in its capacity as administrative agent and collateral agent for the Secured Parties (as defined in the Credit Agreement) (in such capacities, the "Agent").

PRELIMINARY STATEMENT

Holdings, the Borrower, the Lenders, the Agent and others entered into that certain Credit Agreement dated as of August 15, 2017 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the "Credit Agreement"). The Grantors are entering into this Security Agreement in order to induce the Lenders to enter into and extend credit to the Borrowers under the Credit Agreement and to secure the Secured Obligations, including their obligations under the Loan Guaranty, each Hedge Agreement the obligations under which constitute Secured Hedging Obligations and each agreement relating to Banking Services the obligations under which constitute Banking Services Obligations.

ACCORDINGLY, the parties hereto agree as follows:

ARTICLE 1 DEFINITIONS

Section 1.01. *Terms Defined in Credit Agreement.* All capitalized terms used herein and not otherwise defined shall have the meanings assigned to such terms in the Credit Agreement.

Section 1.02. *Terms Defined in UCC.* Terms defined in the UCC that are not otherwise defined in this Security Agreement or the Credit Agreement are used herein as defined in Articles 8 or 9 of the UCC, as the context may require (including as if such terms were capitalized in Article 8 or 9 of the UCC, as the context may require, the following terms: "Account," "Chattel Paper," "Commercial Tort Claim," "Commodities Account," "Deposit Accounts," "Document," "Electronic Chattel Paper," "Equipment," "Fixture," "General Intangible," "Goods," "Instruments," "Inventory," "Investment Property," "Letter-of-Credit Right," "Securities Account," "Securities Entitlement," "Supporting Obligation" and "Tangible Chattel Paper").

Section 1.03. *Definitions of Certain Terms Used Herein.* As used in this Security Agreement, in addition to the terms defined in the preamble and Preliminary Statement above, the following terms shall have the following meanings:

"Agent" has the meaning set forth in the preamble.

"Article" means a numbered article of this Security Agreement, unless another document is specifically referenced.

“Borrower” and “Borrowers” have the meanings specified in the preamble.

“Collateral” has the meaning set forth in Article 2.

“Contract Rights” means all rights of any Grantor under any Contract, including (a) any and all rights to receive and demand payments under such Contract, (b) any and all rights to receive and compel performance under such Contract and (c) any and all other rights, interests and claims now existing or in the future arising in connection with such Contract.

“Contracts” means all contracts between any Grantor and one or more additional parties (including any Hedge Agreement, any licensing agreement and any partnership agreement, joint venture agreement and/or limited liability company agreement).

“Control” has the meaning set forth in Article 8 of the UCC or, if applicable, in Section 9-104, 9-105, 9-106 or 9-107 of Article 9 of the UCC.

“Credit Agreement” has the meaning set forth in the Preliminary Statement.

“Cumulative Perfection Certificate” means the Perfection Certificate delivered pursuant to Section 4.01(j) of the Credit Agreement and any Perfection Certificate delivered pursuant to Section 5.12(a) of the Credit Agreement, in each case, as supplemented from time to time as a result of the delivery of any Perfection Certificate Supplement pursuant to Section 5.01(i) of the Credit Agreement.

“Exhibit” refers to a specific exhibit to this Security Agreement, unless another document is specifically referenced.

“Grantors” has the meaning set forth in the preamble.

“Holdings” has the meaning set forth in the preamble.

“Intellectual Property Collateral” means, collectively, all Copyrights, Patents, Trademarks, Trade Secrets, Domain Names, Licenses and Software.

“Intellectual Property Security Agreement” means an Intellectual Property Security Agreement substantially in the form of Exhibit B to this Security Agreement.

“Jefferies” has the meaning set forth in the preamble.

“Licenses” means, with respect to any Grantor, all of such Grantor’s right, title, and interest in and to (a) any and all licensing agreements or similar arrangements, whether as licensor or licensee, in (i) Patents, (ii) Copyrights, (iii) Trademarks, (iv) Trade Secrets or (v) Software, (b) all income, royalties, damages, claims, and payments now or hereafter due or payable under and with respect thereto, including damages and payments for past and future breaches thereof and (c) all rights to sue for past, present, and future breaches thereof.

“Money” has the meaning set forth in Article 1 of the UCC.

“Permits” means all licenses, permits, rights, orders, variances, franchises or authorizations of or from any Governmental Authority or agency.

“Pledged Collateral” means all Pledged Stock, including all stock (or equivalent) certificates, options or rights of any nature whatsoever in respect of the Pledged Stock that may be issued or granted to, or held by, any Grantor, and all Instruments, Securities and other Investment Property owned by any Grantor, whether or not physically delivered to the Agent pursuant to this Security Agreement, in each case whether now owned or hereafter acquired by such Grantor and any and all Proceeds thereof.

“Pledged Stock” means, with respect to any Grantor, the shares of Capital Stock described in Schedule 3 to the Cumulative Perfection Certificate as held by such Grantor, together with any other shares of Capital Stock as are hereafter acquired by such Grantor.

“Proceeds” has the meaning assigned in Article 9 of the UCC and, in any event, shall also include but not be limited to (a) any and all proceeds of any insurance, indemnity, warranty or guaranty payable to the Agent or any Grantor from time to time with respect to any of the Collateral, (b) any and all payments (in any form whatsoever) made or due and payable to any Grantor from time to time in connection with any requisition, confiscation, condemnation, seizure or forfeiture of all or any part of the Collateral by any Governmental Authority (or any Person acting under color of governmental authority), (c) any and all Stock Rights and (d) any and all other amounts from time to time paid or payable under or in connection with any of the Collateral.

“Receivables” means any Account, Chattel Paper, Document, Investment Property, Instrument and/or General Intangible, in each case, that is a right or claim to receive money and is included as Collateral (whether or not earned by performance).

“Section” means a numbered section of this Security Agreement, unless another document is specifically referenced.

“Security Agreement” has the meaning set forth in the preamble.

“Software” means computer programs, source code, object code and supporting documentation, including “software” as such term is defined in Article 9 of the UCC, as well as computer programs that may be construed as included in the definition of Goods.

“Stock Rights” means all dividends, cash, options, warrants, instruments or other distributions and any other right or property which any Grantor shall receive or shall become entitled to receive for any reason whatsoever with respect to, in substitution for or in exchange for any Capital Stock constituting Collateral, any right to receive any Capital Stock constituting Collateral and any right to receive earnings, in which such Grantor now has or hereafter acquires any right, issued by an issuer of such Capital Stock.

“Subsidiary Parties” means (a) the subsidiaries of any Borrower party hereto on the Closing Date and (b) each Subsidiary that becomes a party to this Security Agreement after the date hereof in accordance with Section 7.10 hereof and Section 5.12 of the Credit Agreement.

“Trade Secrets” means, with respect to any Grantor, all of such Grantor’s right, title and interest in and to the following: (a) confidential and proprietary information, including unpatented inventions, invention disclosures, engineering or other data, information, production procedures, know-how, financial data, customer lists, supplier lists, business and marketing plans, processes, schematics, algorithms, techniques, analyses, proposals, source code, data, databases and data collections; (b) all income, royalties, damages, and payments now or hereafter due or payable with respect thereto, including, without limitation, damages, claims and payments for past and future misappropriations or infringements thereof; (c) all rights to sue for past, present and future infringements of the foregoing, including the right to settle suits involving claims and demands for royalties owing; and (d) all rights corresponding to any of the foregoing.

Applicable provisions in Section 1.03 of the Credit Agreement are incorporated by reference herein as if such Section was set forth herein in its entirety, *mutatis mutandis*.

ARTICLE 2
GRANT OF SECURITY INTEREST

Section 2.01. *Grant of Security Interest.* (a) As security for the prompt and complete payment or performance, as the case may be, in full of the Secured Obligations, each Grantor hereby pledges, collaterally assigns, mortgages, transfers and grants to the Agent, its successors and permitted assigns, on behalf of and for the benefit of the Secured Parties, a continuing security interest in all of its right in, and title and interest to and under, all of the following personal property and other assets, whether now owned by or owing to, or hereafter acquired by or arising in favor of, such Grantor, and regardless of where located (all of which are collectively referred to as the “Collateral”):

- (i) all Accounts;
- (ii) all Chattel Paper (including all Tangible Chattel Paper and all Electronic Chattel Paper);
- (iii) all Intellectual Property Collateral;
- (iv) all Documents;
- (v) all Equipment;
- (vi) all Fixtures;
- (vii) all General Intangibles;
- (viii) all Goods;
- (ix) all Instruments;
- (x) all Inventory;
- (xi) all Investment Property, Pledged Stock and other Pledged Collateral;
- (xii) all Money, cash and cash equivalents;
- (xiii) all letters of credit and Letter-of-Credit Rights;
- (xiv) all Deposit Accounts, Securities Accounts, Commodities Accounts and all other demand, deposit, time, savings, cash management, passbook and similar accounts maintained by such Grantor with any bank or other financial institution and all monies, securities, Instruments and other investments deposited or required to be deposited in any of the foregoing;
- (xv) all Securities Entitlements in any or all of the foregoing;
- (xvi) all Commercial Tort Claims described on Schedule 6 to the Cumulative Perfection Certificate (including any supplements to such Schedule 6 delivered pursuant to Section 4.04);
- (xvii) all Permits;

(xviii) all Software and all recorded data of any kind or nature, regardless of the medium of recording;

(xix) all Contracts, together with all Contract Rights arising thereunder;

(xx) all Supporting Obligations; and

(xxi) all accessions to, substitutions and replacements for and Proceeds and products of the foregoing, together with all books and records, customer lists, credit files, computer files, programs, printouts and other computer materials and records related thereto and any General Intangibles at any time evidencing or relating to any of the foregoing and all collateral security and guarantees given by any Person with respect to any of the foregoing.

(b) Notwithstanding the foregoing, for the avoidance of doubt, the term “Collateral” (and any component definition thereof) shall not include any Excluded Asset and shall be subject in all respects to the exceptions and exclusions set forth in Section 5.12 of the Credit Agreement. Notwithstanding anything to the contrary contained herein, immediately upon the ineffectiveness, lapse or termination of any restriction or condition set forth in the definition of “Excluded Assets” in the Credit Agreement, the Collateral shall include, and the relevant Grantor shall be deemed to have automatically granted a security interest in, all relevant previously restricted or conditioned rights, interests or other assets, as the case may be, as if such restriction or condition had never been in effect. For the avoidance of doubt, “Excluded Assets” shall not include any proceeds, products, substitutions or replacements of Excluded Assets (unless such proceeds, products, substitutions or replacements would otherwise constitute Excluded Assets).

ARTICLE 3 REPRESENTATIONS AND WARRANTIES

The Grantors, jointly and severally, represent and warrant to the Agent on and as of the Closing Date and on and as of the date of each Credit Extension (to the extent required by Sections 4.01 or 4.02, as applicable, of the Credit Agreement), for the benefit of the Secured Parties, that:

Section 3.01. *Title, Perfection and Priority; Filing Collateral.*

(a) Subject to the terms of the last paragraph of Section 4.01 of the Credit Agreement and the Legal Reservations, this Security Agreement creates a legal, valid and enforceable Lien on all of the Collateral in favor of the Agent for the benefit of itself and the other Secured Parties and, upon the satisfaction of the applicable Perfection Requirements, such Liens constitute perfected First Priority Liens (subject to Permitted Liens) on the Collateral (except to the extent Liens are not required to be perfected under the terms of the Loan Documents and limited to the actions described in the Perfection Requirements) securing the Secured Obligations, in each case as and to the extent set forth therein.

(b) Each Grantor (i) is the owner of all of its Collateral free and clear from any Lien or other right, title or interest of any Person (other than a Permitted Lien and/or any such other right, title or interest that is permitted or not prohibited by the terms of the Credit Agreement) or (ii) has the power to transfer rights in the Collateral to the Agent.

Section 3.02. *Intellectual Property.*

(a) Upon (i) filing of appropriate financing statements with the Secretary of State (or equivalent office) of the state of organization of such Grantor and the filing of the Intellectual Property Security Agreement with the United States Patent and Trademark Office and (ii) filing of the Intellectual Property Security Agreement with the United States Copyright Office, as applicable, the Agent shall have a fully perfected First Priority Lien on the Collateral constituting of United States issued, registered or applied for Patents, Trademarks and Copyrights and exclusive Copyright Licenses, as applicable, under the UCC and the laws of the United States for the ratable benefit of the Secured Parties, and such perfected security interests shall be enforceable as such as against any and all creditors of and purchasers from the Grantors, subject to the Legal Reservations. No Grantor shall be required to complete any filings or take any other action with respect to the perfection of the security interests created hereby in any jurisdiction outside of the United States.

(b) No Grantor is aware of (i) any third-party claim (A) that any of its owned Patent, Trademark or Copyright registrations or applications is invalid or unenforceable, or (B) challenging such Grantor's rights to such registrations and applications or (ii) any basis for such claims, other than, in each case, to the extent any such third-party claim would not reasonably be expected to have a Material Adverse Effect.

Section 3.03. *Pledged Collateral.* (i) All Pledged Stock has been duly authorized and validly issued (to the extent such concepts are relevant with respect to such Pledged Collateral) by the issuer thereof and is fully paid and non-assessable, (ii) as of the date of the most recently delivered Cumulative Perfection Certificate, each Grantor is the direct owner, beneficially and of record, of the Pledged Stock described in Schedule 3 to the Cumulative Perfection Certificate as held by such Grantor and (iii) as of the date of the most recently delivered Cumulative Perfection Certificate, each Grantor holds the Pledged Stock described in Schedule 3 to the Cumulative Perfection Certificate as held by such Grantor free and clear of all Liens (other than Permitted Liens).

Section 3.04. *Perfection Certificate.* The Cumulative Perfection Certificate has been duly prepared, completed and executed and the certifications set forth therein are true and correct in all material respects as of the date thereof.

ARTICLE 4

COVENANTS

From the date hereof, and thereafter until the Termination Date:

Section 4.01. *General.*

(a) *Authorization to File Financing Statements; Ratification.* Each Grantor hereby (i) authorizes the Agent to file (A) all financing statements and amendments thereto with respect to the Collateral naming such Grantor as debtor and the Agent as secured party, in form appropriate for filing under the UCC of the relevant jurisdiction and (B) filings with the United States Patent and Trademark Office and the United States Copyright Office (including any Intellectual Property Security Agreement executed by the relevant Grantor) for the purpose of perfecting, enforcing, maintaining or protecting the Lien of the Agent in United States issued, registered and applied for Patents, Trademarks and Copyrights and exclusive Copyright Licenses contained in the Collateral and naming such Grantor as debtor and the Agent as secured party and, (ii) subject to the terms of the Loan Documents (including the limitations set forth in Section 5.12 of the Credit Agreement) agrees to take such other actions, in each case described under clauses (i) and (ii) above, as may from time to time be necessary and reasonably requested by the Agent (and authorizes the Agent to take any such other actions, consistent with and limited to the Perfection Requirements, which it has no obligation to take) in order to establish and maintain a First Priority, valid, enforceable (subject to the Legal Reservations) and perfected security interest in and subject, in the case of Pledged Collateral, to Section 4.02 hereof, Control of, the Collateral. Each Grantor shall pay any applicable filing fees, recordation fees and related reasonable expenses relating to its Collateral in accordance with Section 9.03(a) of the Credit Agreement. Any financing statement filed by the Agent may be filed in any filing office in any applicable UCC jurisdiction and may (i) indicate the Collateral (A) as all assets of the applicable Grantor or words of similar effect, regardless of whether any particular asset comprised in the Collateral falls within the scope of Article 9 of the UCC of such jurisdiction, or (B) by any other description which reasonably approximates the description contained in this Security Agreement and (ii) contain any other information required by part 5 of Article 9 of the UCC for the sufficiency or filing office acceptance of any financing statement or amendment. Each Grantor agrees to furnish any such information to the Agent promptly upon request.

(b) *Further Assurances.* Each Grantor agrees, at its own expense, to take any and all actions reasonably necessary to defend title to the Collateral against all Persons (other than Persons holding Permitted Liens on such Collateral that have priority over the Agent's Lien) and to defend the security interest of the Agent in the Collateral and the priority thereof against any Lien that is not a Permitted Lien. Notwithstanding the foregoing, Grantor may, as part of its ordinary course of business substantially consistent with past practice, grant licenses to third parties to use Intellectual Property Collateral owned, licensed or developed by a Grantor; for the purposes of this Security Agreement such licensing activity shall not constitute a Lien on such Intellectual Property Collateral.

Section 4.02. *Pledged Collateral.*

(a) *Delivery of Certificated Securities, Tangible Chattel Paper, Instruments and Documents.* Each Grantor will, after the Closing Date, hold in trust for the Agent upon receipt and (x) if the event giving rise to the obligation under this Section 4.02(a) occurs during the first three Fiscal Quarters of any Fiscal Year, on or before the date on which financial statements are required to be delivered pursuant to Section 5.01(a) of the Credit Agreement for the Fiscal Quarter in which the relevant event occurred or (y) if the event giving rise to the obligation under this Section 4.02(a) occurs during the fourth Fiscal Quarter of any Fiscal Year, on or before the date that is 60 days after the end of such Fiscal Quarter (or, in each of the cases of clauses (x) and (y), such longer period as the Agent may reasonably agree) deliver to the Agent for the benefit of the Secured Parties any (1) certificated Securities representing or evidencing Pledged Collateral and (2) Tangible Chattel Paper and Instruments (A) in each case under this clause (2), having an outstanding balance in excess of \$5,000,000 and (B) in each case under clauses (1) and (2), constituting Collateral received after the date hereof, accompanied by undated instruments of transfer or assignment duly executed in blank.

(b) *Uncertificated Securities and Pledged Collateral.* With respect to any partnership interest or limited liability company interest owned by any Grantor which is required to be pledged to the Agent pursuant to the terms hereof (other than a partnership interest or limited liability company interest held by a Clearing Corporation, Securities Intermediary or other financial intermediary of any kind) which is not represented by a certificate and which is not a Security for purposes of the UCC, such Grantor shall not permit any issuer of such partnership interest or limited liability company interest to (i) enter into any agreement with any Person, other than the Agent or any holder of a Permitted Lien to the extent such Permitted Lien has priority over the Agent's Lien, whereby such issuer effectively delivers "control" of such partnership interest or limited liability company interest (as applicable) under the UCC to such Person, or (ii) allow such partnership interest or limited liability company interest (as applicable) to become a Security unless such Grantor complies with the procedures set forth in Section 4.02(a) within the time period prescribed therein. Each Grantor which is an issuer of any uncertificated Pledged Collateral described in this Section 4.02(b) hereby agrees to comply with all instructions from the Agent without such Grantor's further consent, in each case subject to the notice requirements set forth in Section 5.01(a)(iv) hereof.

(c) *Registration in Nominee Name; Denominations.* The Agent, on behalf of the Secured Parties, shall hold certificated Pledged Collateral required to be delivered to the Agent under clause (a) above in the name of the applicable Grantor, endorsed or assigned in blank or in favor of the Agent, but at any time when an Event of Default exists and is continuing and upon at least one Business Day's prior written notice to the Parent Borrower, the Agent shall have the right (in its sole and absolute discretion) to hold the Pledged Collateral in its own name as pledgee, or in the name of its nominee (as pledgee or as sub-agent). At any time when an Event of Default exists, the Agent shall have the right to exchange the certificates representing Pledged Collateral for certificates of smaller or larger denominations for any purpose consistent with this Security Agreement.

(d) *Exercise of Rights in Pledged Collateral.* It is agreed that:

(i) without in any way limiting the foregoing and subject to clause (ii) below, each Grantor shall have the right to exercise all voting rights or other rights relating to the Pledged Collateral for any purpose that does not violate this Security Agreement, the Credit Agreement or any other Loan Document;

(ii) each Grantor will permit the Agent or its nominee at any time when an Event of Default exists and is continuing to exercise the rights and remedies provided under Section 5.01(a)(iv) (subject to the notice requirements set forth therein and applicable Requirements of Law); and

(iii) subject to Section 5.01(a)(iv), each Grantor shall be entitled to receive and retain any and all dividends, interest, principal and other distributions paid on or distributed in respect of the Pledged Collateral; *provided* that any non-cash dividends or other distributions that would constitute Pledged Collateral, whether resulting from a subdivision, combination or reclassification of the outstanding Capital Stock of the issuer of any Pledged Collateral or received in exchange for Pledged Collateral or any part thereof, or in redemption thereof, or as a result of any merger, consolidation, acquisition or other exchange of assets to which such issuer may be a party or otherwise, shall, to the extent constituting Collateral, be and become part of the Pledged Collateral, and, if received by any Grantor, shall be delivered to the Agent as and to the extent required by clause (a) above.

(e) *Return of Pledged Collateral.* So long as no Event of Default then exists, the Agent shall promptly deliver to the applicable Grantor (without recourse and without any representation or warranty) any Pledged Collateral in its possession if requested to be delivered to the issuer or holder thereof in connection with any action or transaction that is permitted or not restricted by the Credit Agreement in accordance with Article 8 and Section 9.18 of the Credit Agreement.

Section 4.03. *Intellectual Property.* (a) At any time when an Event of Default exists and is continuing and upon the written request of the Agent, each Grantor will (i) use its commercially reasonable efforts to obtain all consents and approvals necessary or appropriate for the assignment to or for the benefit of the Agent of any License held by such Grantor in the US to enable the Agent to enforce the security interests granted hereunder and (ii) to the extent required pursuant to any material License in the US under which such Grantor is the licensee, deliver to the licensor thereunder any notice of the grant of security interest hereunder or such other notices required to be delivered thereunder in order to permit the security interest created or permitted to be created hereunder pursuant to the terms of such License.

(b) Each Grantor shall notify the Agent promptly if it knows or reasonably expects that any application for or registration of any Patent, Trademark, Domain Name, or Copyright (now or hereafter existing) may become abandoned or dedicated to the public, or of any determination or development (including the institution of, or any such determination or development in, any proceeding in the United States Patent and Trademark Office, the United States Copyright Office or any court, except for routine office actions issued in the normal course of prosecution) abandoning such Grantor's ownership of any such Patent, Trademark or Copyright, its right to register the same, or to keep and maintain the same, except, in each case, to the extent the same is permitted or not restricted by the Credit Agreement or where the same, individually or in the aggregate, could not reasonably be expected to result in a Material Adverse Effect.

(c) In the event that any Grantor files an application for the registration of any Patent, Trademark (for the avoidance of doubt, excluding any “intent to use” trademark applications) or Copyright with the United States Patent and Trademark Office or the United States Copyright Office, acquires any such application or registration by purchase or assignment or acquires an exclusive Copyright License, in each case, after the Closing Date (and other than as a result of an application that is then subject to an Intellectual Property Security Agreement becoming registered), it shall (x) if the event giving rise to the obligation under this Section 4.03(c) occurs during the first three Fiscal Quarters of any Fiscal Year, on or before the date on which financial statements are required to be delivered pursuant to Section 5.01(a) of the Credit Agreement for the Fiscal Quarter in which the relevant event occurred or (y) if the event giving rise to the obligation under this Section 4.03(c) occurs during the fourth Fiscal Quarter of any Fiscal Year, on or before the date that is 60 days after the end of such Fiscal Quarter (or, in each of the cases of clauses (x) and (y), such longer period as the Agent may reasonably agree) notify the Agent and, promptly upon the Agent’s request, execute and deliver to the Agent, at such Grantor’s sole cost and expense, any Intellectual Property Security Agreement, as applicable, or other instrument as the Agent may reasonably request and require to evidence the Agent’s security interest in such applied for or registered Patent, Trademark or Copyright (or application therefor) or exclusive Copyright License, and the General Intangibles of such Grantor relating thereto or represented thereby.

(d) Each Grantor shall take all actions necessary or reasonably requested by the Agent to (i) maintain and pursue each application and to obtain and maintain the registration of each Patent, Trademark, Domain Name and Copyright included in the Collateral (now or hereafter existing), including by filing applications for renewal, affidavits of use, affidavits of incontestability and, if consistent with good business judgment, by initiating opposition and interference and cancellation proceedings against third parties, (ii) maintain and protect the secrecy or confidentiality of its Trade Secrets and (iii) otherwise protect and preserve such Grantor’s rights in, and the validity or enforceability of, its Intellectual Property Collateral, in each case except where failure to do so (A) could not reasonably be expected to result in a Material Adverse Effect, or (B) is otherwise permitted under the Credit Agreement.

(e) Each Grantor shall promptly notify the Agent of any material infringement or misappropriation of such Grantor’s Patents, Trademarks, Copyrights or Trade Secrets of which it becomes aware and shall take such actions as are commercially reasonable and appropriate under the circumstances to protect such Patent, Trademark, Copyright or Trade Secret, except where such infringement, misappropriation or dilution could not reasonably be expected to cause a Material Adverse Effect.

Section 4.04. *Commercial Tort Claims.* After the Closing Date, (x) if the event giving rise to the obligation under this Section 4.04 occurs during the first three Fiscal Quarters of any Fiscal Year, on or before the date on which financial statements are required to be delivered pursuant to Section 5.01(a) of the Credit Agreement for the Fiscal Quarter in which the relevant event occurred or (y) if the event giving rise to the obligation under this Section 4.04 occurs during the fourth Fiscal Quarter of any Fiscal Year, on or before the date that is 60 days after the end of such Fiscal Quarter (or, in each of the cases of clauses (x) and (y), such longer period as the Agent may reasonably agree) each relevant Grantor shall notify the Agent of any Commercial Tort Claim with an individual value (as reasonably estimated by the Borrower) in excess of \$5,000,000 acquired by it, together with an update to Schedule 6 to the Cumulative Perfection Certificate containing a summary description thereof, and such Commercial Tort Claim (and the Proceeds thereof) shall constitute Collateral, all upon the terms of this Security Agreement.

Section 4.05. *Insurance.* Except to the extent otherwise permitted to be retained by any Grantor or applied by any Grantor pursuant to the terms of the Loan Documents, the Agent shall, at the time when an Event of Default exists and is continuing and any proceeds of any insurance are distributed to the Secured Parties, apply such proceeds in accordance with Section 5.04 hereof.

Section 4.06. *Grantors Remain Liable.* (a) Each Grantor (rather than the Agent or any Secured Party) shall remain liable (as between itself and any relevant counterparty) to observe and perform all the conditions and obligations to be observed and performed by it under any Contract relating to the Collateral, all in accordance with the terms and conditions thereof. Neither the Agent nor any other Secured Party shall have any obligation or liability under any Contract by reason of or arising out of this Security Agreement or the receipt by the Agent or any other Secured Party of any payment relating to such Contract pursuant hereto, nor shall the Agent or any other Secured Party be obligated in any manner to perform any of the obligations of any Grantor under or pursuant to any Contract, to make any payment, to make any inquiry as to the nature or sufficiency of any performance or to collect the payment of any amounts which may have been assigned to them or to which they may be entitled at any time or times.

(b) Each Grantor assumes all liability and responsibility in connection with the Collateral acquired by it, and the liability of such Grantor to pay the Secured Obligations shall in no way be affected or diminished by reason of the fact that such Collateral may be lost, destroyed, stolen, damaged or for any reason whatsoever unavailable to such Grantor.

(c) Notwithstanding anything herein to the contrary, each Grantor (rather than the Agent or any Secured Party) shall remain liable under each of the Accounts to observe and perform all of the conditions and obligations to be observed and performed by it thereunder, all in accordance with the terms of any agreement giving rise to such Accounts. Neither the Agent nor any other Secured Party shall have any obligation or liability under any Account (or any agreement giving rise thereto) by reason of or arising out of this Security Agreement or the receipt by the Agent or any other Secured Party of any payment relating to such Account pursuant hereto, nor shall the Agent or any other Secured Party be obligated in any manner to perform any of the obligations of any Grantor under or pursuant to any Account (or any agreement giving rise thereto), to make any payment, to make any inquiry as to the nature or the sufficiency of any payment received by them or as to the sufficiency of any performance by any party under any Account (or any agreement giving rise thereto), to present or file any claim, to take any action to enforce any performance or to collect the payment of any amounts which may have been assigned to them or to which they may be entitled at any time or times.

ARTICLE 5 REMEDIES

Section 5.01. *Remedies.* (a) Each Grantor agrees that, at any time when an Event of Default exists and is continuing and upon at least three Business Days' prior written notice to the Parent Borrower, the Agent may exercise any or all of the following rights and remedies (in addition to the rights and remedies existing under applicable Requirements of Law):

(i) the rights and remedies provided in this Security Agreement, the Credit Agreement, or any other Loan Document; *provided that* this Section 5.01(a) shall not limit any rights available to the Agent prior to an Event of Default;

(ii) the rights and remedies available to a secured party under the UCC or under any other applicable Requirements of Law (including, without limitation, any law governing the exercise of a bank's right of setoff or bankers' Lien) when a debtor is in default under a security agreement;

(iii) enter the premises of any Grantor where any Collateral is located (through self-help and without judicial process) to collect, receive, assemble, process, appropriate, sell, lease, assign, grant an option or options to purchase or otherwise dispose of, deliver, or realize upon, the Collateral or any part thereof in one or more parcels at one or more public or private sales (which sales may be adjourned or continued from time to time with or without notice and may take place at such Grantor's premises or elsewhere), for cash, on credit or for future delivery without assumption of any credit risk, and upon such other terms as the Agent may deem commercially reasonable;

(iv) transfer and register in its name or in the name of its nominee the whole or any part of the Pledged Collateral, to exercise the voting and all other rights as a holder with respect thereto (whereupon the voting and other rights of such Grantor described in Section 4.02(d) (i) above shall immediately cease such that the Agent shall have the sole right to exercise such voting and other rights while the relevant Event of Default exists and is continuing), to collect and receive all cash dividends, interest, principal and other distributions made thereon (it being understood that all Stock Rights received by any Grantor while the relevant Event of Default exists and is continuing shall be received in trust for the benefit of the Agent and forthwith paid over to the Agent in the same form as so received (with any necessary endorsements)) and to otherwise act with respect to the Pledged Collateral as though the Agent was the outright owner thereof; and

(v) take possession of the Collateral or any part thereof, by directing such Grantor in writing to deliver the same to the Agent at any reasonable place or places designated by the Agent, in which event such Grantor shall at its own expense:

- (1) forthwith cause the same to be moved to the place or places so designated by the Agent and there delivered to the Agent;
- (2) store and keep any Collateral so delivered to the Agent at such place or places pending further action by the Agent; and
- (3) while the Collateral shall be so stored and kept, provide such security and maintenance services as shall be reasonably necessary to protect the same and to preserve and maintain it in good condition.

(b) Each Grantor acknowledges and agrees that compliance by the Agent, on behalf of the Secured Parties, with any applicable state or federal Requirements of Law in connection with a disposition of the Collateral will not be considered to adversely affect the commercial reasonableness of any sale of the Collateral.

(c) The Agent shall have the right in any public sale and, to the extent permitted by applicable Requirements of Law, in any private sale, to purchase for the benefit of the Agent and the Secured Parties, all or any part of the Collateral so sold, free of any right of equity redemption, which equity redemption each Grantor hereby expressly releases.

(d) Until the Agent is able to effect a sale, lease, transfer or other disposition of any Collateral under this Section 5.01, the Agent shall have the right to hold or use such Collateral, or any part thereof, to the extent that it deems appropriate for the purpose of preserving such Collateral or the value of such Collateral, or for any other purpose deemed reasonably appropriate by the Agent. At any time when an Event of Default exists and is continuing, the Agent may, if it so elects, seek the appointment of a receiver or keeper to take possession of any Collateral and to enforce any of the Agent's remedies (for the benefit of the Agent and Secured Parties), with respect to such appointment without prior notice or hearing as to such appointment.

(e) Notwithstanding the foregoing, the Agent shall not be required to (i) make any demand upon, or pursue or exhaust any of their rights or remedies against, the Grantors, any other obligor, guarantor, pledgor or any other Person with respect to the payment of the Secured Obligations or to pursue or exhaust any of their rights or remedies with respect to any Collateral therefor or any direct or indirect guarantee thereof, (ii) marshal the Collateral or any guarantee of the Secured Obligations or to resort to the Collateral or any such guarantee in any particular order, or (iii) effect a public sale of any Collateral.

(f) Each Grantor recognizes that the Agent may be unable to effect a public sale of any or all the Pledged Collateral and may be compelled to resort to one or more private sales thereof. Each Grantor also acknowledges that any private sale may result in prices and other terms less favorable to the seller than if such sale were a public sale and, notwithstanding such circumstances, agrees that no such private sale shall be deemed to have been made in a commercially unreasonable manner solely by virtue of such sale being private. The Agent shall be under no obligation to delay a sale of any of the Pledged Collateral for the period of time necessary to permit any Grantor or the issuer of any Pledged Collateral to register such securities for public sale under the Securities Act of 1933, as amended, or under applicable state securities Requirements of Law, even if any Grantor and the issuer would agree to do so.

(g) Notwithstanding the foregoing, any rights and remedies provided in this Section 5.01 shall be subject to any Acceptable Intercreditor Agreement.

Section 5.02. *Grantors' Obligations Upon Default.* Upon the request of the Agent at any time when an Event of Default exists and is continuing, each Grantor will:

(a) at its own cost and expense (i) assemble and make available to the Agent, the Collateral and all books and records relating thereto at any place or places reasonably specified by the Agent, whether at such Grantor's premises or elsewhere, (ii) deliver all tangible evidence of its Accounts and Contract Rights (including, without limitation, all documents evidencing the Accounts and all Contracts) and such books and records to the Agent or to its representatives (copies of which evidence and books and records may be retained by such Grantor) and (iii) if the Agent so directs, legend in a form and manner reasonably satisfactory to the Agent, the Accounts and the Contracts, as well as books, records and documents (if any) of such Grantor evidencing or pertaining to such Accounts and Contracts with an appropriate reference to the fact that such Accounts and Contracts have been assigned to the Agent and that the Agent has a security interest therein; and

(b) permit the Agent and/or its representatives and/or agents, to enter, occupy and use any premises where all or any part of the Collateral, or the books and records relating thereto, or both, are located, to take possession of all or any part of the Collateral or the books and records relating thereto, or both, to remove all or any part of the Collateral or the books and records relating thereto, or both, and to conduct sales of the Collateral, without any obligation to pay any Grantor for such use and occupancy.

Section 5.03. *Intellectual Property Remedies.* (a) For the purpose of enabling the Agent to exercise the rights and remedies under this Article 5 at any time when an Event of Default exists and is continuing and at such time as the Agent shall be lawfully entitled to exercise such rights and remedies, each Grantor hereby grants to the Agent a power of attorney to sign any document which may be required by the United States Patent and Trademark Office, the United States Copyright Office, domain name registrar or similar registrar in order to effect an absolute assignment of all right, title and interest in each registered Patent, Trademark, Domain Name and Copyright and exclusive Copyright License included in the Collateral and each application for any such registration, and record the same. At any time when an Event of Default exists and is continuing, the Agent may (i) declare the entire right, title and interest of such Grantor in and to each item of Intellectual Property Collateral to be vested in the Agent for the benefit of the Secured Parties, in which event such right, title and interest shall immediately vest in the Agent for the benefit of the Secured Parties, and the Agent shall be entitled to exercise the power of attorney referred to in this Section 5.03 to execute, cause to be acknowledged and notarized and record such absolute assignment with the applicable agency or registrar; (ii) sell any Grantor's Inventory directly to any Person, including without limitation Persons who have previously purchased any Grantor's Inventory from such Grantor and in connection with any such sale or other enforcement of the Agent's rights under this Security Agreement and subject to any restrictions contained in applicable third party licenses entered into by such Grantor, sell Inventory which bears any Trademark owned by or licensed to any Grantor and any Inventory that is covered by any Intellectual Property Collateral owned by or licensed to any Grantor, and the Agent may finish any work in process and affix any relevant Trademark owned by or licensed to such Grantor and sell such Inventory as provided herein; (iii) direct such Grantor to refrain, in which event such Grantor shall refrain, from using any Intellectual Property Collateral in any manner whatsoever, directly or indirectly; and (iv) assign or sell any Patent, Trademark, Copyright, Domain Name, and/or Trade Secret included in the Collateral, as well as the goodwill of such Grantor's business symbolized by any such Trademark and the right to carry on the business and use the assets of such Grantor in connection with which any such Trademark or Domain Name has been used.

(b) Each Grantor hereby grants to the Agent an irrevocable (until the Termination Date), nonexclusive, royalty-free, worldwide license to its right to use, license or sublicense any Intellectual Property Collateral now owned or hereafter acquired by such Grantor, wherever the same may be located, and including in such license access to all media in which any of the licensed items may be recorded or stored and (to the extent not prohibited by any applicable license and subject to any Grantor's security policies and obligations of confidentiality) to all computer software and programs used for compilation or printout thereof; provided, however, that nothing in this Section 5.03(b) shall require a Grantor to grant any license that (i) is prohibited by any rule of law, statute or regulation or (ii) is prohibited by, or constitutes a breach or default under or results in the termination of or gives rise to any right of acceleration, modification or cancellation under, any license or similar agreement giving rise to a right to use or theretofore granted with respect to such property, which, in the case of this clause (ii), (w) exists on the Closing Date, (x) if such agreement was entered into by a Grantor acquired after the Closing Date, exists at the time such Grantor is acquired and which agreement was not entered into in contemplation of such acquisition or (y) if such agreement was entered into by any Grantor after the Closing Date, is entered into as part of the Grantor's ordinary course of business substantially consistent with past practice, and natural evolutions thereof; provided, further, that such licenses to be granted hereunder with respect to Trademarks shall be subject to the maintenance of quality standards with respect to the goods and services on which such Trademarks are used sufficient to preserve the validity of such Trademarks. The use of the license granted to the Agent pursuant to the preceding sentence may be exercised, at the option of the Agent, only when an Event of Default exists and is continuing; provided that any license, sublicense or other transaction entered into by the Agent in accordance with this clause (b) shall be binding upon each Grantor notwithstanding any subsequent cure of the relevant Event of Default.

Section 5.04. *Application of Proceeds.* (a) Subject to any Acceptable Intercreditor Agreement, the Agent shall apply the proceeds of any collection, sale, foreclosure or other realization of any Collateral, as well as any Collateral consisting of Cash, as set forth in Section 2.18(b) of the Credit Agreement.

(b) Except as otherwise provided herein or in any other Loan Document, the Agent shall have absolute discretion as to the time of application of any such proceeds, money or balance in accordance with this Security Agreement. Upon any sale of Collateral by the Agent (including pursuant to a power of sale granted by statute or under a judicial proceeding), a receipt by the Agent or of the officer making the sale of such proceeds, moneys or balances shall be a sufficient discharge to the purchaser or purchasers of the Collateral so sold and such purchaser or purchasers shall not be obligated to see to the application of any part of the purchase money paid over to the Agent or such officer or be answerable in any way for the misapplication thereof. It is understood that the Grantors shall remain jointly and severally liable to the extent of any deficiency between the amount of the proceeds of the Collateral and the aggregate amount of the Secured Obligations.

ARTICLE 6

ACCOUNT VERIFICATION; ATTORNEY IN FACT; PROXY

Section 6.01. *Account Verification.* The Agent may at any time and from time to time when an Event of Default exists and is continuing and upon at least one Business Day's prior written notice to the Parent Borrower, in the Agent's own name, in the name of a nominee of the Agent, or in the name of any Grantor, communicate (by mail, telephone, facsimile or otherwise) with the Account Debtors of such Grantor, parties to Contracts with such Grantor and obligors in respect of Instruments of such Grantor to verify with such Persons, to the Agent's reasonable satisfaction, the existence, amount, terms of, and any other matter relating to, Accounts, Contracts, Instruments, Chattel Paper, payment intangibles and/or other Receivables that constitute Collateral.

Section 6.02. *Authorization for the Agent to Take Certain Action.* (a) Each Grantor hereby irrevocably authorizes the Agent and appoints the Agent (and all officers, employees or agents designated by the Agent) as its true and lawful attorney in fact (i) at any time and from time to time in its sole discretion (A) to execute (to the extent necessary under the Requirements of Law of the applicable jurisdiction) on behalf of such Grantor as debtor and to file financing statements necessary or desirable in the Agent's reasonable discretion to perfect and to maintain the perfection and priority of the Agent's security interest in the Collateral and (B) with the consent of the Borrowers (other than when an Event of Default exists and is continuing and upon at least one Business Day's prior written notice to the Parent Borrower), to contact and enter into one or more agreements with the issuers of uncertificated securities that constitute Pledged Collateral or with securities intermediaries holding Pledged Collateral as may be necessary or advisable to give the Agent Control over such Pledged Collateral in accordance with the terms hereof; (ii) at any time when an Event of Default exists and is continuing in the sole discretion of the Agent (in the name of such Grantor or otherwise) and upon at least one Business Day's prior written notice to the Parent Borrower (A) to endorse and collect any cash proceeds of the Collateral and to apply the proceeds of any Collateral received by the Agent to the Secured Obligations as provided herein or in the Credit Agreement or any other Loan Document, subject to the terms of any Acceptable Intercreditor Agreement, (B) to demand payment or enforce payment of any Receivable constituting Collateral in the name of the Agent or such Grantor and to endorse any check, draft and/or any other instrument for the payment of money relating to any such Receivable, (C) to sign such Grantor's name on any invoice or bill of lading relating to any Receivable constituting Collateral, any draft against any Account Debtor of such Grantor, and/or any assignment and/or verification of any such Receivable, (D) to exercise all of any Grantor's rights and remedies with respect to the collection of any Receivable constituting Collateral and any other Collateral, (E) to settle, adjust, compromise, extend or renew any Receivable constituting Collateral, (F) to settle, adjust or compromise any legal proceedings brought to collect any Receivable constituting Collateral, (G) to prepare, file and sign such Grantor's name on a proof of claim in bankruptcy or similar document against any Account Debtor of such Grantor, (H) to prepare, file and sign such Grantor's name on any notice of Lien, assignment or satisfaction of Lien or similar document in connection with any Receivable constituting Collateral, (I) to discharge past due taxes, assessments, charges, fees or Liens on the Collateral (except for Permitted Liens), (J) to make, settle and adjust claims in respect of Collateral under policies of insurance and endorse the name of such Grantor on any check, draft, instrument or other item of payment for the proceeds of such policies of insurance, (K) to make all reasonable determinations and decisions with respect thereto and (L) to obtain or maintain the policies of insurance of the types referred to in Section 5.05 of the Credit Agreement or to pay any premium in whole or in part relating thereto; and (iii) to do all other acts and things or institute any proceedings which the Agent may reasonably deem to be necessary or advisable (pursuant to this Security Agreement and the other Loan Documents and in accordance with applicable law) to carry out the terms of this Security Agreement and to protect the interests of the Secured Parties; and, when and to the extent required pursuant to Section 9.03(a) of the Credit Agreement, such Grantor agrees to reimburse the Agent for any payment made in connection with this paragraph or any expense (including attorneys' fees, court costs and expenses) and other changes related thereto incurred by the Agent in connection with any of the foregoing (it being understood that any such sums shall constitute additional Secured Obligations); provided that, this authorization shall not relieve such Grantor of any of its obligations under this Security Agreement or under the Credit Agreement.

(b) All acts of such attorney or designee are hereby ratified and approved by each Grantor. The powers conferred on the Agent, for the benefit of the Agent and Secured Parties, under this Section 6.02 are solely to protect the Agent's interests in the Collateral and shall not impose any duty upon the Agent or any Secured Party to exercise any such powers.

Section 6.03. *PROXY.* EACH GRANTOR HEREBY IRREVOCABLY (UNTIL THE TERMINATION DATE) CONSTITUTES AND APPOINTS THE AGENT AS ITS PROXY AND ATTORNEY-IN-FACT (SUBJECT TO AND AS SET FORTH IN SECTION 6.02 ABOVE) WITH RESPECT TO THE PLEDGED COLLATERAL, INCLUDING THE RIGHT TO VOTE SUCH PLEDGED COLLATERAL, WITH FULL POWER OF SUBSTITUTION TO DO SO. IN ADDITION TO THE RIGHT TO VOTE ANY SUCH PLEDGED COLLATERAL, THE APPOINTMENT OF THE AGENT AS PROXY AND ATTORNEY-IN-FACT SHALL INCLUDE THE RIGHT TO EXERCISE ALL OTHER RIGHTS, POWERS, PRIVILEGES AND REMEDIES TO WHICH A HOLDER OF SUCH PLEDGED COLLATERAL WOULD BE ENTITLED (INCLUDING GIVING OR WITHHOLDING WRITTEN CONSENTS OF SHAREHOLDERS, CALLING SPECIAL MEETINGS OF SHAREHOLDERS AND VOTING AT SUCH MEETINGS). SUCH PROXY SHALL BE EFFECTIVE, AUTOMATICALLY AND WITHOUT THE NECESSITY OF ANY ACTION (INCLUDING ANY TRANSFER OF ANY SUCH PLEDGED COLLATERAL ON THE RECORD BOOKS OF THE ISSUER THEREOF) BY ANY PERSON (INCLUDING THE ISSUER OF SUCH PLEDGED COLLATERAL OR ANY OFFICER OR AGENT THEREOF), IN EACH CASE ONLY WHEN AN EVENT OF DEFAULT EXISTS AND IS CONTINUING AND UPON AT LEAST ONE BUSINESS DAY'S PRIOR WRITTEN NOTICE TO THE PARENT BORROWER.

Section 6.04. *NATURE OF APPOINTMENT; LIMITATION OF DUTY.* THE APPOINTMENT OF THE AGENT AS PROXY AND ATTORNEY-IN-FACT IN THIS ARTICLE 6 IS COUPLED WITH AN INTEREST AND SHALL BE IRREVOCABLE UNTIL THE TERMINATION DATE. NOTWITHSTANDING ANYTHING CONTAINED HEREIN, NEITHER THE AGENT, NOR ANY SECURED PARTY, NOR ANY OF THEIR RESPECTIVE AFFILIATES, OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR REPRESENTATIVES SHALL HAVE ANY DUTY TO EXERCISE ANY RIGHT OR POWER GRANTED HEREUNDER OR OTHERWISE OR TO PRESERVE THE SAME AND SHALL NOT BE LIABLE FOR ANY FAILURE TO DO SO OR FOR ANY DELAY IN DOING SO, EXCEPT TO THE EXTENT SUCH DAMAGES ARE ATTRIBUTABLE TO THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF SUCH PERSON AS FINALLY DETERMINED BY A COURT OF COMPETENT JURISDICTION IN A FINAL AND NON-APPEALABLE DECISION SUBJECT TO SECTION 7.20 HEREOF; PROVIDED, THAT THE FOREGOING EXCEPTION SHALL NOT BE CONSTRUED TO OBLIGATE THE AGENT TO TAKE OR REFRAIN FROM TAKING ANY ACTION WITH RESPECT TO THE COLLATERAL.

ARTICLE 7
GENERAL PROVISIONS

Section 7.01. *Waivers.* To the maximum extent permitted by applicable Requirements of Law, each Grantor hereby waives notice of the time and place of any judicial hearing in connection with the Agent's taking possession of the Collateral or of any public sale or the time after which any private sale or other disposition of all or any part of the Collateral may be made, including without limitation, any and all prior notice and hearing for any prejudgment remedy or remedies. To the extent such notice may not be waived under applicable Requirements of Law, any notice made shall be deemed reasonable if sent to any Grantor, addressed as set forth in Article 8, at least 10 days prior to (a) the date of any such public sale or (b) the time after which any such private disposition may be made. To the maximum extent permitted by applicable Requirements of Law, each Grantor waives all claims, damages, and demands against the Agent arising out of the repossession, retention or sale of the Collateral, except those arising out of the gross negligence or willful misconduct of the Agent as determined by a court of competent jurisdiction in a final and non-appealable judgment. To the extent it may lawfully do so, each Grantor absolutely and irrevocably waives and relinquishes the benefit and advantage of, and covenants not to assert against the Agent, any valuation, stay (other than an automatic stay under any applicable Debtor Relief Law), appraisal, extension, moratorium, redemption or similar law and any and all rights or defenses it may have as a surety now or hereafter existing which, but for this provision, might be applicable to the sale of any Collateral made under the judgment, order or decree of any court, or privately under the power of sale conferred by this Security Agreement, or otherwise. Except as otherwise specifically provided herein, each Grantor hereby waives presentment, demand, protest, any notice (to the maximum extent permitted by applicable Requirements of Law) of any kind or all other requirements as to the time, place and terms of sale in connection with this Security Agreement or any Collateral.

Section 7.02. *Limitation on Agent's Duty with Respect to the Collateral.* The Agent shall not have any obligation to clean or otherwise prepare the Collateral for sale. The Agent shall use reasonable care with respect to the Collateral in its possession; provided that the Agent shall be deemed to have exercised reasonable care in the custody and preservation of any Collateral in its possession if such Collateral is accorded treatment substantially equal to which it accords its own property. The Agent shall not have any other duty as to any Collateral in its possession or control or in the possession or control of any agent or nominee of the Agent, or any income thereon or as to the preservation of rights against prior parties or any other rights pertaining thereto. To the extent that applicable Requirements of Law impose duties on the Agent to exercise remedies in a commercially reasonable manner, each Grantor acknowledges and agrees that it would be commercially reasonable for the Agent (a) to elect not to incur expenses to prepare Collateral for disposition or otherwise to transform raw material or work in process into finished goods or other finished products for disposition, (b) to elect not to obtain third party consents for access to Collateral to be disposed of, or to obtain or, if not required by other law, to fail to obtain governmental or third party consents for the collection or disposition of Collateral to be collected or disposed of, (c) to elect not to exercise collection remedies against Account Debtors or other Persons obligated on Collateral or to remove Liens on or any adverse claims against Collateral, (d) to exercise collection remedies against Account Debtors and other Persons obligated on Collateral directly or through the use of collection agencies and other collection specialists, (e) to advertise dispositions of Collateral through publications or media of general circulation, whether or not the Collateral is of a specialized nature, (f) to contact other Persons, whether or not in the same business as any Grantor, for expressions of interest in acquiring all or any portion of such Collateral, (g) to hire one or more professional auctioneers to assist in the disposition of Collateral, whether or not the Collateral is of a specialized nature, (h) to dispose of Collateral by utilizing internet sites that provide for the auction of assets of the types included in the Collateral or that have the reasonable capacity of doing so, or that match buyers and sellers of assets, (i) to dispose of assets in wholesale rather than retail markets, (j) to disclaim disposition warranties, such as title, possession or quiet enjoyment, (k) to purchase insurance or credit enhancements to insure the Agent against risks of loss in connection with any collection or disposition of Collateral or to provide to the Agent a guaranteed return from the collection or disposition of Collateral or (l) to the extent deemed appropriate by the Agent, to obtain the services of other brokers, investment bankers, consultants and other professionals to assist the Agent in the collection or disposition of any of the Collateral. Each Grantor acknowledges that the purpose of this Section 7.02 is to provide non-exhaustive indications of what actions or omissions by the Agent would be commercially reasonable in the Agent's exercise of remedies with respect to the Collateral and that other actions or omissions by the Agent shall not be deemed commercially unreasonable solely on account of not being indicated in this Section 7.02. Without limitation upon the foregoing, nothing contained in this Section 7.02 shall be construed to grant any rights to any Grantor or to impose any duties on the Agent that would not have been granted or imposed by this Security Agreement or by applicable law in the absence of this Section 7.02.

Section 7.03. *Compromises and Collection of Collateral.* Each Grantor and the Agent recognize that setoffs, counterclaims, defenses and other claims may be asserted by obligors with respect to certain of the Receivables, that certain of the Receivables may be or become uncollectible in whole or in part and that the expense and probability of success in litigating a disputed Receivable may exceed the amount that reasonably may be expected to be recovered with respect to any Receivable. In view of the foregoing, each Grantor agrees that the Agent may at any time and from time to time, if an Event of Default exists and is continuing, compromise with the obligor on any Receivable, accept in full payment of any Receivable such amount as the Agent in its sole discretion shall determine or abandon any Receivable, and any such action by the Agent shall be commercially reasonable so long as the Agent acts in good faith based on information known to it at the time it takes any such action.

Section 7.04. *Agent Performance of Debtor Obligations.* Without having any obligation to do so, the Agent may, at any time when an Event of Default exists and is continuing and upon prior written notice to the Borrower, perform or pay any obligation which any Grantor has agreed to perform or pay under this Security Agreement and which obligation is due and unpaid and not being contested by such Grantor in good faith, and such Grantor shall reimburse the Agent for any amounts paid by the Agent pursuant to this Section 7.04 as a Secured Obligation payable in accordance with Section 9.03(a) of the Credit Agreement.

Section 7.05. *No Waiver; Amendments; Cumulative Remedies.* No delay or omission of the Agent (subject to the provisions of Article 8 and Section 9.18 of the Credit Agreement) to exercise any right or remedy granted under this Security Agreement shall impair such right or remedy or be construed to be a waiver of any Default or an acquiescence therein, and no single or partial exercise of any such right or remedy shall preclude any other or further exercise thereof or the exercise of any other right or remedy. No waiver, amendment or other variation of the terms, conditions or provisions of this Security Agreement whatsoever shall be valid unless in writing signed by the Grantors and the Agent with the concurrence or at the direction of the Lenders to the extent required under Section 9.02 of the Credit Agreement and then only to the extent in such writing specifically set forth. All rights and remedies contained in this Security Agreement or afforded by law shall be cumulative and all shall be available to the Agent until the Termination Date.

Section 7.06. *Limitation by Law; Severability of Provisions.* All rights, remedies and powers provided in this Security Agreement may be exercised only to the extent that the exercise thereof does not violate any applicable Requirements of Law, and all of the provisions of this Security Agreement are intended to be subject to all applicable mandatory Requirements of Law that may be controlling and to be limited to the extent necessary so that such provisions do not render this Security Agreement invalid, unenforceable or not entitled to be recorded or registered, in whole or in part. To the extent permitted by applicable Requirements of Law, any provision of this Security Agreement held to be invalid, illegal or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity, illegality or unenforceability without affecting the validity, legality and enforceability of the remaining provisions of this Security Agreement; and the invalidity of a particular provision in a particular jurisdiction shall not invalidate such provision in any other jurisdiction.

Section 7.07. *Security Interest Absolute.* All rights of the Agent hereunder, the security interests granted hereunder and all obligations of each Grantor hereunder shall be absolute and unconditional irrespective of (a) any lack of validity or enforceability of the Credit Agreement, any other Loan Document, any agreement with respect to any of the Secured Obligations or any other agreement or instrument relating to any of the foregoing, (b) any change in the time, manner or place of payment of, or in any other term of, all or any of the Secured Obligations, or any other amendment or waiver of or any consent to any departure from the Credit Agreement, any other Loan Document or any other agreement or instrument relating to the foregoing, (c) any exchange, release or nonperfection of any Lien on any Collateral, or any release or amendment or waiver of or consent under or departure from any guaranty, securing or guaranteeing all or any of the Secured Obligations, (d) any bankruptcy, insolvency, reorganization, arrangement, readjustment, composition, liquidation or the like of any Grantor, (e) any exercise or non-exercise, or any waiver of, any right, remedy, power or privilege under or in respect of this Security Agreement or any other Loan Document or (f) any other circumstance that might otherwise constitute a defense available to, or a discharge of, any Grantor in respect of the Secured Obligations or this Security Agreement (other than a termination of any Lien contemplated by [Section 7.12](#) or the occurrence of the Termination Date).

Section 7.08. *Benefit of Security Agreement.* The terms and provisions of this Security Agreement shall be binding upon and inure to the benefit of each Grantor, the Agent and the Secured Parties and their respective successors and permitted assigns (including all Persons who become bound as a debtor to this Security Agreement). No sale of participations, assignments, transfers, or other dispositions of any agreement governing the Secured Obligations or any portion thereof or interest therein shall in any manner impair the Lien granted to the Agent hereunder for the benefit of the Agent and the Secured Parties.

Section 7.09. *Survival of Representations.* All representations and warranties of each Grantor contained in this Security Agreement shall survive the execution and delivery of this Security Agreement until the Termination Date.

Section 7.10. *Additional Subsidiaries.* Upon the execution and delivery by any Subsidiary of an instrument in the form of [Exhibit A](#) in accordance with [Section 5.12\(a\)](#) or [Section 5.12\(b\)](#) of the Credit Agreement, such Subsidiary shall become a Subsidiary Party hereunder with the same force and effect as if such Subsidiary was originally named as a Subsidiary Party herein. The execution and delivery of any such instrument shall not require the consent of any other Grantor or any other Person. The rights and obligations of each Grantor hereunder shall remain in full force and effect notwithstanding the addition of any new Grantor as a party to this Security Agreement.

Section 7.11. *Headings.* The titles of and section headings in this Security Agreement are for convenience of reference only, and shall not govern the interpretation of any of the terms and provisions of this Security Agreement.

Section 7.12. *Termination or Release.* (a) This Security Agreement shall continue in effect until the Termination Date, and the Liens granted hereunder shall automatically be released in the circumstances described in [Article 8](#) and [Section 9.18](#) of the Credit Agreement.

(b) In connection with any termination or release pursuant to paragraph (a) above, the Agent shall promptly execute (if applicable) and deliver to any Grantor, at such Grantor's expense, all UCC termination statements and similar documents that such Grantor shall reasonably request to evidence and/or effectuate such termination or release. Any execution and delivery of documents pursuant to this Section 7.12 shall be without recourse to or representation or warranty by the Agent or any Secured Party. The Borrowers shall reimburse the Agent for all costs and expenses, including any fees and expenses of counsel, incurred by it in connection with any action contemplated by this Section 7.12 pursuant to and to the extent required by Section 9.03(a) of the Credit Agreement.

(c) The Agent shall have no liability whatsoever to any other Secured Party as the result of any release of Collateral by it in accordance with (or which the Agent in good faith believes to be in accordance with) the terms of this Section 7.12.

(d) At any time that a Grantor desires that the Agent take any action to acknowledge or give effect to any release of Collateral pursuant to the foregoing Section 7.12(a), such Grantor shall deliver to the Agent a certificate signed by a Responsible Officer of such Grantor (or the Borrowers on behalf of such Grantor) stating that the release of the respective Collateral is permitted pursuant to such Section 7.12(a) and the terms of the Credit Agreement. At any time that any Grantor desires that a Restricted Subsidiary of such Grantor be released hereunder, it shall deliver to the Agent a certificate signed by a Responsible Officer of such Grantor (or the Borrowers on behalf of such Grantor) stating that the release of the respective Grantor (and its Collateral) is permitted pursuant to such Section 7.12(a) and the terms of the Credit Agreement.

Section 7.13. *Entire Agreement.* This Security Agreement, together with the other Loan Documents and any Acceptable Intercreditor Agreement, embodies the entire agreement and understanding between each Grantor and the Agent relating to the Collateral and supersedes all prior agreements and understandings between any Grantor and the Agent relating to the Collateral.

Section 7.14. *CHOICE OF LAW. THIS SECURITY AGREEMENT AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS SECURITY AGREEMENT, WHETHER IN TORT, CONTRACT (AT LAW OR IN EQUITY) OR OTHERWISE, SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.*

Section 7.15. *CONSENT TO JURISDICTION; CONSENT TO SERVICE OF PROCESS.*

(a) EACH PARTY HERETO HEREBY IRREVOCABLY AND UNCONDITIONALLY SUBMITS, FOR ITSELF AND ITS PROPERTY, TO THE EXCLUSIVE JURISDICTION OF ANY US FEDERAL OR NEW YORK STATE COURT SITTING IN THE BOROUGH OF MANHATTAN, IN THE CITY OF NEW YORK (OR ANY APPELLATE COURT THEREFROM) OVER ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS SECURITY AGREEMENT AND AGREES THAT ALL CLAIMS, CONTROVERSIES OR DISPUTES IN RESPECT OF ANY SUCH ACTION OR PROCEEDING SHALL (EXCEPT AS PERMITTED BELOW) BE HEARD AND DETERMINED IN SUCH NEW YORK STATE OR, TO THE EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, FEDERAL COURT. EACH OF THE PARTIES HERETO AGREES THAT SERVICE OF ANY PROCESS, SUMMONS, NOTICE OR DOCUMENTS BY REGISTERED MAIL ADDRESSED TO SUCH PERSON SHALL BE EFFECTIVE SERVICE OF PROCESS AGAINST SUCH PERSON FOR ANY SUIT, ACTION OR PROCEEDING BROUGHT IN ANY SUCH COURT. EACH OF THE PARTIES HERETO AGREES THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY APPLICABLE REQUIREMENTS OF LAW. EACH PARTY HERETO HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT IT MAY LEGALLY AND EFFECTIVELY DO SO, ANY OBJECTION WHICH IT MAY NOW OR HEREAFTER HAVE TO THE LAYING OF VENUE OF ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS SECURITY AGREEMENT IN ANY SUCH COURT. EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, ANY CLAIM OR DEFENSE OF AN INCONVENIENT FORUM TO THE MAINTENANCE OF SUCH ACTION, SUIT OR PROCEEDING IN ANY SUCH COURT. EACH PARTY HERETO AGREES THAT THE AGENT AND LENDERS RETAIN THE RIGHT TO BRING PROCEEDINGS AGAINST ANY GRANTOR IN THE COURTS OF ANY OTHER JURISDICTION SOLELY IN CONNECTION WITH THE EXERCISE OF ANY RIGHTS IN RESPECT OF THE COLLATERAL UNDER THIS SECURITY AGREEMENT.

(b) TO THE EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, EACH PARTY TO THIS SECURITY AGREEMENT HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF ANY AND ALL PROCESS UPON IT AND AGREES THAT ALL SUCH SERVICE OF PROCESS MAY BE MADE BY REGISTERED MAIL (OR ANY SUBSTANTIALLY SIMILAR FORM OF MAIL) DIRECTED TO IT AT ITS ADDRESS FOR NOTICES AS PROVIDED FOR IN SECTION 9.01 OF THE CREDIT AGREEMENT. EACH PARTY TO THIS SECURITY AGREEMENT HEREBY WAIVES ANY OBJECTION TO SUCH SERVICE OF PROCESS AND FURTHER IRREVOCABLY WAIVES AND AGREES NOT TO PLEAD OR CLAIM IN ANY ACTION OR PROCEEDING COMMENCED HEREUNDER THAT SERVICE OF PROCESS WAS INVALID AND INEFFECTIVE. NOTHING IN THIS SECURITY AGREEMENT WILL AFFECT THE RIGHT OF ANY PARTY TO THIS SECURITY AGREEMENT TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY APPLICABLE REQUIREMENTS OF LAW.

Section 7.16. *WAIVER OF JURY TRIAL.* EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY SUIT, ACTION, LEGAL PROCEEDING OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY) DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS SECURITY AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY. EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS SECURITY AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION.

Section 7.17. *Indemnity.* Each Grantor hereby agrees to indemnify the Indemnitees, as, and to the extent, set forth in Section 9.03 of the Credit Agreement.

Section 7.18. *Counterparts.* This Security Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page of this Security Agreement by facsimile or by email as a “.pdf” or “.tif” attachment or other electronic transmission shall be effective as delivery of a manually executed counterpart of this Security Agreement.

Section 7.19. *INTERCREDITOR AGREEMENT GOVERNS.* NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY, THE LIENS AND SECURITY INTERESTS GRANTED TO THE AGENT FOR THE BENEFIT OF THE SECURED PARTIES PURSUANT TO THIS SECURITY AGREEMENT AND THE EXERCISE OF ANY RIGHT OR REMEDY BY THE AGENT WITH RESPECT TO ANY COLLATERAL HEREUNDER ARE SUBJECT TO THE PROVISIONS OF ANY ACCEPTABLE INTERCREDITOR AGREEMENT. IN THE EVENT OF ANY CONFLICT BETWEEN THE PROVISIONS OF ANY ACCEPTABLE INTERCREDITOR AGREEMENT AND THIS SECURITY AGREEMENT, THE PROVISIONS OF ANY ACCEPTABLE INTERCREDITOR AGREEMENT SHALL GOVERN AND CONTROL.

Section 7.20. *Waiver of Consequential Damages, Etc.* To the extent permitted by applicable law, none of the Grantors or Secured Parties shall assert, and each hereby waives, any claim against each other or any Related Party thereof, on any theory of liability, for special, indirect, consequential or punitive damages (as opposed to direct or actual damages) arising out of, in connection with, or as a result of, this Security Agreement or any agreement or instrument contemplated hereby, except, in the case of any claim by any Indemnitee against any of the Grantors, to the extent such damages would otherwise be subject to indemnification pursuant to the terms of Section 7.17.

Section 7.21. *Mortgages.* In the case of a conflict between this Security Agreement and any Mortgage with respect to any Material Real Estate Asset that is also subject to a valid and enforceable Lien under the terms of such Mortgage (including Fixtures), the terms of such Mortgage shall govern.

Section 7.22. *Successors and Assigns.* Whenever in this Security Agreement any party hereto is referred to, such reference shall be deemed to include the successors and permitted assigns of such party; and all covenants, promises and agreements by or on behalf of any Grantor or the Agent in this Security Agreement shall bind and inure to the benefit of their respective successors and permitted assigns. Except in a transaction expressly permitted under the Credit Agreement, no Grantor may assign any of its rights or obligations hereunder without the written consent of the Agent.

Section 7.23. *Survival of Agreement.* Without limiting any provision of the Credit Agreement or Section 7.17 hereof, all covenants, agreements, indemnities, representations and warranties made by the Grantors in the Loan Documents and in the certificates or other instruments delivered in connection with or pursuant to this Security Agreement or any other Loan Document shall be considered to have been relied upon by the Lenders and shall survive the execution and delivery of the Loan Documents and the making of any Loans, regardless of any investigation made by any such Lender or on its behalf and notwithstanding that the Agent or any Lender may have had notice or knowledge of any Default or Event of Default or incorrect representation or warranty at the time any credit is extended under the Credit Agreement, and shall continue in full force and effect until the Termination Date, or with respect to any individual Grantor until such Grantor is otherwise released from its obligations under this Security Agreement in accordance with the terms hereof.

Section 7.24. *Effectiveness of the Acquisition.* The Parent Borrower and the Co-Borrower shall have no rights or obligations hereunder until the consummation of the Acquisition, and any representations and warranties of the Parent Borrower or the Co-Borrower hereunder shall not become effective until such time. Upon consummation of the Acquisition, the Parent Borrower and the Co-Borrower shall succeed to all the rights and obligations of the Initial Borrower under this Agreement and the other Loan Documents to which it is a party and all representations and warranties of the Parent Borrower and the Co-Borrower shall become effective as of the date hereof, without any further action by any Person.

ARTICLE 8

NOTICES

Section 8.01. *Sending Notices.* Any notice required or permitted to be given under this Security Agreement shall be delivered in accordance with Section 9.01 of the Credit Agreement (it being understood and agreed that references in such Section to “herein”, “hereunder” and other similar terms shall be deemed to be references to this Security Agreement).

Section 8.02. *Change in Address for Notices.* Each of the Grantors, the Agent and the Lenders may change the address or facsimile number for service of notice upon it by a notice in writing to the other parties.

ARTICLE 9
THE AGENT

Jefferies has been appointed Agent for the Lenders hereunder pursuant to Article 8 of the Credit Agreement. It is expressly understood and agreed by the parties to this Security Agreement that any authority conferred upon the Agent hereunder is subject to the terms of the delegation of authority made by the Lenders to the Agent pursuant to the Credit Agreement, and that the Agent has agreed to act (and any successor Agent shall act) as such hereunder only on the express conditions contained in such Article 8. Any successor Agent appointed pursuant to Article 8 of the Credit Agreement shall be entitled to all the rights, interests and benefits of the Agent hereunder.

By accepting the benefits of this Security Agreement and any other Loan Document, each Secured Party expressly acknowledges and agrees that this Security Agreement and each other Loan Document may be enforced only by the action of the Agent, and that such Secured Party shall not have any right individually to seek to enforce or to enforce this Security Agreement or to realize upon the security to be granted hereby, it being understood and agreed that such rights and remedies may be exercised by the Agent for the benefit of the Secured Parties upon the terms of this Security Agreement and the other Loan Documents.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, each Grantor and the Agent have executed this Security Agreement as of the date first above written.

EQT AVATAR INTERMEDIATE, INC.,

By: _____
Name: _____
Title:

EQT AVATAR HOLDINGS, INC.,

By: _____
Name: _____
Title:

Signature Page to Pledge and Security Agreement

CERTARA HOLDCO, INC.,

By: _____
Name: _____
Title: _____

CERTARA USA, INC.,

By: _____
Name: _____
Title: _____

CERTARA HOLDING, INC.,

By: _____
Name: _____
Title: _____

MBDD US, LLC,

By: _____
Name: _____
Title: _____

TRIPOS INVESTMENTS, L.L.C.,

By: _____
Name: _____
Title: _____

SYNCHROGENIX INFORMATION STRATEGIES, LLC,

By: _____
Name: _____
Title: _____

Signature Page to Pledge and Security Agreement

CERTARA, L.P.,

By: _____
Name:
Title:

Signature Page to Pledge and Security Agreement

JEFFERIES FINANCE LLC,
as the Agent

By: _____
Name:
Title:

Signature Page to Pledge and Security Agreement

EXHIBIT A

[FORM OF] SECURITY AGREEMENT JOINDER

A. SUPPLEMENT NO. [●] dated as of [●] (this “Supplement”), to the Pledge and Security Agreement dated as of August 15, 2017 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Security Agreement”), by and among the Borrowers and the Subsidiary Parties from time to time party thereto (the foregoing, collectively, the “Grantors”) and Jefferies Finance LLC in its capacity as administrative agent and collateral agent for the Secured Parties (in such capacities, the “Agent”).

B. Reference is made to the Credit Agreement dated as of August 15, 2017, (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Credit Agreement”), by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), EQT Avatar Holdings, Inc., a Delaware corporation (“Buyer” or the “Initial Borrower”), Certara Holdco, Inc., a Delaware corporation (the “Parent Borrower”), Certara USA, Inc., a Delaware corporation (the “Co-Borrower” and, together with the Initial Borrower (prior to the consummation of the Closing Date Assumption (as defined in the Credit Agreement referred to below)) and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the lenders and issuing banks from time to time party thereto and the Agent.

C. Capitalized terms used herein and not otherwise defined herein shall have the meanings assigned to such terms in the Credit Agreement or the Security Agreement, as applicable.

D. The Grantors have entered into the Security Agreement in order to induce the Lenders to make Loans. Section 7.10 of the Security Agreement and Section 5.12 of the Credit Agreement provide that additional Subsidiaries of the Borrowers may become Subsidiary Parties under the Security Agreement by executing and delivering an instrument in the form of this Supplement. [**The**] [**Each**] undersigned Subsidiary ([**each a**] [**the**] “New Subsidiary”) is executing this Supplement in accordance with the requirements of the Credit Agreement to become a Subsidiary Party under the Security Agreement in order to induce the Lenders to make additional Loans and as consideration for Loans previously made and to secure the Secured Obligations, including [**its**] [**their**] obligations under the Loan Guaranty, each Hedge Agreement the obligations under which constitute Secured Hedging Obligations and agreements relating to Banking Services the obligations under which constitute Banking Services Obligations.

Accordingly, the Agent and [**the**] [**each**] New Subsidiary agree as follows:

SECTION 1. In accordance with Section 7.10 of the Security Agreement, [**the**] [**each**] New Subsidiary by its signature below becomes a Subsidiary Party and a Grantor under the Security Agreement with the same force and effect as if originally named therein as a Subsidiary Party, and [**the**] [**each**] New Subsidiary hereby (a) agrees to all the terms and provisions of the Security Agreement applicable to it as a Subsidiary Party and Grantor thereunder and (b) makes the representations and warranties applicable to it as a Grantor under the Security Agreement[, **subject to Schedule A hereto,**] on and as of the date hereof; it being understood and agreed that any representation or warranty that expressly relates to an earlier date shall be deemed to refer to the date hereof. In furtherance of the foregoing, [**the**] [**each**] New Subsidiary, as security for the payment and performance in full of the Secured Obligations, does hereby create and grant to the Agent, its successors and permitted assigns, for the benefit of the Secured Parties, their successors and permitted assigns, a security interest in and Lien on all of [**the**] [**each**] New Subsidiary’s right, title and interest in and to the Collateral of [**the**] [**each**] New Subsidiary. Each reference to a “Grantor” and “Subsidiary Party” in the Security Agreement shall be deemed to include [**the**] [**each**] New Subsidiary. The Security Agreement is hereby incorporated herein by reference.

SECTION 2. [The] [Each] New Subsidiary represents and warrants to the Agent and the other Secured Parties that this Supplement has been duly authorized, executed and delivered by it and constitutes its legal, valid and binding obligation, enforceable against it in accordance with its terms, subject to the Legal Reservations.

SECTION 3. This Supplement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. This Supplement shall become effective when the Agent shall have received a counterpart of this Supplement that bears the signature of [the] [each] New Subsidiary and the Agent has executed a counterpart hereof. Delivery of an executed signature page to this Supplement by facsimile transmission or by email as a “.pdf” or “.tif” attachment shall be as effective as delivery of a manually signed counterpart of this Supplement.

SECTION 4. Attached hereto is a duly prepared, completed and executed Perfection Certificate with respect to [the] [each] New Subsidiary, and [the] [each] New Subsidiary hereby represents and warrants that the information set forth therein is correct and complete in all material respects as of the date hereof.

SECTION 5. Except as expressly supplemented hereby, the Security Agreement shall remain in full force and effect.

SECTION 6. **THIS SUPPLEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.**

SECTION 7. In case any one or more of the provisions contained in this Supplement is invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein and in the Security Agreement shall not in any way be affected or impaired thereby (it being understood that the invalidity of a particular provision in a particular jurisdiction shall not in and of itself affect the validity of such provision in any other jurisdiction). Each of the Borrowers and the Agent shall endeavor in good-faith negotiations to replace the invalid, illegal or unenforceable provisions with valid provisions the economic effect of which comes as close as possible to that of the invalid, illegal or unenforceable provisions.

SECTION 8. All communications and notices hereunder shall be in writing and given as provided in Section 8.01 of the Security Agreement.

SECTION 9. [The] [Each] New Subsidiary agrees to reimburse the Agent for its expenses in connection with this Supplement, including the fees, other charges and disbursements of counsel in accordance with Section 9.03(a) of the Credit Agreement.

SECTION 10. This Supplement shall constitute a Loan Document, under and as defined in, the Credit Agreement.

[Signature pages follow]

IN WITNESS WHEREOF, **[each]** **[the]** New Subsidiary has duly executed this Supplement to the Security Agreement as of the day and year first above written.

[NAME OF NEW SUBSIDIARY]

By: _____

Name:

Title:

[SCHEDULE A
CERTAIN EXCEPTIONS]

EXHIBIT B¹

[FORM OF] INTELLECTUAL PROPERTY SECURITY AGREEMENT

[PATENT/TRADEMARK/COPYRIGHT] SECURITY AGREEMENT dated as of [●] (this "Agreement"), among [●] (each a "Grantor") and Jefferies Finance LLC (in such capacity, the "Administrative Agent").

WHEREAS, reference is made to (a) the Credit Agreement dated as of August 15, 2017, (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the "Credit Agreement"), by and among EQT Avatar Intermediate, Inc., a Delaware corporation ("Holdings"), EQT Avatar Holdings, Inc., a Delaware corporation ("Buyer" or the "Initial Borrower"), Certara Holdco, Inc., a Delaware corporation (the "Parent Borrower"), Certara USA, Inc., a Delaware corporation (the "Co-Borrower" and, together with the Initial Borrower (prior to the consummation of the Closing Date Assumption (as defined in the Credit Agreement referred to below)) and the Parent Borrower, each a "Borrower" and collectively the "Borrowers"), the lenders and issuing banks from time to time party thereto and the Administrative Agent and (b) the Pledge and Security Agreement dated as of August 15, 2017 (the "Security Agreement"), by and among the Borrower, Holdings, the Subsidiary Parties from time to time party thereto and the Administrative Agent;

WHEREAS, the Lenders have agreed to extend credit to the Borrowers subject to the terms and conditions set forth in the Credit Agreement; and

WHEREAS, each Grantor is willing to execute and deliver this Agreement in as consideration for such extensions of credit.

NOW, THEREFORE, for good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

SECTION 1. Terms. Capitalized terms used in this Agreement and not otherwise defined herein have the meanings specified in the Security Agreement or the Credit Agreement, as applicable.

SECTION 2. Grant of Security Interest. As security for the payment or performance, as the case may be, in full of the Secured Obligations, each Grantor hereby grants to the Administrative Agent, its successors and assigns, for the benefit of the Secured Parties, a security interest (the "Security Interest") in all of such Grantor's right, title and interest in, to and under any [Patents/Trademarks/Copyrights and exclusive Copyright Licenses] now owned or at any time hereafter acquired by such Grantor, including those listed on Schedule I (the "Collateral").

SECTION 3. Security Agreement. The Security Interest granted to the Administrative Agent herein is granted in furtherance, and not in limitation, of the security interests granted to the Administrative Agent pursuant to the Security Agreement. Each Grantor hereby acknowledges and affirms that the rights and remedies of the Administrative Agent with respect to the Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the Security Agreement, the terms of the Security Agreement shall govern.

¹ Note: A separate Intellectual Property Security Agreement must be drafted for each of any Patents, Trademarks, or Copyrights/exclusive Copyright Licenses.

SECTION 4. Counterparts. This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original but all of which when taken together shall constitute a single contract. Delivery of an executed signature page to this Agreement by facsimile or other electronic transmission shall be effective as delivery of a manually signed counterpart of this Agreement.

SECTION 5. CHOICE OF LAW. THIS SECURITY AGREEMENT AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS SECURITY AGREEMENT, WHETHER IN TORT, CONTRACT (AT LAW OR IN EQUITY) OR OTHERWISE, SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

[●]

By:

Name:

Title:

B-3

SCHEDULE I

B-4

**[FORM OF]
LOAN GUARANTY**

LOAN GUARANTY

THIS LOAN GUARANTY (as it may be amended, restated, amended and restated, supplemented or otherwise modified from time to time, this "Loan Guaranty") is entered into as of August 15, 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation ("Holdings"), EQT Avatar Holdings, Inc., a Delaware corporation ("Buyer" or the "Initial Borrower"), Certara Holdco, Inc., a Delaware corporation (the "Parent Borrower"), Certara USA, Inc., a Delaware corporation (the "Co-Borrower" and, together with the Initial Borrower (prior to the consummation of the Closing Date Assumption (as defined in the Credit Agreement referred to below)) and the Parent Borrower, each a "Borrower" and collectively the "Borrowers"), the Subsidiary Parties (as defined below) from time to time party hereto (the foregoing, collectively, the "Loan Guarantors") and Jefferies Finance LLC, in its capacity as administrative agent and collateral agent for the lenders party to the Credit Agreement referred to below (in such capacity, the "Administrative Agent").

PRELIMINARY STATEMENT

Reference is hereby made to that certain Credit Agreement dated as of August 15, 2017 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the "Credit Agreement"), by and among, *inter alios*, Holdings, the Borrowers, the lenders and issuing banks party thereto from time to time (the "Lenders") and the Administrative Agent.

The Loan Guarantors are entering into this Loan Guaranty in order to induce the Lenders to enter into and extend credit to the Borrowers under the Credit Agreement and to guarantee the Guaranteed Obligations (as defined below).

Each Loan Guarantor will obtain benefits from the incurrence of Loans by the Borrowers and the issuance of, and participation in, Letters of Credit for the account of the Borrowers and their respective subsidiaries and the incurrence by the Loan Parties of Secured Hedging Obligations and Banking Services Obligations.

ACCORDINGLY, the parties hereto agree as follows:

ARTICLE 1 DEFINITIONS

Section 1.01. Definitions of Certain Terms Used Herein. As used in this Loan Guaranty, in addition to the terms defined in the preamble and Preliminary Statement above, the following terms shall have the following meanings:

"Accommodation Payments" has the meaning assigned to such term in Section 2.08.

"Administrative Agent" has the meaning assigned to such term in the preamble.

"Article" means a numbered article of this Loan Guaranty, unless another document is specifically referenced.

"Borrower" and "Borrowers" have the meanings assigned to such terms in the preamble.

"Credit Agreement" has the meaning assigned to such term in the preliminary statement.

“Exhibit” refers to a specific exhibit to this Loan Guaranty, unless another document is specifically referenced.

“Guaranteed Obligations” means (a) the Secured Obligations of the Borrowers and (b) any Other Secured Obligation, including any amount that would become due but for the automatic stay under Section 362(a) of the Bankruptcy Code, 11 U.S.C. §362(a) (excluding, for the avoidance of doubt, any Excluded Swap Obligation), together with any and all expenses which may be incurred by the Administrative Agent and the other Secured Parties in collecting any such Secured Obligation and/or Other Secured Obligation that are reimbursable in accordance with Section 9.03 of the Credit Agreement.

“Guarantor Percentage” has the meaning assigned to such term in Section 2.09.

“Guaranty Supplement” has the meaning assigned to such term in Section 3.04.

“Holdings” has the meaning assigned to such term in the preamble.

“Lenders” has the meaning assigned to such term in the preliminary statement.

“Loan Guarantors” has the meaning assigned to such term in the preamble.

“Loan Guaranty” has the meaning assigned to such term in the preamble.

“Maximum Liability” has the meaning assigned to such term in Section 2.08.

“Merger Sub” has the meaning assigned to such term in the preamble.

“Non-Paying Guarantor” has the meaning assigned to such term in Section 2.08.

“Obligated Party” means each Borrower, each Loan Guarantor, each other guarantor or each other Person obligated for all or any part of the Guaranteed Obligations.

“Other Secured Obligation” means, with respect to the Loan Guaranty provided by any Loan Party, any Secured Hedging Obligation and/or Banking Services Obligation of any other Loan Party (other than any Borrower).

“Paying Guarantor” has the meaning assigned to such term in Section 2.08.

“Section” means a numbered section of this Loan Guaranty, unless another document is specifically referenced.

“Subsidiary Parties” means (a) the Restricted Subsidiaries of the Borrowers identified on Exhibit A hereto and (b) each other Restricted Subsidiary that becomes a party to this Loan Guaranty as a Subsidiary Party after the date hereof, in accordance with Section 3.04 herein and Section 5.12 of the Credit Agreement.

“UFCA” has the meaning assigned to such term in Section 2.08(a).

“UFTA” has the meaning assigned to such term in Section 2.08(a).

The foregoing definitions shall be equally applicable to both the singular and plural forms of the defined terms. Capitalized terms used in this Loan Guaranty and not otherwise defined herein shall have the meanings set forth in the Credit Agreement.

It is understood and agreed for the avoidance of doubt that any reference herein to “the Guaranteed Obligations” shall, with respect to any Loan Guarantor, be deemed to apply only to the Guaranteed Obligations applicable to such Loan Guarantor under the definition of “Guaranteed Obligations”.

ARTICLE 2
LOAN GUARANTY

Section 2.01. Guaranty. Except as otherwise provided for herein (including under Section 3.14), each Loan Guarantor hereby agrees that it is jointly and severally liable for, and, as primary obligor and not merely as surety, absolutely and unconditionally and irrevocably guarantees to the Administrative Agent (acting as agent for the Secured Parties, pursuant to Article 8 of the Credit Agreement) for the benefit of the Secured Parties, the full and prompt payment, when and as the same become due, whether at stated maturity, upon acceleration or otherwise, and at all times thereafter, of the Guaranteed Obligations. Each Loan Guarantor further agrees that the Guaranteed Obligations may be increased, extended or renewed in whole or in part without notice to or further assent from it, and that it remains bound upon its guarantee notwithstanding any such extension or renewal. In addition, if any or all of the Guaranteed Obligations become due and payable hereunder, each Loan Guarantor, unconditionally and irrevocably, promises to pay such Guaranteed Obligations to the Administrative Agent for the benefit of the Secured Parties, on demand. This Loan Guaranty is a continuing one and shall remain in full force and effect until the Termination Date, and all liabilities to which it applies or may apply under the terms hereof shall be conclusively presumed to have been created in reliance hereon.

Section 2.02. Guaranty of Payment. This Loan Guaranty is a guaranty of payment and not of collection. Each Loan Guarantor understands and agrees that the Administrative Agent on behalf of the Secured Parties may enforce this Loan Guaranty up to the full amount of the Guaranteed Obligations against any Loan Guarantor. The Administrative Agent may enforce this Loan Guaranty at any time when an Event of Default exists.

Section 2.03. No Discharge or Diminishment of Loan Guaranty.

(a) Except as otherwise provided for herein (including under Section 3.14), the obligations of each Loan Guarantor hereunder are unconditional, irrevocable and absolute and independent of the Guaranteed Obligations or other obligations of any other Loan Guarantor and not subject to any reduction, limitation, impairment or termination for any reason, including: (i) any claim of waiver, release, extension, renewal, settlement, surrender, alteration, compromise, invalidity, rescission, irregularity or unenforceability of all or any part of the Guaranteed Obligations or of any security therefor or proceeds thereof, by operation of law or otherwise; (ii) any change in the corporate existence, structure or ownership of any Obligated Party; (iii) any insolvency, bankruptcy, reorganization or other similar proceeding affecting any other Obligated Party, or their assets or any resulting release or discharge of any obligation of any Obligated Party; (iv) the existence of any claim, setoff or other right which any Loan Guarantor may have at any time against any Obligated Party, the Administrative Agent, any Lender or any other Person, whether in connection herewith or in any unrelated transactions; (v) any direction as to application of payments by the Borrowers or by any other party; (vi) any other continuing or other guaranty, undertaking or maximum liability of a guarantor or of any other party as to the Guaranteed Obligations; (vii) any payment on or in reduction of any such other guaranty or undertaking; (viii) any dissolution, termination or increase, decrease or change in personnel by any Borrower; (ix) any payment made to any Secured Party on the Guaranteed Obligations which any such Secured Party repays to any Borrower pursuant to court order in any bankruptcy, reorganization, arrangement, moratorium or other debtor relief proceeding, and each Loan Guarantor waives any right to the deferral or modification of its obligations hereunder by reason of any such proceeding; (x) the failure of any Loan Guarantor to receive any benefit from or as a result of its execution, delivery and performance of this Loan Guaranty; or (xi) any other circumstance (including any statute of limitations), any act or omission, or any existence of or reliance on any representation by any Secured Party that might otherwise constitute a defense available to, or a discharge of, any Loan Party or any other guarantor or surety.

(b) Except for termination of a Loan Guarantor's obligations hereunder or as expressly permitted by Section 3.14, the obligations of each Loan Guarantor hereunder are not subject to any defense or setoff, counterclaim, recoupment, or termination whatsoever by reason of the invalidity, illegality, or unenforceability of any of the Guaranteed Obligations or otherwise, or any Requirements of Law purporting to prohibit payment by any Obligated Party, of the Guaranteed Obligations or any part thereof.

(c) Further, the obligations of any Loan Guarantor hereunder are not discharged or impaired or otherwise affected by: (i) the failure of the Administrative Agent to assert any claim or demand or to enforce any remedy with respect to all or any part of the Guaranteed Obligations; (ii) any waiver or modification of or supplement to any provision of any agreement relating to the Guaranteed Obligations; (iii) any release, non-perfection or invalidity of any indirect or direct security for the obligations of the Borrowers for all or any part of the Guaranteed Obligations or any obligations of any other guarantor or of other Person liable for any of the Guaranteed Obligations; (iv) any action, failure or delay to act by the Administrative Agent with respect to any Collateral securing any part of the Guaranteed Obligations; or (v) any default, failure or delay, willful or otherwise, in the payment or performance of any of the Guaranteed Obligations, or any other circumstance, act, omission or delay that might in any manner or to any extent vary the risk of such Loan Guarantor or that would otherwise operate as a discharge of any Loan Guarantor as a matter of law or equity, in each case other than as set forth in Section 3.14.

Section 2.04. Defenses Waived. To the fullest extent permitted by applicable Requirements of Law, and except for termination of a Loan Guarantor's obligations hereunder or as otherwise provided for herein (including under Section 3.14), each Loan Guarantor hereby waives any defense based on or arising out of any defense of any Obligated Party or arising out of the disability of any Obligated Party or the unenforceability of all or any part of the Guaranteed Obligations or any part thereof from any cause, or the cessation from any cause of the liability of any Obligated Party. Without limiting the generality of the foregoing, each Loan Guarantor irrevocably waives acceptance hereof, presentment, demand, protest and, to the fullest extent permitted by applicable Requirements of Law, any notice not provided for herein or in any other Loan Document, including any notice of nonperformance, notice of protest, notice of dishonor, notice of acceptance of this Loan Guaranty, and any notice of the existence, creation or incurring of new or additional Guaranteed Obligations, as well as any requirement that at any time any action be taken by any Person against any Obligated Party, or any other Person, including any right (except as may be required by applicable Requirements of Law and to the extent the relevant requirement cannot be waived) to require the Administrative Agent to (i) proceed against any other guarantor or any other party, (ii) proceed against or exhaust any security held from any other party or (iii) pursue any other remedy in the Administrative Agent's power whatsoever. The Administrative Agent may, at its election and in accordance with the terms of the applicable Loan Documents, foreclose on any Collateral held by it by one or more judicial or nonjudicial sales, accept an assignment of any such Collateral in lieu of foreclosure or otherwise act or fail to act with respect to any Collateral securing all or a part of the Guaranteed Obligations, and the Administrative Agent may, at its election, compromise or adjust any part of the Guaranteed Obligations, make any other accommodation with any Obligated Party or exercise any other right or remedy available to it against any Obligated Party, or any security, without affecting or impairing in any way the liability of such Loan Guarantor under this Loan Guaranty, except as otherwise provided in Section 3.14. To the fullest extent permitted by applicable Requirements of Law, each Loan Guarantor waives any defense arising out of any such election even though such election may operate, pursuant to applicable Requirements of Law, to impair or extinguish any right of reimbursement, contribution, indemnification or subrogation or other right or remedy of any Loan Guarantor against any Obligated Party or any security.

Section 2.05. Authorization. Each Loan Guarantor authorizes the Administrative Agent without notice or demand or, except as may be required by any Loan Document, consent by any Loan Guarantor (except as may be required by applicable Requirements of Law and to the extent the relevant requirement cannot be waived), and without affecting or impairing its liability hereunder (except as set forth in Section 3.14), from time to time, subject to the terms of the referenced Loan Documents, to:

(a) change the manner, place or terms of payment of, and/or change or extend the time of payment of, renew, increase, accelerate or alter, any of the Guaranteed Obligations (including any increase or decrease in the principal amount thereof or the rate of interest or fees thereon), any security therefor, or any liability incurred directly or indirectly in respect thereof, and this Loan Guaranty shall apply to the Guaranteed Obligations as so changed, extended, renewed or altered;

(b) take and hold security for the payment of the Guaranteed Obligations and sell, exchange, release, impair, surrender, realize upon or otherwise deal with in any manner and in any order any property by whomsoever at any time pledged or mortgaged to secure, or howsoever securing, the Guaranteed Obligations or any liabilities (including any of those hereunder) incurred directly or indirectly in respect thereof or hereof, and/or any offset there against;

(c) exercise or refrain from exercising any rights against any Obligated Party or others or otherwise act or refrain from acting;

(d) release or substitute any endorser, any guarantor, any Borrower, any other Loan Party and/or any other obligor;

(e) settle or compromise any of the Guaranteed Obligations, any security therefor or any liability (including any of those hereunder) incurred directly or indirectly in respect thereof or hereof, and/or subordinate the payment of all or any part thereof to the payment of any liability (whether due or not) of any Obligated Party to its creditors other than the Secured Parties;

(f) apply any sums by whomsoever paid or howsoever realized to any liability or liabilities of any Obligated Party to the Secured Parties regardless of what liability or liabilities of such Obligated Party remain unpaid;

(g) consent to or waive any breach of, or any act, omission or default under, this Loan Guaranty, the Credit Agreement, any other Loan Document, any Hedge Agreement with respect to any Secured Hedging Obligation or any of the instruments or agreements referred to herein or therein, or otherwise amend, modify or supplement this Loan Guaranty, the Credit Agreement, any other Loan Document, any Hedge Agreement with respect to any Secured Hedging Obligation or any of such other instruments or agreements; and/or

(h) take any other action which would, under otherwise applicable principles of common law, give rise to a legal or equitable discharge of the Loan Guarantors from their respective liabilities under this Loan Guaranty (including any action or omission whatsoever that might otherwise vary the risk of such Loan Guarantor or constitute a legal or equitable defense to or discharge of the liabilities of a guarantor or surety or that might otherwise limit recourse against such Loan Guarantor).

Section 2.06. Rights of Subrogation. Each Loan Guarantor hereby subordinates to the payment in full in cash of the Guaranteed Obligations all rights, claims or causes of action, including any claim of subrogation, contribution, exoneration or indemnification, that it has against any Loan Party or any Collateral in respect of this Loan Guaranty (whether contractual, under Section 509 of the Bankruptcy Code or otherwise), whether or not such right, claim or cause of action arises in equity or under contract, statute or common law, including the right to take or receive from any Borrower or Loan Party, directly or indirectly, in cash or other property or by set-off or in any other manner, payment or security on account of such claim, remedy or right, unless and until the occurrence of the Termination Date; provided that if any amount is paid to such Loan Guarantor on account of such subrogation rights at any time prior to the Termination Date, then unless such Loan Guarantor has already discharged its liabilities under this Loan Guaranty in an amount equal to such Loan Guarantor's Maximum Liability as of such date, such amount shall be held by the recipient Loan Guarantor in trust for the benefit of the Secured Parties and shall forthwith be paid by the recipient Loan Guarantor to the Administrative Agent (for the benefit of the Secured Parties) to be credited and applied to the Guaranteed Obligations, whether matured or unmatured, in accordance with Section 2.18(b) of the Credit Agreement

Section 2.07. Reinstatement; Stay of Acceleration. If at any time any payment of any portion of the Guaranteed Obligations is rescinded or must otherwise be restored or returned upon the insolvency, bankruptcy or reorganization of any Borrower or otherwise, each Loan Guarantor's obligations under this Loan Guaranty with respect to such payment shall be reinstated at such time as though the payment had not been made. If acceleration of the time for payment of any of the Guaranteed Obligations is stayed upon the insolvency, bankruptcy or reorganization of any Borrower, all such amounts otherwise subject to acceleration under the terms of any agreement relating to the Guaranteed Obligations shall nonetheless be payable by the other Loan Guarantors forthwith on demand by the Administrative Agent. For the avoidance of doubt this paragraph shall survive the Termination Date and/or release of this Loan Guaranty.

Section 2.08. Information. Each Loan Guarantor assumes all responsibility for being and keeping itself informed of each Borrower's financial condition, affairs and assets, and of all other circumstances bearing upon the risk of nonpayment of the Guaranteed Obligations and the nature, scope and extent of the risks that each Loan Guarantor assumes and incurs under this Loan Guaranty, and agrees that none of the Administrative Agent, any Lender or any other Secured Party shall have any obligation to investigate the financial condition or affairs of the Obligated Parties for the benefit of such Loan Guarantor or to advise any Loan Guarantor of information known to it regarding those circumstances or risks or any fact respecting, or any change in, the financial condition, assets or affairs of any Obligated Party that might become known to any Secured Party at any time, whether or not such Secured Party knows or believes or has reason to know or believe that any such fact or change is unknown to such Loan Guarantor, or might (or does) increase the risk of such Loan Guarantor as guarantor hereunder, or might (or would) affect the willingness of such Loan Guarantor to continue as a guarantor of the Guaranteed Obligations hereunder.

Section 2.09. Contribution; Subordination; Maximum Liability.

(a) In the event that any Loan Guarantor (a “Paying Guarantor”) makes any payment or payments under this Loan Guaranty or suffers any loss as a result of any realization upon any Collateral granted by it to secure its Guaranteed Obligations (each such payment or loss, an “Accommodation Payment”), each other Loan Guarantor that has provided a Loan Guaranty in respect of such Guaranteed Obligations (each a “Non-Paying Guarantor”) shall contribute to such Paying Guarantor an amount equal to such Non-Paying Guarantor’s “Guarantor Percentage” of such Accommodation Payment by such Paying Guarantor. For purposes of this Article 2, each Non-Paying Guarantor’s “Guarantor Percentage” with respect to any Accommodation Payment by a Paying Guarantor shall be determined as of the date on which such Accommodation Payment was made by reference to the ratio of (a) such Non-Paying Guarantor’s Maximum Liability (as defined below) as of the date hereof (or with respect to any Person that becomes a Guarantor after the date hereof, as of the date such person became a Guarantor) to (b) the aggregate Maximum Liability of all Loan Guarantors in respect of such Guaranteed Obligations hereunder (including such Paying Guarantor) as of the date hereof (or with respect to any Person that becomes a Guarantor after the date hereof, as of the date such person became a Guarantor). As of any date of determination, the “Maximum Liability” of each Loan Guarantor shall be equal to the maximum amount of liability, after giving effect to the right to contribution under this Section 2.09(a), which could be asserted against such Loan Guarantor hereunder and under the Credit Agreement without (i) rendering such Loan Guarantor “insolvent” within the meaning of Section 101(32) of the Bankruptcy Code, Section 2 of the Uniform Fraudulent Transfer Act (“UFTA”) or Section 2 of the Uniform Fraud Conveyance Act (“UFCA”), (ii) leaving such Loan Guarantor with unreasonably small capital or assets, within the meaning of Section 548 of the Bankruptcy Code, Section 4 of the UFTA or Section 5 of the UFCA, or (iii) leaving such Loan Guarantor unable to pay its debts as they become due within the meaning of Section 548 of the Bankruptcy Code, Section 4 of the UFTA or Section 5 of the UFCA. Nothing in this provision shall affect any Loan Guarantor’s several liability for the entire amount of the Guaranteed Obligations (up to such Loan Guarantor’s Maximum Liability). Each of the Loan Guarantors covenants and agrees that its right to receive any contribution under this Loan Guaranty from a Non-Paying Guarantor shall be subordinate and junior in right of payment to the Secured Obligations until the Termination Date. If, prior to the Termination Date, any such contribution payment is received by a Paying Guarantor at any time when an Event of Default exists, such contribution payment shall be collected, enforced and received by such Loan Guarantor as trustee for the Secured Parties and be paid over to the Administrative Agent on account of the Secured Obligations, but without affecting or impairing in any manner the liability of such Loan Guarantor under the other provisions of this Loan Guaranty. This provision is for the benefit of the Administrative Agent, the Lenders and the other Secured Parties.

(b) It is the desire and intent of the Loan Guarantors and the Secured Parties that this Loan Guaranty shall be enforced against the Loan Guarantors to the fullest extent permissible under the Requirements of Law and public policies applied in each jurisdiction in which enforcement is sought. The provisions of this Loan Guaranty are severable, and in any action or proceeding involving any state corporate law, or any state, territorial, federal or foreign bankruptcy, insolvency, reorganization or other Requirements of Law affecting the rights of creditors generally, if the obligations of any Loan Guarantor under this Loan Guaranty would otherwise be held or determined to be avoidable, invalid or unenforceable on account of the amount of such Loan Guarantor’s liability under this Loan Guaranty, then, notwithstanding any other provision of this Loan Guaranty to the contrary, the amount of such liability shall, without any further action by the Loan Guarantors or the Secured Parties, be automatically limited and reduced to such Loan Guarantor’s Maximum Liability. Each Loan Guarantor agrees that the Guaranteed Obligations may at any time and from time to time exceed the Maximum Liability of such Loan Guarantor without impairing this Loan Guaranty or affecting the rights and remedies of the Administrative Agent hereunder; provided that nothing in this sentence shall be construed to increase any Loan Guarantor’s obligations hereunder beyond its Maximum Liability.

Section 2.10. Representations and Warranties. As, when (including on the date hereof) and to the extent required in accordance with the terms of the Credit Agreement, each Loan Guarantor hereby makes each applicable representation and warranty made in the Loan Documents by the Borrowers with respect to such Loan Guarantor and each Loan Guarantor hereby further acknowledges and agrees that such Loan Guarantor has, independently and without reliance upon any Secured Party and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Loan Guaranty and each other Loan Document to which it is or is to be a party, and such Loan Guarantor has established adequate means of obtaining from each other Loan Guarantor on a continuing basis information pertaining to the business, condition (financial or otherwise), operations, performance, properties and prospects of each other Loan Guarantor.

Section 2.11. Covenants. Each Loan Guarantor covenants and agrees that, until the Termination Date, such Loan Guarantor will perform and observe, and cause each of its subsidiaries that constitutes a Restricted Subsidiary to perform and observe, all of the terms, covenants and agreements set forth in the Loan Documents that the Borrowers have agreed to cause such Loan Guarantor or such subsidiary to perform or observe.

ARTICLE 3 GENERAL PROVISIONS

Section 3.01. Liability Cumulative. The liability of each Loan Guarantor under this Loan Guaranty is in addition to and shall be cumulative with all liabilities of such Loan Guarantor to the Administrative Agent and the Lenders under the Credit Agreement and the other Loan Documents to which such Loan Guarantor is a party or in respect of any obligations or liabilities of the other Loan Guarantors, without any limitation as to amount, unless the instrument or agreement evidencing or creating such other liability specifically provides to the contrary.

Section 3.02. No Waiver; Amendments. No delay or omission of the Administrative Agent in exercising any right or remedy granted under this Loan Guaranty shall impair such right or remedy or be construed to be a waiver of any Default or Event of Default or an acquiescence therein, and any single or partial exercise of any such right or remedy shall not preclude any other or further exercise thereof or the exercise of any other right or remedy. No waiver, amendment or other variation of the terms, conditions or provisions of this Loan Guaranty whatsoever shall be valid unless in writing signed by the Loan Guarantors and the Administrative Agent in accordance with Section 9.02 of the Credit Agreement and then only to the extent specifically set forth in such writing.

Section 3.03. Severability of Provisions. To the extent permitted by applicable Requirements of Law, any provision of this Loan Guaranty that is held to be invalid, illegal or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity, illegality or unenforceability without affecting the validity, legality and enforceability of the remaining provisions of this Loan Guaranty; and the invalidity of a particular provision in a particular jurisdiction shall not invalidate such provision in any other jurisdiction.

Section 3.04. Additional Subsidiaries. Restricted Subsidiaries of the Borrowers may be required or may elect to enter into this Loan Guaranty as Subsidiary Parties pursuant to and in accordance with Section 5.12 of the Credit Agreement. Upon execution and delivery by any such Restricted Subsidiary of an instrument in substantially the form of Exhibit B hereto (each, a "Guaranty Supplement"), such Restricted Subsidiary shall become a Subsidiary Party hereunder with the same force and effect as if originally named as a Subsidiary Party herein. The execution and delivery of any such instrument shall not require the consent of any other Loan Guarantor hereunder or any other Person. The rights and obligations of each Loan Guarantor hereunder shall remain in full force and effect notwithstanding the addition of any new Loan Guarantor as a party to this Loan Guaranty.

Section 3.05. Headings. The titles of and section headings in this Loan Guaranty are for convenience of reference only, and shall not govern the interpretation of any of the terms and provisions of this Loan Guaranty.

Section 3.06. Entire Agreement. This Loan Guaranty and the other Loan Documents constitute the entire agreement among the parties relating to the subject matter hereof and supersede any and all previous agreements and understandings, oral or written, relating to the subject matter hereof.

Section 3.07. CHOICE OF LAW. THIS LOAN GUARANTY AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS LOAN GUARANTY, WHETHER IN TORT, CONTRACT (AT LAW OR IN EQUITY) OR OTHERWISE, SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

Section 3.08. CONSENT TO JURISDICTION; CONSENT TO SERVICE OF PROCESS.

(a) EACH PARTY HERETO HEREBY IRREVOCABLY AND UNCONDITIONALLY SUBMITS, FOR ITSELF AND ITS PROPERTY, TO THE EXCLUSIVE JURISDICTION OF ANY US FEDERAL OR NEW YORK STATE COURT SITTING IN THE BOROUGH OF MANHATTAN, IN THE CITY OF NEW YORK (OR ANY APPELLATE COURT THEREFROM) OVER ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS LOAN GUARANTY AND AGREES THAT ALL CLAIMS IN RESPECT OF ANY SUCH ACTION OR PROCEEDING SHALL (EXCEPT AS PERMITTED BELOW) BE HEARD AND DETERMINED IN SUCH NEW YORK STATE OR, TO THE EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, FEDERAL COURT. EACH PARTY HERETO AGREES THAT SERVICE OF ANY PROCESS, SUMMONS, NOTICE OR DOCUMENT BY REGISTERED MAIL ADDRESSED TO SUCH PERSON SHALL BE EFFECTIVE SERVICE OF PROCESS AGAINST SUCH PERSON FOR ANY SUIT, ACTION OR PROCEEDING BROUGHT IN ANY SUCH COURT. EACH PARTY HERETO AGREES THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON SUCH JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY APPLICABLE REQUIREMENTS OF LAW.

(b) EACH PARTY HERETO HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT IT MAY LEGALLY AND EFFECTIVELY DO SO, ANY OBJECTION WHICH IT MAY NOW OR HEREAFTER HAVE TO THE LAYING OF VENUE OF ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS LOAN GUARANTY AND BROUGHT IN ANY COURT REFERRED TO IN PARAGRAPH (a) OF THIS SECTION. EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, ANY CLAIM OR DEFENSE OF AN INCONVENIENT FORUM TO THE MAINTENANCE OF SUCH ACTION, SUIT OR PROCEEDING IN ANY SUCH COURT.

(c) TO THE EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF ANY AND ALL PROCESS UPON IT AND AGREES THAT ALL SUCH SERVICE OF PROCESS MAY BE MADE BY REGISTERED MAIL (OR ANY SUBSTANTIALLY SIMILAR FORM OF MAIL) DIRECTED TO IT AT ITS ADDRESS FOR NOTICES PROVIDED IN SECTION 9.01 OF THE CREDIT AGREEMENT. EACH PARTY HERETO HEREBY WAIVES ANY OBJECTION TO SUCH SERVICE OF PROCESS AND FURTHER IRREVOCABLY WAIVES AND AGREES NOT TO PLEAD OR CLAIM IN ANY ACTION OR PROCEEDING COMMENCED HEREUNDER THAT SERVICE OF PROCESS WAS INVALID AND INEFFECTIVE. NOTHING IN THIS LOAN GUARANTY WILL AFFECT THE RIGHT OF ANY PARTY TO THIS LOAN GUARANTY TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY LAW.

Section 3.09. WAIVER OF JURY TRIAL. EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY SUIT, ACTION, PROCEEDING OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY) DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS LOAN GUARANTY OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY. EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS LOAN GUARANTY BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION.

Section 3.10. Indemnity. Each Loan Guarantor hereby agrees to indemnify the Administrative Agent and the other Indemnitees, as set forth in Section 9.03 of the Credit Agreement.

Section 3.11. Counterparts. This Loan Guaranty may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page of this Loan Guaranty by facsimile or by email as a “.pdf” or “.tif” attachment shall be effective as delivery of a manually executed counterpart of this Loan Guaranty.

Section 3.12. Successors and Assigns. Whenever in this Loan Guaranty any party hereto is referred to, such reference shall be deemed to include the successors and permitted assigns of such party; and all covenants, promises and agreements by or on behalf of any Loan Guarantor or the Administrative Agent that are contained in this Loan Guaranty shall bind and inure to the benefit of their respective successors and permitted assigns. Except in a transaction permitted (or not restricted) under the Credit Agreement, no Loan Guarantor may assign any of its rights or obligations hereunder without the written consent of the Administrative Agent.

Section 3.13. Survival of Agreement. Without limitation of any provision of the Credit Agreement or Section 3.10 hereof, all covenants, agreements, indemnities, representations and warranties made by the Loan Guarantors in the Loan Documents and in the certificates or other instruments delivered in connection with or pursuant to this Loan Guaranty or any other Loan Document shall be considered to have been relied upon by the Lenders and shall survive the execution and delivery of the Loan Documents and the making of any Loans, regardless of any investigation made by any such Lender or on its behalf and notwithstanding that the Administrative Agent or any Lender may have had notice or knowledge of any Default or Event of Default or incorrect representation or warranty at the time any credit is extended under the Credit Agreement, and shall continue in full force and effect until the Termination Date, or with respect to any individual Loan Guarantor until such Loan Guarantor is otherwise released from its obligations under this Loan Guaranty in accordance with Section 3.14.

Section 3.14. Release of Loan Guarantors. Subject to Section 2.07, a Subsidiary Party shall automatically be released from its obligations hereunder and its Loan Guaranty shall be automatically released in the circumstances described in Article 8 and Section 9.18 of the Credit Agreement. In connection with any such release, the Administrative Agent shall promptly execute and deliver to any Loan Guarantor, at such Loan Guarantor's expense, all documents that such Loan Guarantor shall reasonably request to evidence such termination or release. Any execution and delivery of documents pursuant to the preceding sentence of this Section 3.14 shall be without recourse to or warranty by the Administrative Agent (other than as to the Administrative Agent's authority to execute and deliver such documents).

Section 3.15. Payments. All payments made by any Loan Guarantor hereunder will be made without setoff, counterclaim or other defense and on the same basis as payments are made by the Borrowers under Sections 2.17 and 2.18 of the Credit Agreement.

Section 3.16. Notice, etc. All notices and other communications provided for hereunder shall be in writing and shall be delivered by hand or overnight courier service, mailed by certified or registered mail or sent by facsimile or email, as follows:

- (a) if to any Loan Guarantor, addressed to it in care of the Borrowers at their respective addresses specified in Section 9.01 of the Credit Agreement;
- (b) if to the Administrative Agent or any Lender, at its address specified in Section 9.01 of the Credit Agreement;
- (c) if to any Secured Party in respect of any Secured Hedging Obligation, at its address specified in the Hedge Agreement to which it is a party; or
- (d) if to any Secured Party in respect of any Banking Services Obligation, at its address specified in the relevant documentation to which it is a party.

Section 3.17. Set Off. In addition to any rights now or hereafter granted under applicable Requirements of Law and not by way of limitation of any such rights, while an Event of Default exists, the Administrative Agent, each Lender and each Issuing Bank shall be entitled to rights of setoff to the extent provided in Section 9.09 of the Credit Agreement.

Section 3.18. Waiver of Consequential Damages, Etc. To the extent permitted by applicable Requirements of Law, none of the Loan Guarantors nor the Secured Parties shall assert, and each hereby waives, any claim against each other or any Related Party thereof, on any theory of liability, for special, indirect, consequential or punitive damages (as opposed to direct or actual damages) arising out of, in connection with, or as a result of, this Loan Guaranty or any agreement or instrument contemplated hereby, except, in the case of any claim by any Indemnatee against any of the Loan Guarantors, to the extent such damages would otherwise be subject to indemnification pursuant to the terms of Section 3.10.

Section 3.19. Allocation of Proceeds. All monies collected by the Administrative Agent hereunder pursuant to the enforcement of remedies by the Administrative Agent hereunder shall be applied, to the extent, and in the manner, provided in Section 2.18 of the Credit Agreement.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, each Loan Guarantor and the Administrative Agent have executed this Loan Guaranty as of the date first above written.

Holdings:

EQT AVATAR INTERMEDIATE, INC.,

By: _____
Name: _____
Title: _____

Borrowers:

EQT AVATAR HOLDINGS, INC.,

By: _____
Name: _____
Title: _____

CERTARA HOLDCO, INC.,

By: _____
Name: _____
Title: _____

CERTARA USA, INC.,

By: _____
Name: _____
Title: _____

Signature Page to Loan Guaranty

Subsidiary Parties:

CERTARA HOLDING, INC.,

By: _____
Name: _____
Title:

MBDD US, LLC,

By: _____
Name: _____
Title:

TRIPOS INVESTMENTS, L.L.C.,

By: _____
Name: _____
Title:

SYNCHROGENIX INFORMATION STRATEGIES, LLC,

By: _____
Name: _____
Title:

CERTARA, L.P.

By: _____
Name: _____
Title:

Signature Page to Loan Guaranty

JEFFERIES FINANCE LLC,
as Administrative Agent

By: _____
Name:
Title:

Signature Page to Loan Guaranty

EXHIBIT A
SUBSIDIARY PARTIES

No.	Entity	Jurisdiction
1.	Certara Holding, Inc.	Delaware
2.	MBDD US, LLC	Delaware
3.	Tripos Investments, L.L.C.	Delaware
4.	Synchrogenix Information Strategies, LLC	Delaware
5.	Certara, L.P.	Delaware

EXHIBIT B
JOINDER AGREEMENT

THIS JOINDER AGREEMENT (this "Agreement"), dated as of [●] [●], 20[●], is entered into by [●], a [●] (**[each, a] [the]** "New Subsidiary"), in favor of Jefferies Finance LLC, as administrative agent (in such capacity, the "Administrative Agent"), pursuant to that certain Loan Guaranty, dated as of August 15, 2017 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the "Loan Guaranty"), by and among EQT Avatar Intermediate, Inc., a Delaware corporation ("Holdings"), EQT Avatar Holdings, Inc., a Delaware corporation ("Buyer" or the "Initial Borrower"), Certara Holdco, Inc., a Delaware corporation (the "Parent Borrower"), Certara USA, Inc., a Delaware corporation (the "Co-Borrower" and, together with the Initial Borrower (prior to the consummation of the Closing Date Assumption (as defined in the Credit Agreement referred to below)) and the Parent Borrower, each a "Borrower" and collectively the "Borrowers"), the Subsidiary Parties (as defined below) from time to time party hereto (the foregoing, collectively, the "Loan Guarantors") and the Administrative Agent. All capitalized terms used herein and not otherwise defined shall have the meanings set forth in the Loan Guaranty.

[Each] [The] New Subsidiary, for the benefit of the Secured Parties, hereby agrees as follows:

1. **[Each] [The]** New Subsidiary hereby acknowledges, agrees and confirms that, by its execution of this Agreement, **[each] [the]** New Subsidiary will be deemed to be a Loan Guarantor under the Loan Guaranty and a Loan Guarantor for all purposes of the Credit Agreement and shall have all of the rights, benefits, duties and obligations of a Loan Guarantor thereunder as if it had executed the Loan Guaranty. **[Each] [The]** New Subsidiary hereby ratifies, as of the date hereof, and agrees to be bound by, all of the terms, provisions and conditions contained in the Loan Guaranty. Without limiting the generality of the foregoing terms of this paragraph 1, **[each] [the]** New Subsidiary hereby absolutely and unconditionally and irrevocably guarantees, jointly and severally with the other Loan Guarantors, to the Administrative Agent and the Secured Parties, the prompt payment of the Guaranteed Obligations in full when and as the same become due (whether at stated maturity, upon acceleration or otherwise), and at all times thereafter, to the extent of and in accordance with the Loan Guaranty.

2. **[Each] [The]** New Subsidiary hereby waives acceptance by the Administrative Agent and the Secured Parties of the guaranty by the New Subsidiary upon the execution of this Agreement by **[each] [the]** New Subsidiary.

3. **[Each] [The]** New Subsidiary hereby (x) makes, as of the date hereof, the representation and warranty set forth in Section 2.10 of the Loan Guaranty, **except as set forth on Schedule A hereto,** and (y) agrees to perform and observe, and to cause each of its Restricted Subsidiaries to perform and observe, the covenants set forth in Section 2.11 of the Loan Guaranty.

4. From and after the execution and delivery hereof by the parties hereto, this Agreement shall constitute a "Loan Document" for all purposes of the Credit Agreement and the other Loan Documents.

5. This Agreement may be executed in any number of counterparts, each of which when so executed and delivered shall be an original, but all of which shall constitute one and the same instrument. Delivery of an executed counterpart of a signature page of this Agreement by facsimile or by email as a ".pdf" or ".tif" attachment shall be effective as delivery of a manually executed counterpart of this Agreement.

6. THIS AGREEMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK.

7. The provisions of this Agreement shall be deemed automatically incorporated by reference into the Loan Guaranty.

[Signature Page Follows]

IN WITNESS WHEREOF, [each] [the] New Subsidiary has caused this Agreement to be duly executed by its authorized officer, as of the day and year first above written.

[NEW SUBSIDIARY]

By:

Name:

Title:

[SCHEDULE A
CERTAIN EXCEPTIONS]

[FORM OF] INTELLECTUAL PROPERTY SECURITY AGREEMENT⁴²

[PATENT/TRADEMARK/COPYRIGHT/DESIGN] SECURITY AGREEMENT dated as of [•] (this "Agreement"), by and among EQT Avatar Holdings, Inc., a Delaware corporation ("Holdings"), EQT Avatar Holdings, Inc., a Delaware corporation (the "Initial Borrower"), and each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Initial Borrower after giving effect to the Acquisition (as defined in the Credit Agreement referred to below) (the "Parent Borrower"), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Initial Borrower after giving effect to the Acquisition (the "Co-Borrower" and, together with the Initial Borrower and the Parent Borrower, each a "Borrower" and collectively the "Borrowers"), the Subsidiary Parties (as defined in the Security Agreement referred to below) from time to time party hereto (the foregoing, each a "Grantor") and Jefferies Finance LLC in its capacity as administrative agent and collateral agent (in such capacities, the "Administrative Agent").

WHEREAS, reference is made to (a) the Credit Agreement dated as of [August 15], 2017, by and among Holdings, immediately prior to the Closing Date Assumption (as defined therein), the Initial Borrower, and thereafter, each of (i) the Parent Borrower and (ii) the Co-Borrower, the Lenders from time to time party thereto, the Administrative Agent and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks, and (b) the Pledge and Security Agreement dated as of [August 15], 2017 (the "Security Agreement"), by and among the Borrowers, Holdings, the Subsidiary Parties from time to time party thereto and the Administrative Agent;

WHEREAS, the Lenders have agreed to extend credit to the Borrowers subject to the terms and conditions set forth in the Credit Agreement; and

WHEREAS, each Grantor is willing to execute and deliver this Agreement in as consideration for such extensions of credit.

NOW, THEREFORE, for good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

SECTION 1. Terms. Capitalized terms used in this Agreement and not otherwise defined herein have the meanings specified in the Security Agreement or the Credit Agreement, as applicable.

SECTION 2. Grant of Security Interest. As security for the payment or performance, as the case may be, in full of the Secured Obligations, each Grantor hereby grants to the Administrative Agent, its successors and assigns, for the benefit of the Secured Parties, a security interest (the "Security Interest") in all of such Grantor's right, title and interest in, to and under any [Patents/Trademarks/Copyrights and exclusive Copyright Licenses/Designs] now owned or at any time hereafter acquired by such Grantor, including those listed on Schedule I (the "Collateral").

SECTION 3. Security Agreement. The Security Interest granted to the Administrative Agent herein is granted in furtherance, and not in limitation, of the security interests granted to the Administrative Agent pursuant to the Security Agreement. Each Grantor hereby acknowledges and affirms that the rights and remedies of the Administrative Agent with respect to the Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the Security Agreement, the terms of the Security Agreement shall govern.

⁴² Note: A separate Intellectual Property Security Agreement must be drafted for each of any Patents, Trademarks, Copyrights/exclusive Copyright Licenses or Designs.

SECTION 4. Counterparts. This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original but all of which when taken together shall constitute a single contract. Delivery of an executed signature page to this Agreement by facsimile or other electronic transmission shall be effective as delivery of a manually signed counterpart of this Agreement.

SECTION 5. CHOICE OF LAW. THIS SECURITY AGREEMENT AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS SECURITY AGREEMENT, WHETHER IN TORT, CONTRACT (AT LAW OR IN EQUITY) OR OTHERWISE, SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

[•]

By:

Name:
Title:

SCHEDULE I

TRADEMARKS

REGISTERED OWNER	REGISTRATION NUMBER	TRADEMARK

TRADEMARK APPLICATIONS

APPLICANT	APPLICATION NO.	TRADEMARK

SCHEDULE I

PATENTS

REGISTERED OWNER	SERIAL NUMBER	TITLE

PATENT APPLICATIONS

APPLICANT	APPLICATION NO.	TITLE

SCHEDULE I

COPYRIGHTS

REGISTERED OWNER	REGISTRATION NUMBER	TITLE

COPYRIGHT APPLICATIONS

APPLICANT	APPLICATION NUMBER	TITLE

EXCLUSIVE COPYRIGHT LICENSES:

SCHEDULE I

DESIGNS

REGISTERED OWNER	SERIAL NUMBER	DESCRIPTION

DESIGN APPLICATIONS

APPLICANT	APPLICATION NO.	DESCRIPTION

**[FORM OF]
LETTER OF CREDIT REQUEST**

[●],⁴³
as Issuing Bank

Attention: [●]
Fax: [●]

with a copy to: Jefferies Finance LLC
as Administrative Agent for the Lenders referred to below

Attention: Jefferies Finance LLC
520 Madison Avenue
New York, NY 10022
Attention: Account Manager – Certara
Facsimile: []
Email: []

[●] [●] 20[●]⁴⁴

Ladies and Gentlemen:

Pursuant to Section 2.05(b) of the Credit Agreement, we hereby request that [●]⁴⁵, as an Issuing Bank, in its individual capacity, **[issue, amend, renew, extend]**[a/an] **[existing]** **[Standby]** Letter of Credit on [●]⁴⁶ (the “Date of Issuance”), which Letter of Credit shall be in the aggregate Stated Amount of [●]⁴⁷ and shall be for the account of [●]⁴⁸. The beneficiary of the requested Letter of Credit is [●]⁴⁹, and such Letter of Credit will have a stated expiration date of [●]⁵⁰. For the purposes of this Letter of Credit Request, unless otherwise defined herein, all capitalized terms used herein and defined in that certain Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the “Initial Borrower”), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the “Parent Borrower”), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the “Co-Borrower” and, together with the Initial Borrower and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the “Administrative Agent”), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks.

⁴³ Insert name and address of the applicable Issuing Bank.

⁴⁴ Must be delivered to the applicable Issuing Bank and the Administrative Agent, at least three Business Days in advance of the requested date of issuance, amendment, extension or renewal (or such shorter period as is acceptable to the applicable Issuing Bank or, in the case of any issuance to be made on the Closing Date, one Business Day prior to the Closing Date).

⁴⁵ Insert name of the applicable Issuing Bank.

⁴⁶ Insert date of issuance, which must be a Business Day (at least three Business Days after the date hereof (or at least one Business Day after the Date hereof in the case of the Closing Date) (or, in each case, such later date to which the Issuing Bank may agree).

⁴⁷ Insert aggregate initial amount of Letter of Credit and applicable currency.

⁴⁸ Insert name of account party.

⁴⁹ Insert name and address of beneficiary.

⁵⁰ Date may not be later than the date referred to in Section 2.05(c) of the Credit Agreement.

[We hereby certify that:

- (A) The representations and warranties of the Loan Parties set forth in the Credit Agreement and the other Loan Documents are true and correct in all material respects on and as of the Date of Issuance with the same effect as though such representations and warranties had been made on and as of the Date of Issuance; provided that to the extent that a representation and warranty specifically refers to an earlier date or period, it is true and correct in all material respects as of such earlier date or period.
- (B) As of the Date of Issuance and immediately after giving effect to the requested Letter of Credit, no Default or Event of Default has occurred and is continuing.]⁵¹

[Signature Page Follows]

⁵¹ Include bracketed language only for issuances, amendments, modifications, extensions of renewals, of Letters of Credit after the Closing Date.

CERTARA HOLDCO, INC.

By: _____
Name:
Title:

[FORM OF]
 U.S. TAX COMPLIANCE CERTIFICATE (FOR FOREIGN LENDERS THAT ARE NOT PARTNERSHIPS FOR
 U.S. FEDERAL INCOME TAX PURPOSES)

Reference is hereby made to that certain Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the “Initial Borrower”), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the “Parent Borrower”), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the “Co-Borrower” and, together with the Initial Borrower and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the “Administrative Agent”), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks. Terms defined in the Credit Agreement are used herein with the same meanings unless otherwise defined herein.

Pursuant to the provisions of Section 2.17(e)(ii)(B)(3) of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record and beneficial owner of the Loan(s) (as well as any Promissory Notes evidencing such Loan(s)) in respect of which it is providing this certificate, (ii) it is not a “bank” within the meaning of Section 881(c)(3)(A) of the Code, (iii) it is not a “10 percent shareholder” of any of the Borrowers within the meaning of Section 871(h)(3)(B) of the Code, (iv) it is not a “controlled foreign corporation” related to the Borrowers as described in Section 881(c)(3)(C) of the Code and (v) the interest payments on the Loan(s) are not effectively connected with the undersigned’s conduct of a U.S. trade or business.

The undersigned has furnished the Administrative Agent and the Borrowers with a duly executed certificate of its non-U.S. Person status on IRS Form W-8BEN-E. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, or if a lapse in time or change in circumstances renders the information on this certificate obsolete, expired or inaccurate in any material respect, the undersigned shall promptly so inform each of the Borrowers and the Administrative Agent in writing and deliver promptly to the Borrowers and the Administrative Agent an updated certificate or other appropriate documentation (including any new documentation reasonably requested by the Borrowers or the Administrative Agent) or promptly notify the Borrowers and the Administrative Agent in writing of its inability to do so, and (2) the undersigned shall have at all times furnished each of the Borrowers and the Administrative Agent with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

[NAME OF LENDER]

By: _____
 Name:
 Title:

Date: [●] [●], 20[●]

[FORM OF]
U.S. TAX COMPLIANCE CERTIFICATE (FOR FOREIGN PARTICIPANTS THAT ARE NOT
PARTNERSHIPS FOR U.S. FEDERAL INCOME TAX PURPOSES)

Reference is hereby made to that certain Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the “Initial Borrower”), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the “Parent Borrower”), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the “Co-Borrower” and, together with the Initial Borrower and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the “Administrative Agent”), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks. Terms defined in the Credit Agreement are used herein with the same meanings unless otherwise defined herein.

Pursuant to the provisions of Section 2.17(e)(ii)(B)(4) of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record and beneficial owner of the participation in respect of which it is providing this certificate, (ii) it is not a “bank” within the meaning of Section 881(c)(3)(A) of the Code, (iii) it is not a “10 percent shareholder” of the Borrowers within the meaning of Section 871(h)(3)(B) of the Code, (iv) it is not a “controlled foreign corporation” related to any of the Borrowers as described in Section 881(c)(3)(C) of the Code, and (v) the interest payments with respect to such participation are not effectively connected with the undersigned’s conduct of a U.S. trade or business.

The undersigned has furnished its participating Lender with a duly executed certificate of its non-U.S. Person status on IRS Form W-8BEN-E. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, or if a lapse in time or change in circumstances renders the information on this certificate obsolete, expired or inaccurate in any material respect, the undersigned shall promptly so inform such Lender in writing and deliver promptly to such Lender an updated certificate or other appropriate documentation (including any new documentation reasonably requested by such Lender) or promptly notify such Lender in writing of its inability to do so, and (2) the undersigned shall have at all times furnished such Lender with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

[NAME OF PARTICIPANT]

By: _____
Name:
Title:

Date: [●] [●], 20[●]

[FORM OF]
 U.S. TAX COMPLIANCE CERTIFICATE (FOR FOREIGN PARTICIPANTS THAT ARE PARTNERSHIPS FOR
 U.S. FEDERAL INCOME TAX PURPOSES)

Reference is hereby made to that certain Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the “Initial Borrower”), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the “Parent Borrower”), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the “Co-Borrower” and, together with the Initial Borrower and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the “Administrative Agent”), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks. Terms defined in the Credit Agreement are used herein with the same meanings unless otherwise defined herein.

Pursuant to the provisions of Section 2.17(e)(ii)(B)(4) of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record owner of the participation in respect of which it is providing this certificate, (ii) its direct or indirect partners/members are the sole beneficial owners of such participation, (iii) with respect to such participation, neither the undersigned nor any of its direct or indirect partners/members that is claiming the portfolio interest exemption is a “bank” extending credit pursuant to a loan agreement entered into in the ordinary course of its trade or business within the meaning of Section 881(c)(3)(A) of the Code, (iv) none of its direct or indirect partners/members that is claiming the portfolio interest exemption is a “10 percent shareholder” of any of the Borrowers within the meaning of Section 871(h)(3)(B) of the Code, (v) none of its direct or indirect partners/members that is claiming the portfolio interest exemption is a “controlled foreign corporation” related to any of the Borrowers as described in Section 881(c)(3)(C) of the Code, and (vi) the interest payments on the Loan(s) are not effectively connected with the conduct of a U.S. trade or business by the undersigned or any of its direct or indirect partners/members that is claiming the portfolio interest exemption.

The undersigned has furnished its participating Lender with a duly executed IRS Form W-8IMY accompanied by one of the following forms from each of its partners/members that is claiming the portfolio interest exemption: (i) an IRS Form W-8BEN-E or (ii) an IRS Form W-8IMY accompanied by an IRS Form W-8BEN-E from each of such partner’s/member’s beneficial owners that is claiming the portfolio interest exemption. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, or if a lapse in time or change in circumstances renders the information on this certificate obsolete, expired or inaccurate in any material respect, the undersigned shall promptly so inform such Lender in writing and deliver promptly to such Lender an updated certificate or other appropriate documentation (including any new documentation reasonably requested by such Lender) or promptly notify such Lender in writing of its inability to do so, and (2) the undersigned shall have at all times furnished such Lender with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

[NAME OF PARTICIPANT]

By: _____
 Name:
 Title:

Date: [●] [●], 20[●]

[FORM OF]
U.S. TAX COMPLIANCE CERTIFICATE (FOR FOREIGN LENDERS THAT ARE PARTNERSHIPS FOR U.S.
FEDERAL INCOME TAX PURPOSES)

Reference is hereby made to that certain Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the “Initial Borrower”), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the “Parent Borrower”), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the “Co-Borrower” and, together with the Initial Borrower and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the “Administrative Agent”), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks. Terms defined in the Credit Agreement are used herein with the same meanings unless otherwise defined herein.

Pursuant to the provisions of Section 2.17(e)(ii)(B)(4) of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record owner of the Loan(s) (as well as any Promissory Note(s) evidencing such Loan(s)) in respect of which it is providing this certificate, (ii) its direct or indirect partners/members are the sole beneficial owners of such Loan(s) (as well as any Promissory Note(s) evidencing such Loan(s)), (iii) with respect to the extension of credit pursuant to this Credit Agreement or any other Loan Document, neither the undersigned nor any of its direct or indirect partners/members that is claiming the portfolio interest exemption is a “bank” extending credit pursuant to a loan agreement entered into in the ordinary course of its trade or business within the meaning of Section 881(c)(3)(A) of the Code, (iv) none of its direct or indirect partners/members that is claiming the portfolio interest exemption is a “10 percent shareholder” of any of the Borrowers within the meaning of Section 871(h)(3)(B) of the Code, (v) none of its direct or indirect partners/members that is claiming the portfolio interest exemption is a “controlled foreign corporation” related to any of the Borrowers as described in Section 881(c)(3)(C) of the Code, and (vi) the interest payments on the Loan(s) are not effectively connected with the conduct of a U.S. trade or business by the undersigned or any of its direct or indirect partners/members that is claiming the portfolio interest exemption.

The undersigned has furnished the Administrative Agent and the Borrowers with a duly executed IRS Form W-8IMY accompanied by one of the following forms from each of its partners/members that is claiming the portfolio interest exemption: (i) an IRS Form W-8BEN-E or (ii) an IRS Form W-8IMY accompanied by an IRS Form W-8BEN-E from each of such partner’s/member’s beneficial owners that is claiming the portfolio interest exemption. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, or if a lapse in time or change in circumstances renders the information on this certificate obsolete, expired or inaccurate in any material respect, the undersigned shall promptly so inform the Borrowers and the Administrative Agent in writing and deliver promptly to the Borrowers and the Administrative Agent an updated certificate or other appropriate documentation (including any new documentation reasonably requested by the Borrowers or the Administrative Agent) or promptly notify the Borrowers and the Administrative Agent in writing of its inability to do so, and (2) the undersigned shall have at all times furnished the Borrowers and the Administrative Agent with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

[Signature Page Follows]

[NAME OF LENDER]

By: _____
Name:
Title:

Date: [•] [•], 20[•]

[FORM OF] SOLVENCY CERTIFICATE

[●][●], 20[●]

To the Administrative Agent and each of the Lenders party to the Credit Agreement referred to below:

I, the undersigned, the Chief Financial Officer of the Parent Borrower, as referred to below, in that capacity only and not in my individual capacity (and without personal liability), do hereby certify as of the date hereof, and based upon facts and circumstances as they exist as of the date hereof (and disclaiming any responsibility for changes in such fact and circumstances after the date hereof), that:

1. This certificate is furnished to the Administrative Agent and the Lenders pursuant to Section 4.01(i) of the Credit Agreement, dated as of August [15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation ("Holdings"), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the "Initial Borrower"), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly owned subsidiary of the Initial Borrower after giving effect to the Acquisition (as defined therein) (the "Parent Borrower"), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Initial Borrower after giving effect to the Acquisition (the "Co-Borrower" and, together with the Initial Borrower and the Parent Borrower, each a "Borrower" and collectively the "Borrowers"), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the "Administrative Agent") and Jefferies Finance LLC and Golub Capital LLC, as Issuing Banks (the "Credit Agreement"). Unless otherwise defined herein, capitalized terms used in this certificate shall have the meanings set forth in the Credit Agreement.

2. For purposes of this certificate, the terms below shall have the following definitions:

(a) "Fair Value"

The amount at which the assets (both tangible and intangible), in their entirety, of the Parent Borrower and its Subsidiaries taken as a whole would change hands between a willing buyer and a willing seller, within a commercially reasonable period of time, each having reasonable knowledge of the relevant facts, with neither being under any compulsion to act.

(b) "Present Fair Salable Value"

The amount that could be obtained by an independent willing seller from an independent willing buyer if the assets (both tangible and intangible) of the Parent Borrower and its Subsidiaries taken as a whole are sold on a going concern basis with reasonable promptness in an arm's-length transaction under present conditions for the sale of comparable business enterprises insofar as such conditions can be reasonably evaluated.

(c) “Stated Liabilities”

The recorded liabilities (including contingent liabilities that would be recorded in accordance with GAAP) of the Parent Borrower and its Subsidiaries taken as a whole, as of the date hereof after giving effect to the consummation of the Transactions (including the execution and delivery of the Credit Agreement, the making of the loans under such credit agreement and the use of proceeds of such loans on the date hereof), determined in accordance with GAAP consistently applied.

(d) “Identified Contingent Liabilities”

The maximum estimated amount of liabilities reasonably likely to result from pending litigation, asserted claims and assessments, guaranties, uninsured risks and other contingent liabilities of the Parent Borrower and its Subsidiaries taken as a whole after giving effect to the Transactions (including the execution and delivery of the Credit Agreement, the making of the loans under such credit agreement and the use of proceeds of such loans on the date hereof) (including all fees and expenses related thereto but exclusive of such contingent liabilities to the extent reflected in Stated Liabilities), as identified and explained in terms of their nature and estimated magnitude by responsible officers of the Parent Borrower.

(e) “Can pay their Stated Liabilities and Identified Contingent Liabilities as they mature”

The Parent Borrower and its Subsidiaries taken as a whole after giving effect to the Transactions (including the execution and delivery of the Credit Agreement, the making of the loans under such credit agreement and the use of proceeds of such loans on the date hereof) have sufficient assets and cash flow to pay their respective Stated Liabilities and Identified Contingent Liabilities as those liabilities mature or (in the case of contingent liabilities) otherwise become payable.

(f) “Do not have Unreasonably Small Capital”

The Parent Borrower and its Subsidiaries taken as a whole after giving effect to the Transactions (including the execution and delivery of the Credit Agreement, the making of the loans under such credit agreement and the use of proceeds of such loans on the date hereof) have sufficient capital to ensure that it is a going concern.

3. For purposes of this certificate, I, or officers of the Parent Borrower under my direction and supervision, have performed the following procedures as of and for the periods set forth below.

- (a) I have reviewed the financial statements (including the pro forma financial statements) referred to in Section 4.01(c) of the Credit Agreement.
- (b) I have knowledge of and have reviewed to my satisfaction the Credit Agreement.
- (c) As chief financial officer of the Parent Borrower, I am familiar with the financial condition of the Parent Borrower and its Subsidiaries.

4. Based on and subject to the foregoing, I hereby certify on behalf of the Parent Borrower that after giving effect to the consummation of the Transactions (including the execution and delivery of the Credit Agreement, the making of the loans under such credit agreement and the use of proceeds of such loans on the date hereof), it is my opinion that (i) each of the Fair Value and the Present Fair Salable Value of the assets of the Parent Borrower and its Subsidiaries taken as a whole exceed their Stated Liabilities and Identified Contingent Liabilities; (ii) the Parent Borrower and its Subsidiaries taken as a whole do not have Unreasonably Small Capital; and (iii) the Parent Borrower and its Subsidiaries taken as a whole can pay their Stated Liabilities and Identified Contingent Liabilities as they mature.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parent Borrower has caused this certificate to be executed on its behalf by its Chief Financial Officer this _____ day of _____, 2017.

[_____]

By: _____

Name:

Title: Chief Financial Officer

**[FORM OF]
ACCEPTABLE INTERCREDITOR AGREEMENT**

[FORM OF] INTERCREDITOR AGREEMENT

dated as of [], 20[]

among

JEFFERIES FINANCE LLC,
as First Lien Credit Agreement Collateral Agent,

[],
as Second Lien Credit Agreement Collateral Agent

and

EACH OTHER REPRESENTATIVE PARTY HERETO,

and acknowledged and agreed to by

CERTARA HOLDCO, INC. and CERTARA USA, INC.,
as the Borrowers,

EQT AVATAR INTERMEDIATE, INC.,
as Holdings,

and

EACH OF THE OTHER OBLIGORS PARTY HERETO

TABLE OF CONTENTS

	Page
SECTION 1. DEFINITIONS	3
1.1 Defined Terms	3
1.2 Terms Generally	20
SECTION 2. LIEN PRIORITIES	20
2.1 Relative Priorities	20
2.2 Prohibition on Contesting Liens	21
2.3 No New Liens	21
2.4 Similar Liens and Agreements	22
2.5 Nature of Obligations	22
2.6 Certain Cash Collateral	23
SECTION 3. ENFORCEMENT	24
3.1 Exercise of Remedies	24
SECTION 4. PAYMENTS	28
4.1 Application of Proceeds	28
4.2 Payments Over	28
SECTION 5. OTHER AGREEMENTS	29
5.1 Releases	29
5.2 Insurance and Condemnation Awards	31
5.3 Amendments to First Lien Financing Documents and Second Lien Financing Documents	32
5.4 Confirmation of Subordination in Second Lien Collateral Documents	34
5.5 Gratuitous Bailee/Agent for Perfection	34
5.6 When Discharge of First Lien Obligations Deemed to Not Have Occurred	36
5.7 Purchase Right	37
SECTION 6. INSOLVENCY OR LIQUIDATION PROCEEDINGS	38
6.1 Finance and Sale Issues	38
6.2 Relief from the Automatic Stay	39
6.3 Adequate Protection	40
6.4 No Waiver	42
6.5 Reinstatement	42
6.6 Reorganization Securities; Voting	42
6.7 Post-Petition Interest	43
6.8 Waivers	43
6.9 Separate Grants of Security and Separate Classification	44
6.10 Effectiveness in Insolvency Proceedings	44

SECTION 7.	RELIANCE; WAIVERS; ETC.	45
7.1	Reliance	45
7.2	No Warranties or Liability	45
7.3	No Waiver of Lien Priorities	46
7.4	Waiver of Liability	47
7.5	Obligations Unconditional	48
SECTION 8.	MISCELLANEOUS	49
8.1	Conflicts	49
8.2	Effectiveness; Continuing Nature of this Agreement; Severability	49
8.3	Amendments; Waivers	50
8.4	Information Concerning Financial Condition of the Obligors and its Subsidiaries	51
8.5	Subrogation	51
8.6	Application of Payments	51
8.7	SUBMISSION TO JURISDICTION; WAIVERS	52
8.8	Notices	53
8.9	Further Assurances	53
8.10	CHOICE OF LAW	53
8.11	Binding on Successors and Assigns	54
8.12	Headings	54
8.13	Counterparts	54
8.14	Authorization; Binding Effect on Claimholders	54
8.15	Exclusive Means of Exercising Rights under this Agreement	54
8.16	No Third Party Beneficiaries; Provisions Solely to Define Relative Rights	56
8.17	No Indirect Actions	56
8.18	Obligors; Additional Obligors	56
8.19	Right of First Lien Collateral Agent to Continue	57
8.20	Claimholders	57
8.21	Additional Obligations	57
8.22	Additional Intercreditor Agreements	58

INTERCREDITOR AGREEMENT

This **INTERCREDITOR AGREEMENT** (as amended, restated, amended and restated, supplemented and/or otherwise modified from time to time, this “**Agreement**”) is dated as of [], 20[], and entered into by and among JEFFERIES FINANCE LLC (“**Jefferies**”), in its capacity as collateral agent under the First Lien Credit Agreement and the First Lien Collateral Documents relating thereto (in each case, as defined below) (in such capacity and together with its successors and assigns in such capacity, the “**First Lien Credit Agreement Collateral Agent**”), [] (“[]”) in its capacity as collateral agent under the Second Lien Credit Agreement and the Second Lien Collateral Documents relating thereto (in each case, as defined below) (in such capacity and together with its successors and assigns in such capacity, the “**Second Lien Credit Agreement Collateral Agent**”), each other FIRST LIEN COLLATERAL AGENT that is from time to time party hereto, each other SECOND LIEN COLLATERAL AGENT that is from time to time party hereto, each other REPRESENTATIVE (as defined below) that is from time to time party hereto, and acknowledged and agreed to by CERTARA HOLDCO, INC., a Delaware corporation (the “**Parent Borrower**”), CERTARA USA, INC., a Delaware corporation (the “**Co-Borrower**” and together with the Parent Borrower, the “**Borrowers**”), EQT AVATAR INTERMEDIATE, INC., a Delaware corporation (“**Holdings**”), and the other OBLIGORS (as defined below). Capitalized terms used in this Agreement have the meanings assigned to them in Section 1 below.

RECITALS

Holdings, the Borrowers, the financial institutions party thereto from time to time, Jefferies, as administrative agent (in such capacity and together with its successors and assigns in such capacity, the “**First Lien Administrative Agent**”), and the First Lien Credit Agreement Collateral Agent have entered into that certain Credit Agreement, dated as of August [15], 2017 (as Refinanced from time to time in accordance with the terms of this Agreement, the “**First Lien Credit Agreement**”);

Holdings, the Borrowers, the financial institutions party thereto from time to time, [], as administrative agent (in such capacity, the “**Second Lien Administrative Agent**”), and the Second Lien Credit Agreement Collateral Agent have entered into that certain Second Lien Credit Agreement, dated as of [], 20[] (as Refinanced from time to time in accordance with the terms of this Agreement, the “**Second Lien Credit Agreement**” and, together with the First Lien Credit Agreement, the “**Credit Agreements**”);

Pursuant to (i) the First Lien Credit Agreement, (A) the Borrowers will incur loans and First Lien Letters of Credit may be issued for the account of the Borrowers or any of their subsidiaries (as defined therein) from time to time and (B) the relevant First Lien Obligors have agreed to guarantee the First Lien Obligations, and (ii) the Second Lien Credit Agreement, (A) the Borrowers will incur loans and (B) the relevant Second Lien Obligors have agreed to guarantee the Second Lien Obligations;

The obligations of each First Lien Obligor under the First Lien Documents will be secured on a first priority basis by Liens on certain assets of each First Lien Obligor pursuant to the terms of the First Lien Collateral Documents;

The obligations of each Second Lien Obligor under the Second Lien Financing Documents will be secured on a second priority basis by Liens on certain assets of each Second Lien Obligor pursuant to the terms of the Second Lien Collateral Documents;

The First Lien Financing Documents and the Second Lien Financing Documents require, among other things, that the parties thereto shall set forth in this Agreement their respective rights and remedies with respect to the Collateral;

The Obligors may, from time to time, to the extent permitted by this Agreement, the First Lien Financing Documents and the Second Lien Financing Documents, incur additional secured debt which the Obligors and the debtholders thereunder may elect, subject to the terms and conditions hereof, and of the First Lien Financing Documents and of the Second Lien Financing Documents, to be secured by the Collateral on a first priority basis or a second priority basis;

The Obligors may, from time to time, to the extent permitted by this Agreement, the First Lien Financing Documents and the Second Lien Financing Documents, incur additional senior secured, junior secured, senior unsecured and/or subordinated debt which the Obligors and the debtholders thereunder may elect to have the Representatives of such debtholders become party to this Agreement and agree to the intercreditor and other provisions of this Agreement;

In order to induce each First Lien Collateral Agent and the other First Lien Claimholders to consent to the Obligors incurring the Second Lien Obligations and to induce the First Lien Claimholders to extend credit and other financial accommodations and lend monies to or for the benefit of the First Lien Obligors, each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, and each Second Lien Claimholder by its acceptance of the benefits of the Second Lien Collateral Documents, has agreed to the intercreditor and other provisions set forth in this Agreement; and

In order to induce each Second Lien Collateral Agent and the other Second Lien Claimholders to consent to the Obligors incurring the First Lien Obligations and to induce the Second Lien Claimholders to extend credit and other financial accommodations and lend monies to or for the benefit of the Second Lien Obligors, each First Lien Collateral Agent, on behalf of itself and its Related First Lien Claimholders, and each First Lien Claimholder by its acceptance of the benefits of the First Lien Collateral Documents, has agreed to the intercreditor and other provisions set forth in this Agreement.

AGREEMENT

In consideration of the foregoing, the mutual covenants and obligations herein set forth and for other good and valuable consideration, the sufficiency and receipt of which are hereby acknowledged, the parties hereto, intending to be legally bound, hereby agree as follows:

SECTION 1. Definitions.

1.1 Defined Terms. As used in this Agreement, the following terms shall have the following meanings:

“**Additional First Lien Obligations**” means obligations with respect to Indebtedness of the Borrowers or any other Obligor (other than, for the avoidance of doubt, First Lien Obligations under the First Lien Credit Agreement) issued or guaranteed following the date of this Agreement and documented in an agreement other than any agreement governing any then existing First Lien Obligations; provided that (a) such Indebtedness is permitted by the terms of each of the First Lien Credit Agreement, the Second Lien Credit Agreement and each then existing Additional First Lien Obligations Agreement and Additional Second Lien Obligations Agreement to be secured by Liens on all or a portion of the Collateral ranking *pari passu* with the Liens securing the First Lien Obligations, (b) the Obligors have granted Liens on all or a portion of the Collateral to secure the obligations in respect of such Indebtedness, (c) the applicable Additional First Lien Obligations Agent, for itself and on behalf of its Related Claimholders, has entered into a Joinder Agreement pursuant to Section 8.21(b), acknowledging that such Indebtedness, obligations and Liens shall be subject to, and such Additional First Lien Obligations Agent and such Related Claimholders shall be bound by, and shall have the rights and obligations provided under, the terms of this Agreement applicable to the First Lien Collateral Agent and the other First Lien Claimholders, respectively, and (d) an amendment to or other modification of this Agreement shall have been entered into pursuant to Section 8.3 to the extent contemplated pursuant to Section 8.21(c).

“**Additional First Lien Obligations Agent**” means any Person appointed to act as trustee, agent or similar representative for the holders of Additional First Lien Obligations pursuant to any Additional First Lien Obligations Agreement (including, in the case of any bilateral arrangement, the actual holder of the relevant Additional First Lien Obligations unless such holder has otherwise appointed a trustee, agent or similar representative acting on its behalf).

“**Additional First Lien Obligations Agreements**” means (i) the indenture, credit agreement, guarantee or other agreement evidencing or governing any Additional First Lien Obligations that are designated as Additional First Lien Obligations pursuant to Section 8.21 and (ii) any other “Loan Documents” or “Financing Documents” (or similar term as may be defined in the foregoing or referred to in the foregoing or other agreements, documents and instruments executed in connection therewith), in each case, as Refinanced from time to time in accordance with the terms thereof and subject to the terms hereof.

“**Additional First Lien Obligations Claimholders**” means, at any relevant time, the lenders, creditors and secured parties under any Additional First Lien Obligations Agreements, any Additional First Lien Obligations Agent, any Representative of any of the foregoing and the other agents under such Additional First Lien Obligations Agreements, in each case, in their capacities as such.

“**Additional Lien Obligations Agent**” means the Additional First Lien Obligations Agent and/or the Additional Second Liens Obligations Agent, as applicable.

“**Additional Obligations**” means, collectively, the Additional First Lien Obligations and the Additional Second Lien Obligations.

“**Additional Second Lien Obligations**” means obligations with respect to Indebtedness of the Borrowers or any other Obligor (other than, for the avoidance of doubt, Second Lien Obligations under the Second Lien Credit Agreement) issued or guaranteed following the date of this Agreement and documented in an agreement other than any agreement governing any then existing Second Lien Obligations, provided that (a) such Indebtedness is permitted by the terms of each of the First Lien Credit Agreement, the Second Lien Credit Agreement and any then existing Additional First Lien Obligations Agreement and Additional Second Lien Obligations Agreement to be secured by Liens on all or a portion of the Collateral ranking *pari passu* with the Liens securing the Second Lien Obligations, (b) the Obligors have granted Liens on all or a portion of the Collateral to secure the obligations in respect of such Indebtedness, (c) the applicable Additional Second Lien Obligations Agent, for itself and on behalf of its Related Claimholders, has entered into a Joinder Agreement pursuant to Section 8.21(b) acknowledging that such Indebtedness, obligations and Liens shall be subject to, and such Additional Second Lien Obligations Agent and such Related Claimholders shall be bound by, and shall have rights and obligations provided under, the terms of this Agreement applicable to the Second Lien Collateral Agent and the other Second Lien Claimholders, respectively, and (d) an amendment to or other modification of this Agreement shall have been entered into pursuant to Section 8.3 to the extent contemplated pursuant to Section 8.21(c).

“**Additional Second Lien Obligations Agent**” means any Person appointed to act as trustee, agent or similar representative for the holders of Additional Second Lien Obligations pursuant to any Additional Second Lien Obligations Agreement (including, in the case of any bilateral arrangement, the actual holder of the relevant Additional Second Lien Obligations unless such holder has otherwise appointed a trustee, agent or similar representative acting on its behalf).

“**Additional Second Lien Obligations Agreements**” means (i) the indenture, credit agreement, guarantee or other agreement evidencing or governing any Additional Second Lien Obligations that are designated as Additional Second Lien Obligations pursuant to Section 8.21 and (ii) any other “Loan Documents” or “Financing Documents” (or similar term as may be defined in the foregoing or referred to in the foregoing or other agreements, documents and instruments executed in connection therewith), in each case, as Refinanced from time to time in accordance with the terms thereof and subject to the terms hereof.

“**Additional Second Lien Obligations Claimholders**” means, at any relevant time, the lenders, creditors and secured parties under any Additional Second Lien Obligations Agreements, any Additional Second Lien Obligations Agent, any Representative of any of the foregoing and the other agents under such Additional Second Lien Obligations Agreements, in each case, in their capacities as such.

“**Affiliate**” means, as applied to any Person, any other Person directly or indirectly Controlling, Controlled by, or under common Control with, that Person.

“**Agreement**” has the meaning set forth in the Preamble to this Agreement.

“**Banking Services**” means the First Lien Banking Services and the Second Lien Banking Services.

“**Banking Services Obligations**” means the First Lien Banking Services Obligations and the Second Lien Banking Services Obligations.

“**Bankruptcy Code**” means Title 11 of the United States Code (11. U.S.C. § 101 et seq.).

“**Borrowers**” has the meaning set forth in the Preamble to this Agreement.

“**Business Day**” means any day other than a Saturday, Sunday or other day on which commercial banks in New York City are authorized or required by law to remain closed.

“**Cap Amount**” means, as of any date of determination, the result of (i) (x) \$368,000,000, plus (ii) 115% of the aggregate principal amount of any First Lien Incremental Facility (as defined in the First Lien Credit Agreement as in effect on the date hereof, or pursuant to any similar terms in any Additional First Lien Obligations Agreement and any corresponding provisions in any Refinancing thereof to the extent such similar or corresponding provisions do not permit an aggregate principal amount of Indebtedness in excess of an amount permitted under the First Lien Credit Agreement as in effect on the date hereof) then outstanding (and unutilized commitments in respect thereof) and incurred under clause (c) of the definition of Incremental Cap (as defined in the First Lien Credit Agreement as in effect on the date hereof or pursuant to any similar term in any Additional First Lien Obligations Agreement and any corresponding provisions in any Refinancing thereof to the extent such similar or corresponding provisions do not permit an aggregate principal amount of Indebtedness in excess of an amount permitted under the First Lien Credit Agreement as in effect on the date hereof) pursuant to Section 2.22 of the First Lien Credit Agreement (as in effect on the date hereof, or pursuant to any similar terms in any Additional First Lien Obligations Agreement and any corresponding provisions in any Refinancing thereof to the extent such similar or corresponding provisions do not permit an aggregate principal amount of Indebtedness in excess of an amount permitted under the First Lien Credit Agreement as in effect on the date hereof) at such time, plus (iii) 115% of the sum of the aggregate principal amount of (A) First Lien Ratio Debt and (B) First Lien Incurred Acquisition Debt then outstanding (and unutilized commitments in respect thereof), plus (iv) the amount of any accrued and unpaid interest, paid in kind amounts and premiums on any Indebtedness under the First Lien Credit Agreement, any Additional First Lien Obligations Agreement, any First Lien Ratio Debt or any First Lien Incurred Acquisition Debt to be paid in connection with any Refinancing thereof, plus fees and expenses incurred in connection therewith and minus (v) the amount of any mandatory prepayments of principal of the loans or notes comprising First Lien Obligations made from or after the date hereof pursuant to an asset sale or condemnation event or with the proceeds of any insurance recovery (subject, to the extent such First Lien Obligations are revolving credit loans, to permanent commitment reductions thereof).

“**Capital Lease**” means, as applied to any Person, any lease of any property (whether real, personal or mixed) by that Person as lessee that, in conformity with GAAP, is or should be accounted for as a capital lease on the balance sheet of such Person.

“**Cash Collateral**” has the meaning set forth in Section 6.1(a).

“**Claimholders**” means each of the First Lien Claimholders and the Second Lien Claimholders.

“**Co-Borrower**” has the meaning set forth in the Preamble to this Agreement.

“**Collateral**” means all of the assets and property of any Obligor, whether real, personal or mixed, that constitute or are required to constitute (including pursuant to this Agreement) both First Lien Collateral and Second Lien Collateral, including any property subject to Liens granted pursuant to Section 6 to secure both First Lien Obligations and Second Lien Obligations.

“**Collateral Agent**” means the First Lien Collateral Agent and/or the Second Lien Collateral Agent, as applicable.

“**Collateral Documents**” means the First Lien Collateral Documents and the Second Lien Collateral Documents.

“**Comparable Second Lien Collateral Document**” means, in relation to any Collateral subject to any Lien created under any First Lien Collateral Document, the Second Lien Collateral Document that creates a Lien on the same Collateral, granted by the same Obligor.

“**Control**” means the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of a Person, whether through the ability to exercise voting power, by contract or otherwise, and the terms “**Controlling**” and “**Controlled**” have meanings correlative thereto.

“**Debt Documents**” means the First Lien Documents and/or the Second Lien Documents, as applicable.

“**Debtor Relief Laws**” means the Bankruptcy Code and all other liquidation, conservatorship, bankruptcy, general assignment for the benefit of creditors, moratorium, rearrangement, receivership, insolvency, reorganization or similar debtor relief laws of the U.S. or any state or other applicable jurisdictions from time to time in effect and affecting the rights of creditors generally.

“**Derivative Transaction**” means (a) any interest-rate transaction, including any interest-rate swap, basis swap, forward rate agreement, interest rate option (including a cap, collar or floor), and any other instrument linked to interest rates that gives rise to similar credit risks (including when-issued securities and forward deposits accepted), (b) any exchange-rate transaction, including any cross-currency interest-rate swap, any forward foreign-exchange contract, any currency option, and any other instrument linked to exchange rates that gives rise to similar credit risks, (c) any equity derivative transaction, including any equity-linked swap, any equity-linked option, any forward equity-linked contract, and any other instrument linked to equities that gives rise to similar credit risk and (d) any commodity (including precious metal) derivative transaction, including any commodity-linked swap, any commodity-linked option, any forward commodity-linked contract, and any other instrument linked to commodities that gives rise to similar credit risks; provided that no phantom stock or similar plan providing for payments only on account of services provided by current or former directors, officers, employees, members of management, managers or consultants of Holdings or any of its subsidiaries shall be a Derivative Transaction.

“**DIP Financing**” has the meaning set forth in Section 6.1.

“**Directing First Lien Collateral Agent**” means (a) the First Lien Credit Agreement Collateral Agent unless (and until) the Discharge of First Lien Obligations has occurred solely with respect to the First Lien Obligations under the First Lien Credit Agreement and the First Lien Financing Documents relating thereto and (b) thereafter, the First Lien Collateral Agent designated in writing by the Required First Lien Claimholders from time to time to act as Directing First Lien Collateral Agent hereunder.

“**Directing Second Lien Collateral Agent**” means (a) the Second Lien Credit Agreement Collateral Agent unless (and until) the Discharge of Second Lien Obligations has occurred solely with respect to the Second Lien Obligations under the Second Lien Credit Agreement and the Second Lien Financing Documents relating thereto and (b) thereafter, the Second Lien Collateral Agent designated in writing by the Required Second Lien Claimholders from time to time to act as Directing Second Lien Collateral Agent hereunder.

“**Discharge of First Lien Obligations**” means, except to the extent otherwise expressly provided in Section 5.6:

- (a) payment in full in cash of the principal of and interest (including Post-Petition Interest), and premium, if any, on all Indebtedness outstanding under the First Lien Documents and constituting First Lien Obligations (other than any First Lien Other Obligations);
- (b) termination or expiration of all commitments, if any, to extend credit that would constitute First Lien Obligations;
- (c) termination or cash collateralization or backstopping (in an amount and manner reasonably satisfactory to the applicable First Lien Issuing Banks, but in no event greater than 105% of the aggregate undrawn face amount) of all First Lien Letters of Credit (or the entering into of other arrangements on terms reasonably satisfactory to the applicable First Lien Issuing Banks to the extent that such First Lien Letters of Credit are no longer subject to the First Lien Documents) issued under the First Lien Documents that constitute First Lien Obligations;
- (d) payment in full in cash of all other First Lien Obligations (or, in the case of any First Lien Other Obligations, the cash collateralization or backstopping of such First Lien Other Obligations or the entering into of other arrangements to the extent that such First Lien Other Obligations are no longer subject to the First Lien Documents, in each case, on terms reasonably satisfactory to the applicable lender or counterparty, as applicable) that are due and payable or otherwise accrued and owing at or prior to the time such principal and interest are paid (including Post-Petition Interest, but other than any indemnification or expense reimbursement obligations that by the terms of any First Lien Document expressly survive termination of such First Lien Document, in each case, to the extent that no claim or demand for payment, whether oral or written, has been made at such time); and

(e) adequate provision has been made for any contingent or unliquidated First Lien Obligations related to claims, causes of action or liabilities that have been asserted against the First Lien Claimholders for which indemnification is required under the First Lien Documents;

provided that, in each case the Discharge of First Lien Obligations shall not be deemed to have occurred if such payments are made with the proceeds of other First Lien Obligations that constitute an exchange or replacement for, or a Refinancing of, such First Lien Obligations.

Upon the satisfaction of the conditions set forth in clauses (a) through (e) with respect to any First Lien Obligations, the Directing First Lien Collateral Agent agrees to promptly deliver to the other First Lien Collateral Agents and the Second Lien Collateral Agents written notice of the same.

“Discharge of Second Lien Obligations” means:

(a) payment in full in cash of the principal of and interest (including Post-Petition Interest), and premium, if any, on all Indebtedness outstanding under the Second Lien Documents and constituting Second Lien Obligations (other than any Second Lien Other Obligations);

(b) termination or expiration of all commitments, if any, to extend credit that would constitute Second Lien Obligations;

(c) termination or cash collateralization or backstopping (in an amount and manner reasonably satisfactory to any applicable second lien issuing banks, but in no event greater than 105%) of the aggregate undrawn face amount) of any letter of credit obligations that constitute Second Lien Obligations;

(d) payment in full in cash of all other Second Lien Obligations (or, in the case of any Second Lien Other Obligations, the cash collateralization or backstopping of such Second Lien Other Obligations on terms reasonably satisfactory to the applicable lender or counterparty, as applicable) that are due and payable or otherwise accrued and owing at or prior to the time such principal and interest are paid (including Post-Petition Interest, but other than any indemnification or expense reimbursement obligations that by the terms of any Second Lien Document expressly survive termination of such Second Lien Document, in each case, to the extent that no claim or demand for payment, whether oral or written, has been made at such time); and

(e) adequate provision has been made for any contingent or unliquidated Second Lien Obligations related to claims, causes of action or liabilities that have been asserted against the Second Lien Claimholders or for which indemnification is required under the Second Lien Documents; provided that, in each case the Discharge of Second Lien Obligations shall not be deemed to have occurred if such payments are made with the proceeds of other Second Lien Obligations that constitute an exchange or replacement for, or a Refinancing of, such Second Lien Obligations.

Upon the satisfaction of the conditions set forth in clauses (a) through (e) with respect to any Second Lien Obligation, the Directing Second Lien Collateral Agent agrees to promptly deliver to the other Second Lien Collateral Agents and the First Lien Collateral Agents written notice of the same.

“**Disposition**” has the meaning set forth in Section 5.1(b). “**Dispose**” has a meaning correlative thereto.

“**Dollars**” or “**\$**” refers to lawful money of the United States.

“**Enforcement Action**” means:

(a) any action to foreclose, execute, levy or collect on, take possession or control of, sell or otherwise realize upon (judicially or non-judicially), or lease, license, or otherwise Dispose of (whether publicly or privately), any Collateral or otherwise exercise or enforce remedial rights with respect to any Collateral under the First Lien Documents or the Second Lien Documents (including by way of setoff, recoupment, notification of a public or private sale or other Disposition pursuant to the UCC or other applicable law, notification to account debtors, notification to depository banks under deposit account control agreements, or exercise of rights under landlord consents, if applicable);

(b) any action to solicit bids from third Persons, or approve bid procedures for, any proposed Disposition of any Collateral, to conduct the liquidation or disposition of Collateral or engage or retain sale brokers, marketing agents, investment bankers, accountants, appraisers, auctioneers, or other third Persons for the purposes of valuing, marketing, promoting and selling any Collateral or conduct any Disposition of any Collateral;

(c) any action to receive a transfer of any portion of the Collateral in satisfaction of Indebtedness or any other Obligation secured thereby;

(d) any action to otherwise enforce a security interest or exercise another right or remedy, as a secured creditor or otherwise, pertaining to any Collateral, whether at law, in equity or pursuant to the First Lien Documents or the Second Lien Documents (including the commencement of applicable legal proceedings or other actions with respect to all or any portion of the Collateral to facilitate the actions described in the preceding clauses, and exercising voting rights in respect of equity interests comprising any Collateral);

(e) the Disposition of any Collateral by any Obligor after the occurrence and during the continuation of an “event of default” under the First Lien Documents or the Second Lien Documents with the consent of the First Lien Collateral Agents or the Second Lien Collateral Agents, as applicable (in either case, to the extent that such consent is required); or

(f) the appointment of a receiver or receiver and manager to do any of the foregoing.

“**Escrow Account**” has the meaning set forth in Section 6.3(b)(ii).

“**Exercise Period**” has the meaning set forth in Section 5.7(a).

“**First Lien Administrative Agent**” has the meaning set forth in the Recitals to this Agreement.

“**First Lien Banking Services**” means any of the following services provided to any First Lien Obligor or any “Restricted Subsidiary” (as defined in the First Lien Credit Agreement) thereof (or any similar terms in any other First Lien Document): commercial credit cards, stored value cards, purchasing cards, treasury management services, netting services, overdraft protections, check drawing services, automated payment services (including depository, overdraft, controlled disbursement, ACH and CPA transactions, return items and interstate depository network services), employee credit card programs, cash pooling services and any arrangements or services similar to any of the foregoing and/or otherwise in connection with cash management and deposit accounts.

“**First Lien Banking Services Agreement**” means any documentation with a First Lien Claimholder governing any First Lien Banking Services Obligations.

“**First Lien Banking Services Obligations**” means any and all obligations of the First Lien Obligors or any “Restricted Subsidiary” (as defined in the First Lien Credit Agreement) thereof (or any similar terms in any other First Lien Document), whether absolute or contingent and however and whenever created, arising, evidenced or acquired (including all renewals, extensions and modifications thereof and substitutions therefor), in connection with First Lien Banking Services, in each case, that have been designated to the First Lien Administrative Agent in writing by the Parent Borrower as being First Lien Banking Services Obligations for purpose of the First Lien Financing Documents and constitute “Secured Obligations” as defined in the First Lien Credit Agreement (or any similar term in any other First Lien Financing Document).

“**First Lien Claimholders**” means, at any relevant time, the holders of First Lien Obligations at that time, including the First Lien Lenders, the First Lien Administrative Agent, the First Lien Collateral Agent, the other agents under the First Lien Credit Agreement and any Additional First Lien Obligations Claimholders.

“**First Lien Collateral**” means (i) the “Collateral” as defined in the First Lien Credit Agreement and (ii) any other assets and property of any Obligor, whether real, personal or mixed, with respect to which a Lien is granted or purported to be granted as security for any First Lien Obligations or that is otherwise subject to a Lien securing any First Lien Obligations.

“**First Lien Collateral Agent**” means the First Lien Credit Agreement Collateral Agent and any Additional First Lien Obligations Agent.

“**First Lien Collateral Documents**” means the “Collateral Documents” as defined in the First Lien Credit Agreement and any other agreement, document or instrument pursuant to which a Lien is granted securing any First Lien Obligations or under which rights or remedies with respect to such Liens are governed.

“**First Lien Credit Agreement**” has the meaning set forth in the Recitals to this Agreement.

“**First Lien Credit Agreement Collateral Agent**” has the meaning set forth in the Preamble to this Agreement.

“**First Lien Documents**” means (i) the First Lien Financing Documents, (ii) the First Lien Hedge Agreements governing First Lien Secured Hedging Obligations and (iii) the First Lien Banking Services Agreements, in each case, as Refinanced from time to time in accordance with the terms thereof and subject to the terms hereof.

“**First Lien Financing Documents**” means the First Lien Credit Agreement, the First Lien Collateral Documents, the other “Loan Documents” as defined in the First Lien Credit Agreement, any Additional First Lien Obligations Agreement and each of the other agreements, documents and instruments providing for or evidencing any other First Lien Obligation (other than any First Lien Other Obligation), and any other document or instrument executed or delivered at any time in connection with any First Lien Obligations (other than any First Lien Other Obligations), including any intercreditor or joinder agreement among any First Lien Claimholders, to the extent such are effective at the relevant time, as each may be Refinanced from time to time in accordance with the terms thereof and subject to the terms hereof.

“**First Lien Hedge Agreement**” means any agreement with respect to any Derivative Transaction between any First Lien Obligor (or any similar term in any other First Lien Document) and any First Lien Claimholder.

“**First Lien Hedging Obligations**” means, with respect to any First Lien Obligor or any “Restricted Subsidiary” (as defined in the First Lien Credit Agreement) thereof (or any similar terms in any other First Lien Document), the obligations of such Person under any First Lien Hedge Agreement.

“**First Lien Incremental Facility**” means an “Incremental Facility” and any “Incremental Equivalent Debt” under and as defined in the First Lien Credit Agreement (or any similar terms in any other First Lien Document).

“**First Lien Incurred Acquisition Debt**” means any “Incurred Acquisition Debt” (as defined in the First Lien Credit Agreement on the date hereof or any similar term in any Refinancing or Additional First Lien Obligations Agreement to the extent such similar or corresponding provisions do not permit an aggregate principal amount of Indebtedness in excess of the amount permitted under the First Lien Credit Agreement as in effect on the date hereof) that is secured by the First Lien Collateral (or a portion thereof) on a basis senior to the Second Lien Obligations.

“**First Lien Issuing Bank**” means (i) each “Issuing Bank” under and as defined in the First Lien Credit Agreement (or any similar term in any other First Lien Financing Document) and (ii) each other issuing bank in respect of a First Lien Letter of Credit.

“**First Lien Lenders**” means the “Lenders” under and as defined in the First Lien Credit Agreement (or any similar term in any Additional First Lien Obligations Agreement) and also shall include all First Lien Issuing Banks.

“**First Lien Letters of Credit**” means any letters of credit issued (or deemed issued) from time to time under the First Lien Credit Agreement or any other First Lien Financing Document.

“**First Lien Obligations**” means, without duplication, (a) all “Secured Obligations” as defined in the First Lien Credit Agreement (or any similar term in any other First Lien Financing Document) and (b) all Additional First Lien Obligations.

“**First Lien Obligors**” means, collectively, the “Loan Parties” under and as defined in the First Lien Credit Agreement or any similar term in any other First Lien Document.

“**First Lien Other Obligations**” means, the First Lien Banking Services Obligations and the First Lien Secured Hedging Obligations.

“**First Lien Ratio Debt**” means any “Ratio Debt” (as defined in the First Lien Credit Agreement on the date hereof or any similar term in any Refinancing or Additional First Lien Obligations Agreement to the extent such similar or corresponding provisions do not permit an aggregate principal amount of Indebtedness in excess of the amount permitted under the First Lien Credit Agreement as in effect on the date hereof) that is secured by the First Lien Collateral (or a portion thereof) on a basis senior to the Second Lien Obligations.

“**First Lien Replacement Revolving Facility**” means a “Replacement Revolving Facility” under and as defined in the First Lien Credit Agreement as in effect on the date hereof (or any similar term in any other First Lien Financing Document).

“**First Lien Replacement Term Loan**” means a “Replacement Term Loan” under and as defined in the First Lien Credit Agreement as in effect on the date hereof (or any similar term in any other First Lien Financing Document).

“**First Lien Representative**” means (i) in the case of the First Lien Credit Agreement, the First Lien Credit Agreement Collateral Agent and (ii) in the case of any Additional First Lien Obligations Agreements, the Additional First Lien Obligations Agent thereunder that is named as the “First Lien Representative” in the applicable Joinder Agreement.

“**First Lien Secured Hedging Obligations**” means all First Lien Hedging Obligations of the First Lien Obligors or any “Restricted Subsidiary” (as defined in the First Lien Credit Agreement) thereof (or any similar terms in any other First Lien Document), whether absolute or contingent and howsoever and whenever created, arising, evidenced or acquired (including all renewals, extensions or modifications thereof and substitutions therefor), in each case, that constitute “Secured Obligations” as defined in the First Lien Credit Agreement (or any similar term in any other First Lien Document).

“GAAP” means generally accepted accounting principles in the United States as in effect from time to time.

“Governmental Authority” means any federal, state, provincial, territorial, municipal, national or other government, governmental department, ministry, commission, board, bureau, court, agency or instrumentality or political subdivision thereof or any entity or officer exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to any government or any court, in each case whether associated with the US, a foreign government or any political subdivision thereof.

“Hedge Agreements” means the First Lien Hedge Agreements and the Second Lien Hedge Agreements.

“Hedging Obligations” means the First Lien Hedging Obligations and the Second Lien Hedging Obligations.

“Holdings” has the meaning set forth in the Preamble to this Agreement.

“Indebtedness” means “Indebtedness” within the meaning of the First Lien Credit Agreement or the Second Lien Credit Agreement, as applicable. For the avoidance of doubt, “Indebtedness” shall not include Hedging Obligations or Banking Services Obligations.

“Insolvency or Liquidation Proceeding” means (a) any voluntary or involuntary case or proceeding under the Bankruptcy Code or any other Debtor Relief Laws with respect to any Obligor, (b) the appointment of or taking possession by a receiver, interim receiver, receiver and manager, (preliminary) insolvency receiver, liquidator, sequestrator, trustee or other custodian for all or a substantial part of the property of any Obligor, (c) except as would not result in an “event of default” under the First Lien Credit Agreement or any Additional First Lien Obligations Agreement, any liquidation, administration (or appointment of an administrator), dissolution, reorganization or winding up of any Obligor, whether voluntary or involuntary and whether or not involving insolvency or bankruptcy, or (d) any general assignment for the benefit of creditors or any other marshaling of assets and liabilities of any Obligor.

“Intercreditor Joinder Agreement” means a joinder to this Agreement entered into by an Obligor, substantially in the form of Exhibit A hereto or such other form as shall be approved by the First Lien Credit Agreement Collateral Agent.

“Jefferies” has the meaning set forth in the Recitals to this Agreement.

“Joinder Agreement” means a joinder to this agreement substantially in the form of Exhibit B hereto or otherwise reasonably satisfactory to the Directing First Lien Collateral Agent and the Directing Second Lien Collateral Agent and required to be delivered by a Representative to each of the Directing First Lien Collateral Agent and Directing Second Lien Collateral Agent pursuant to Section 8.21 hereof in order to include such Additional Obligations hereunder and to become the Representative hereunder for the First Lien Claimholders and the Second Lien Claimholders, as the case may be, with respect to such Additional Obligations.

“**Lien**” means any mortgage, pledge, hypothecation, assignment, encumbrance, lien (statutory or other), charge, or other security interest of any kind or nature whatsoever (including any conditional sale or other title retention agreement, any easement, right of way or other encumbrance on title to real property, and any Capital Lease having substantially the same economic effect as any of the foregoing), in each case in the nature of security; provided that in no event shall an operating lease be deemed to constitute a Lien.

“**Loan Party**” has the meaning assigned thereto in the First Lien Credit Agreement (and any similar term in any First Lien Financing Document) and in the Second Lien Credit Agreement (and any similar term in any Second Lien Financing Document).

“**New First Lien Agent**” has the meaning set forth in Section 5.6.

“**Obligations**” means any First Lien Obligations, Second Lien Obligations, Other Obligations and Additional Obligations.

“**Obligors**” means each First Lien Obligor and each Second Lien Obligor and each other Person that has executed and delivered, or may from time to time hereafter execute and deliver, a First Lien Collateral Document or a Second Lien Collateral Document as a “grantor” or “pledgor” (or the equivalent thereof).

“**Other Obligations**” means the First Lien Other Obligations and the Second Lien Other Obligations.

“**Parent Borrower**” has the meaning set forth in the Preamble to this Agreement.

“**Person**” means any natural person, corporation, limited liability company, trust, joint venture, association, company, partnership, Governmental Authority or any other entity.

“**Pledged Collateral**” has the meaning set forth in Section 5.5(a).

“**Post-Petition Interest**” means interest (including interest accruing at the default rate specified in the applicable First Lien Documents or the applicable Second Lien Documents, as the case may be), fees, expenses and other amounts that pursuant to the First Lien Documents or the Second Lien Documents, as the case may be, continue to accrue or become due after the commencement of any Insolvency or Liquidation Proceeding, whether or not such interest, fees, expenses and other amounts are allowed or allowable, voided or subordinated under any Debtor Relief Law or other applicable law or in any such Insolvency or Liquidation Proceeding.

“**Priority Lien**” has the meaning assigned to that term in Section 5.1(e).

“**Purchase Price**” means the sum of: (1) 100% of the principal amount of all loans, advances or similar extensions of credit included in the First Lien Obligations (including the unreimbursed amount of all issued letters of credit (including First Lien Letters of Credit), but excluding the undrawn amount of then outstanding letters of credit (including the undrawn amount of then outstanding First Lien Letters of Credit) and all accrued and unpaid interest (including Post-Petition Interest) thereon through the date of purchase (but excluding any prepayment penalties or premiums (other than customary breakage costs)), (2) the net aggregate amount then owing to counterparties under First Lien Hedge Agreements governing the First Lien Secured Hedging Obligations and First Lien Banking Services Agreements, including, in the case of such First Lien Hedge Agreements, all amounts owing to the counterparties as a result of the termination (or early termination) thereof, (3) all accrued and unpaid fees, expenses and other amounts owed to the First Lien Claimholders under the First Lien Documents on the date of purchase, and (4) in the case of contingent or unliquidated First Lien Obligations for which a claim has been made against the First Lien Claimholders and indemnification is required under the First Lien Documents, cash collateral in such amounts as the Directing First Lien Collateral Agent reasonably determines to be necessary to secure the Directing First Lien Collateral Agent and the other First Lien Claimholders in connection with such contingent or unliquidated First Lien Obligations; it being understood and agreed that at such time as all contingent or unliquidated First Lien Obligations described in clause (4) are settled or otherwise resolved, any excess cash collateral deposited as described above in clause (4) (and not applied or previously released) shall be returned to the respective purchaser or purchasers, as their interests appear.

“**Purchase Right**” has the meaning set forth in [Section 5.7\(a\)](#).

“**Recovery**” has the meaning set forth in [Section 6.5](#).

“**Refinance**” means, in respect of any Indebtedness and any agreement governing any such Indebtedness, to refinance, extend, increase, renew, defease, amend, restate, amend and restate, modify, supplement, restructure, replace, refund or repay, or to issue other indebtedness, in exchange or replacement for or refinancing of, such Indebtedness in whole or in part, including by adding or replacing lenders, creditors, agents, obligors and/or guarantors, and including, in each case, but not limited to, after the original instrument giving rise to such Indebtedness has been terminated. “**Refinanced**” and “**Refinancing**” shall have correlative meanings.

“**Related Claimholders**” means, with respect to any Collateral Agent, its Related First Lien Claimholders or its Related Second Lien Claimholders, as applicable.

“**Related First Lien Claimholders**” means, with respect to any First Lien Collateral Agent, the First Lien Claimholders for which such First Lien Collateral Agent acts as the “collateral agent” (or other agent or similar representative) under the applicable First Lien Documents.

“**Related Second Lien Claimholders**” means, with respect to any Second Lien Collateral Agent, the Second Lien Claimholders for which such Second Lien Collateral Agent acts as the “collateral agent” (or other agent or similar representative) under the applicable Second Lien Documents.

“**Representatives**” means the First Lien Representatives and the Second Lien Representatives.

“Required First Lien Claimholders” means (a) at all times prior to the occurrence of the Discharge of First Lien Obligations (other than the First Lien Other Obligations), the First Lien Claimholders holding more than 50% of the sum of (i) the aggregate outstanding principal amount of First Lien Obligations (including participations in the face amount of the First Lien Letters of Credit and any disbursement thereunder that have not been reimbursed, but excluding the First Lien Other Obligations) plus (ii) the aggregate unfunded commitments to extend credit which, when funded, would constitute First Lien Obligations under the First Lien Documents (other than the First Lien Other Obligations), and (b) at all times following the occurrence of the Discharge of First Lien Obligations (other than the First Lien Other Obligations), the First Lien Claimholders holding more than 50% of the sum of (i) the then outstanding First Lien Secured Hedging Obligations plus (ii) the then outstanding First Lien Banking Services Obligations (determined by the First Lien Collateral Agents in such reasonable manner as is acceptable to them).

“Required Second Lien Claimholders” means (a) at all times prior to the occurrence of the Discharge of Second Lien Obligations (other than the Second Lien Other Obligations), the Second Lien Claimholders holding more than 50% of the sum of (i) the aggregate outstanding principal amount of Second Lien Obligations plus (ii) the aggregate unfunded commitments to extend credit which, when funded, would constitute Second Lien Obligations under the Second Lien Documents (other than the Second Lien Other Obligations), and (b) at all times following the occurrence of the Discharge of Second Lien Obligations (other than the Second Lien Other Obligations), the Second Lien Claimholders holding more than 50% of the sum of (i) the then outstanding Second Lien Secured Hedging Obligations plus (ii) the then outstanding Second Lien Banking Services Obligations (determined by the Second Lien Collateral Agents in such reasonable manner as is acceptable to them).

“Responsible Officer” of any Person means the chief executive officer, the president, the chief financial officer, the treasurer, manager of treasury activities, any assistant treasurer, any executive vice president, any senior vice president, any vice president, any senior vice president (finance), or the chief operating officer of such Person and any other individual or similar official thereof responsible for the administration of the obligations of such Person in respect of this Agreement.

“Second Lien Adequate Protection Interest Payments” has the meaning set forth in [Section 6.3](#).

“Second Lien Administrative Agent” has the meaning set forth in the Recitals to this Agreement.

“Second Lien Banking Services” means any of the following services provided to any Second Lien Obligor or any “Restricted Subsidiary” (as defined in the Second Lien Credit Agreement) thereof (or any similar terms in any other Second Lien Financing Document): commercial credit cards, stored value cards, purchasing cards, treasury management services, netting services, overdraft protections, check drawing services, automated payment services (including depository, overdraft, controlled disbursement, ACH and CPA transactions, return items and interstate depository network services), employee credit card programs, cash pooling services and any arrangements or services similar to any of the foregoing and/or otherwise in connection with cash management and deposit accounts.

“**Second Lien Banking Services Agreement**” means any documentation with a Second Lien Claimholder governing any Second Lien Banking Services Obligations.

“**Second Lien Banking Services Obligations**” means any and all obligations of the Second Lien Obligor or any “Restricted Subsidiary” (as defined in the Second Lien Credit Agreement) thereof (or any similar terms in any other Second Lien Document), whether absolute or contingent and however and whenever created, arising, evidenced or acquired (including all renewals, extensions and modifications thereof and substitutions therefor), in connection with Second Lien Banking Services, in each case, that constitute “Secured Obligations” as defined in the Second Lien Credit Agreement (or any similar term in any other Second Lien Financing Document).

“**Second Lien Claimholders**” means, at any relevant time, the holders of Second Lien Obligations at that time, including the Second Lien Lenders, the Second Lien Administrative Agent, the Second Lien Collateral Agent, the other agents under the Second Lien Credit Agreement and any Additional Second Lien Obligations Claimholders.

“**Second Lien Collateral**” means (i) the “Collateral” as defined in the Second Lien Credit Agreement and (ii) any other assets and property of any Obligor, whether real, personal or mixed, with respect to which a Lien is granted or purported to be granted as security for any Second Lien Obligations or that is otherwise subject to a Lien securing any Second Lien Obligations.

“**Second Lien Collateral Agent**” means the Second Lien Credit Agreement Collateral Agent and any Additional Second Lien Obligations Agent.

“**Second Lien Collateral Documents**” means the “Collateral Documents” as defined in the Second Lien Credit Agreement and any other agreement, document or instrument pursuant to which a Lien is granted securing any Second Lien Obligations or under which rights or remedies with respect to such Liens are governed.

“**Second Lien Credit Agreement**” has the meaning set forth in the Recitals to this Agreement.

“**Second Lien Credit Agreement Collateral Agent**” has the meaning set forth in the Preamble to this Agreement.

“**Second Lien Documents**” means (i) the Second Lien Financing Documents, (ii) the Second Lien Hedge Agreements governing Second Lien Secured Hedging Obligations and (iii) the Second Lien Banking Services Agreements, in each case, as Refinanced from time to time in accordance with the terms thereof and subject to the terms hereof.

“**Second Lien Financing Documents**” means the Second Lien Credit Agreement, the Second Lien Collateral Documents, the other “Loan Documents” as defined in the Second Lien Credit Agreement, any Additional Second Lien Obligations Agreement, and each of the other agreements, documents and instruments providing for or evidencing any other Second Lien Obligation (other than any Second Lien Other Obligation), and any other document or instrument executed or delivered at any time in connection with any Second Lien Obligations (other than any Second Lien Other Obligations), including any intercreditor or joinder agreement among any Second Lien Claimholders, to the extent such are effective at the relevant time, as each may be Refinanced from time to time in accordance with the terms thereof and subject to the terms hereof.

“**Second Lien Hedge Agreement**” means any agreement with respect to any Derivative Transaction between any Second Lien Obligor (or any similar term in any other Second Lien Document) and any Second Lien Claimholder.

“**Second Lien Hedging Obligations**” means, with respect to any Second Lien Obligor or any “Restricted Subsidiary” (as defined in the Second Lien Credit Agreement) thereof (or any similar terms in any other Second Lien Document) (or any similar term in any other Second Lien Document), the obligations of such Person under any Second Lien Hedge Agreement.

“**Second Lien Incremental Facility**” means an “Incremental Facility” and any “Incremental Equivalent Debt” under and as defined in the Second Lien Credit Agreement or any similar terms in any other Second Lien Document.

“**Second Lien Lenders**” means the “Lenders” under and as defined in the Second Lien Credit Agreement or any similar term in any Additional Second Lien Obligations Agreement.

“**Second Lien Obligations**” means without duplication, (a) all “Secured Obligations” as defined in the Second Lien Credit Agreement (or any similar term in any other Second Lien Financing Document) and (b) all Additional Second Lien Obligations. To the extent any payment by a Second Lien Obligor with respect to any Second Lien Obligation (whether by or on behalf of any Second Lien Obligor, as proceeds of security, enforcement of any right of setoff or otherwise) is declared to be a fraudulent conveyance or a preference in any respect, set aside or required to be paid to a debtor in possession, any receiver or other Person, then the obligation or part thereof originally intended to be satisfied shall, for all purposes of this Agreement and the rights and obligations of the First Lien Claimholders and the Second Lien Claimholders, be deemed to be reinstated and outstanding as if such payment had not occurred. In the event that any interest, fees, expenses or other amounts (including any interest accruing at the default rate or any Post-Petition Interest) to be paid pursuant to the Second Lien Financing Documents, the Second Lien Hedge Agreements governing Second Lien Secured Hedging Obligations or the Second Lien Banking Services Agreements are disallowed by order of any court of competent jurisdiction, including by order of a court presiding over an Insolvency or Liquidation Proceeding, such interest, fees, expenses and other amounts (including default interest and Post-Petition Interest) shall, as between the First Lien Claimholders and the Second Lien Claimholders, be deemed to continue to accrue and be added to the amount to be calculated as the “Second Lien Obligations.”

“**Second Lien Obligors**” means, collectively, the “Loan Parties” under and as defined in the Second Lien Credit Agreement or any similar term in any other Second Lien Document.

“**Second Lien Other Obligations**” means the Second Lien Banking Services Obligations and the Second Lien Secured Hedging Obligations.

“**Second Lien Replacement Loan**” means a “Replacement Loan” as defined in the Second Lien Credit Agreement as in effect on the date hereof (or any similar term in any other Second Lien Financing Document).

“**Second Lien Representatives**” means (i) in the case of the Second Lien Credit Agreement, the Second Lien Credit Agreement Collateral Agent and (ii) in the case of any Additional Second Lien Obligations Agreements, the Additional Second Lien Obligations Agent thereunder that is named as the “Second Lien Representative” in the applicable Joinder Agreement.

“**Second Lien Secured Hedging Obligations**” means all Second Lien Hedging Obligations of the Second Lien Obligors or any “Restricted Subsidiary” (as defined in the Second Lien Credit Agreement) thereof (or any similar terms in any other Second Lien Document), whether absolute, or contingent and howsoever and whenever created, arising, evidenced or acquired (including all renewals, extensions or modifications thereof and substitutions therefor), in each case, that constitute “Secured Obligations” as defined in the Second Lien Credit Agreement (or any similar term in any other Second Lien Financing Document).

“**Standstill Period**” has the meaning set forth in Section 3.1(a)(1).

“**subsidiary**” means, with respect to any Person, any corporation, partnership, limited liability company, association, joint venture or other business entity of which more than 50% of the total voting power of stock or other ownership interests entitled (without regard to the occurrence of any contingency) to vote in the election of the Person or Persons (whether directors, trustees or other Persons performing similar functions) having the power to direct or cause the direction of the management and policies thereof is at the time owned or controlled, directly or indirectly, by such Person or one or more of the other subsidiaries of such Person or a combination thereof; provided that in determining the percentage of ownership interests of any Person controlled by another Person, no ownership interests in the nature of a “qualifying share” of the former Person shall be deemed to be outstanding. Unless otherwise specified, “subsidiary” shall mean any subsidiary of the Parent Borrower.

“**UCC**” means the Uniform Commercial Code as in effect from time to time (except as otherwise specified) in any applicable state or jurisdiction.

1.2 Terms Generally. The definitions of terms in this Agreement shall apply equally to the singular and plural forms of the terms defined. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. The words “include,” “includes” and “including” shall be deemed to be followed by the phrase “without limitation.” The word “will” shall be construed to have the same meaning and effect as the word “shall.” Unless the context requires otherwise:

(a) any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to such agreement, instrument or other document as from time to time permitted to be Refinanced or replaced in accordance with the terms hereof, in each case to the extent so Refinanced or replaced;

(b) any reference herein to any Person shall be construed to include such Person’s permitted successors and assigns;

(c) the words “herein,” “hereof” and “hereunder,” and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof;

(d) all references herein to Sections, clauses or paragraphs shall be construed to refer to Sections, clauses or paragraphs of this Agreement, unless otherwise specified;

(e) any reference to any law or regulation shall (i) include all statutory and regulatory provisions consolidating, amending, replacing, interpreting or supplementing such law or regulation, and (ii) unless otherwise specified, refer to such law or regulation as amended, modified or supplemented from time to time; and

(f) the words “asset” and “property” shall be construed to have the same meaning and effect and to refer to any and all tangible and intangible assets and properties, including cash, securities, accounts and contract rights.

SECTION 2. Lien Priorities

2.1 Relative Priorities. Notwithstanding the date, time, method, manner or order of grant, attachment, recordation or perfection of any Liens on the Collateral securing the Second Lien Obligations or of any Liens on the Collateral securing the First Lien Obligations, and notwithstanding any provision of the UCC or any other applicable law, or the Second Lien Documents or the First Lien Documents, or any defect or deficiencies in, or failure to perfect or lapse in perfection of, or avoidance as a fraudulent conveyance or otherwise of, the Liens on the Collateral securing the First Lien Obligations or any other circumstance whatsoever, whether or not any Insolvency or Liquidation Proceeding has been commenced by or against any Obligor, each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, hereby agrees that:

(a) any Lien on the Collateral securing any First Lien Obligations now or hereafter held by or on behalf of any First Lien Collateral Agent, any other First Lien Claimholders or any agent or trustee therefor, regardless of how acquired, whether by grant, possession, statute (including any judgment lien), operation of law, subrogation or otherwise, shall be senior in all respects and prior to any Lien on the Collateral securing any of the Second Lien Obligations;

(b) any Lien on the Collateral securing any Second Lien Obligations now or hereafter held by or on behalf of any Second Lien Collateral Agent, any other Second Lien Claimholders or any agent or trustee therefor, regardless of how acquired, whether by grant, possession, statute (including any judgment lien), operation of law, subrogation or otherwise, shall be junior and subordinate in all respects to all Liens on the Collateral securing any of the First Lien Obligations; and

(c) all Liens on the Collateral securing any First Lien Obligations shall be and remain senior in all respects and prior to all Liens on the Collateral securing any Second Lien Obligations for all purposes, whether or not such Liens securing any First Lien Obligations are subordinated to any Lien securing any other obligation of the Obligors or any other Person.

2.2 Prohibition on Contesting Liens. Each Second Lien Collateral Agent, for itself and on behalf of its Related Second Lien Claimholders, and each First Lien Collateral Agent, for itself and on behalf of its Related First Lien Claimholders, agrees that it and its Related Claimholders will not (and each hereby waives any right to) directly or indirectly contest or challenge, or support any other Person in contesting or challenging, in any proceeding (including any Insolvency or Liquidation Proceeding), (i) the validity or enforceability of any First Lien Document or any Second Lien Document, respectively, or any First Lien Obligation or any Second Lien Obligation, respectively, (ii) the existence, validity, perfection, priority or enforceability of the Liens securing any First Lien Obligations or any Second Lien Obligations, as the case may be, or (iii) the relative rights and duties of the First Lien Claimholders or the Second Lien Claimholders granted and/or established in this Agreement or any Collateral Document with respect to such Liens; provided that nothing in this Agreement shall be construed to prevent or impair the rights of any First Lien Collateral Agent or any other First Lien Claimholder to enforce this Agreement or to exercise any of its remedies or rights hereunder, including the provisions of this Agreement relating to the priority of the Liens securing the First Lien Obligations as provided in Sections 2.1 and 3.1.

2.3 No New Liens. Subject to Section 2.6 hereof, the parties hereto agree that, so long as the Discharge of First Lien Obligations has not occurred, (a) none of the Obligors shall grant or permit any additional Liens on any asset or property of any Obligor to secure any Second Lien Obligation unless it has granted, or concurrently therewith grants, through documentation in form and substance reasonably satisfactory to the Directing First Lien Collateral Agent, a Lien on such asset or property of such Obligor to secure the First Lien Obligations and (b) none of the Obligors shall grant or permit any additional Liens on any asset or property of any Obligor to secure any First Lien Obligation unless it has granted, or concurrently therewith grants, through documentation in form and substance reasonably satisfactory to the Directing Second Lien Collateral Agent, a Lien on such asset or property of such Obligor to secure the Second Lien Obligations. So long as the Discharge of First Lien Obligations has not occurred, whether or not any Insolvency or Liquidation Proceeding has been commenced by or against any of the Obligors, the parties hereto agree that if any Second Lien Claimholder shall acquire or hold any Lien on any assets of any Obligor securing any Second Lien Obligation which assets are not also subject to the first priority Lien of the First Lien Claimholders under the First Lien Collateral Documents, then, without limiting any other rights and remedies available to any First Lien Collateral Agent and/or the other First Lien Claimholders, the applicable Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, and each other Second Lien Claimholder (by its acceptance of the benefits of the Second Lien Financing Documents), shall (i) notify the Directing First Lien Collateral Agent promptly upon becoming aware thereof and, unless such Obligor shall promptly grant a similar Lien on such assets or property to each First Lien Collateral Agent as security for the First Lien Obligations, shall assign such Lien to the Directing First Lien Collateral Agent as security for all First Lien Obligations for the benefit of the First Lien Secured Parties (but may retain a junior lien on such assets or property subject to the terms hereof) and (ii) until such assignment of such Lien to the Directing First Lien Collateral Agent or such grant of a similar Lien to each First Lien Collateral Agent, shall be deemed to also hold and have held such Lien for the benefit of each First Lien Collateral Agent and the other First Lien Secured Parties as security for the applicable First Lien Obligations. To the extent that the provisions of the immediately preceding sentence are not complied with for any reason, without limiting any other right or remedy available to the First Lien Collateral Agent or any other First Lien Secured Party, the Second Lien Collateral Agent, for itself and on behalf of the other Second Lien Secured Parties, agrees that any amounts received by or distributed to any Second Lien Secured Party pursuant to or as a result of any Lien granted in contravention of this Section 2.3 shall be subject to Section 4.2.

2.4 Similar Liens and Agreements. The parties hereto agree that it is their intention that the Second Lien Collateral shall not be more expansive than the First Lien Collateral. In furtherance of the foregoing and of Sections 2.3 and 8.9, each First Lien Collateral Agent, for itself and on behalf of its Related First Lien Claimholders, and each Second Lien Collateral Agent, for itself and on behalf of its Related Second Lien Claimholders, agrees, subject to the other provisions of this Agreement:

(a) upon request by the Directing First Lien Collateral Agent or the Directing Second Lien Collateral Agent, to cooperate in good faith from time to time in order to determine the specific items included in the First Lien Collateral and the Second Lien Collateral and the steps taken to perfect their respective Liens thereon and the identity of the respective parties obligated under the First Lien Documents and the Second Lien Documents; and

(b) that the documents, agreements or instruments creating or evidencing the First Lien Collateral and the Second Lien Collateral and guaranties for the First Lien Obligations and the Second Lien Obligations shall be in all material respects the same forms of documents, agreements or instruments, other than with respect to the “first priority” and the “second priority” nature of the Liens thereunder, the identity of the secured parties that are parties thereto or secured thereby and other matters contemplated by this Agreement.

2.5 Nature of Obligations. The priorities of the Liens provided in Section 2.1 shall not be altered or otherwise affected by (a) any Refinancing of the First Lien Obligations or the Second Lien Obligations or (b) any action or inaction that any of the First Lien Claimholders or the Second Lien Claimholders may take or fail to take in respect of the Collateral. Each Second Lien Collateral Agent, for itself and on behalf of its Related Second Lien Claimholders, agrees and acknowledges that (i) a portion of the First Lien Obligations is revolving in nature and that the amount thereof that may be outstanding at any time or from time to time may be increased or reduced and subsequently reborrowed, (ii) the terms of the First Lien Documents and the First Lien Obligations may be amended, supplemented or otherwise modified, and the First Lien Obligations, or a portion thereof, may be Refinanced from time to time and (iii) the aggregate amount of the First Lien Obligations may be increased (subject to any limitations with respect thereto set forth in the Second Lien Documents), in each case, without notice to or consent by the Second Lien Collateral Agents or the Second Lien Claimholders and without affecting the provisions hereof, except as otherwise expressly set forth herein. As between the Parent Borrower and the other Obligors, on the one hand, and the Second Lien Claimholders, on the other hand, the foregoing provisions will not limit or otherwise affect the obligations of the Parent Borrower and the other Obligors contained in any Second Lien Document with respect to the incurrence of additional First Lien Obligations.

2.6 Certain Cash Collateral. Notwithstanding anything in this Agreement or any other First Lien Document or Second Lien Document to the contrary, collateral consisting of cash and cash equivalents pledged to secure (i) First Lien Obligations under the First Lien Credit Agreement consisting of reimbursement obligations in respect of First Lien Letters of Credit issued thereunder or otherwise held by the First Lien Credit Agreement Collateral Agent or the First Lien Credit Agreement Administrative Agent, as applicable, pursuant to Section 2.05, 2.11(b)(vii), 2.18(b), 2.19 or Article 7 of the First Lien Credit Agreement (or any equivalent successor provision), (ii) First Lien Obligations under First Lien Hedge Agreements to the extent permitted by the First Lien Documents and the Second Lien Documents and/or (iii) Second Lien Obligations under Second Lien Hedge Agreements to the extent permitted by the First Lien Documents and the Second Lien Documents, shall be applied as specified in the First Lien Credit Agreement, the relevant First Lien Hedge Agreement and/or the relevant Second Lien Hedge Agreement, as applicable, and will not constitute Collateral hereunder.

2.7 Injunctive Relief. Should the Directing Second Lien Collateral Agent and/or any other Second Lien Claimholder, contrary to this Agreement, in any way take, attempt to take or threaten to take any action with respect to the Collateral (including any attempt to realize upon or enforce any remedy with respect to this Agreement), or fail to take any action required by this Agreement, the Directing First Lien Collateral Agent or any other First Lien Claimholder (in its or their own name or in the name of the Parent Borrower) may obtain relief against the Directing Second Lien Collateral Agent or such other Second Lien Claimholder by injunction, specific performance and/or other appropriate equitable relief, it being understood and agreed by the Directing Second Lien Collateral Agent and each other Second Lien Claimholder that (a) the First Lien Claimholders' damages from its actions may by that time be difficult to ascertain and may be irreparable and (b) each Directing Second Lien Collateral Agent and other Second Lien Claimholder waives any defense that the Directing First Lien Collateral Agent or any other First Lien Claimholder cannot demonstrate damage and/or be made whole by the awarding of damages.

SECTION 3. Enforcement.

3.1 Exercise of Remedies.

(a) Until the Discharge of First Lien Obligations has occurred, whether or not any Insolvency or Liquidation Proceeding has been commenced by or against any of the Obligor, each of the Second Lien Collateral Agents, for itself and on behalf of its Related Second Lien Claimholders, hereby agrees that it and its Related Second Lien Claimholders:

(1) will not exercise or seek to exercise any rights or remedies (including setoff) with respect to any Collateral or institute or commence, or join with any Person in instituting or commencing, any other Enforcement Action or any other action or proceeding with respect to such rights or remedies (including any action of foreclosure, exercise of a power of sale, enforcement, collection or execution and any Insolvency or Liquidation Proceeding); provided that the Directing Second Lien Collateral Agent may commence an Enforcement Action or otherwise exercise any or all such rights or remedies after the passage of a period of at least 180 days since the Directing First Lien Collateral Agent shall have received notice from the Directing Second Lien Collateral Agent with respect to the acceleration by the relevant Second Lien Claimholders of the maturity of all then outstanding Second Lien Obligations (and requesting that Enforcement Action be taken with respect to the Collateral) so long as the applicable "event of default" shall not have been cured or waived (or the applicable acceleration rescinded) (the "**Standstill Period**"); provided further that notwithstanding anything herein to the contrary, in no event shall the Second Lien Collateral Agents or any other Second Lien Claimholders exercise any rights or remedies with respect to any Collateral or institute or commence, or join with any Person (other than the Directing First Lien Collateral Agent) in instituting or commencing, any other Enforcement Action or any other action or proceeding with respect to such rights or remedies, if, notwithstanding the expiration of the Standstill Period, either (A) the Directing First Lien Collateral Agent or any other First Lien Claimholder shall have commenced and be diligently pursuing (or shall have sought or requested and be diligently pursuing relief from or modification of the automatic stay or any other stay in any Insolvency or Liquidation Proceeding to enable the commencement and the pursuit of) an Enforcement Action or other exercise of their rights or remedies in each case with respect to all or any material portion of the Collateral (with any determination of which Collateral to proceed against, and in what order, to be made by the Directing First Lien Collateral Agent or such First Lien Claimholders in their reasonable judgment) or (B) any of the Obligor is then a debtor in any Insolvency or Liquidation Proceeding; provided further that the Standstill Period shall be tolled for any period that the Directing First Lien Collateral Agent or the other First Lien Claimholders are stayed from exercising remedies with respect to the Collateral;

(2) will not contest, protest or object to any Enforcement Action or any other foreclosure proceeding or action or exercise of a power of sale brought by the Directing First Lien Collateral Agent or any other First Lien Claimholder or any other exercise by the Directing First Lien Collateral Agent or any other First Lien Claimholder of any rights and remedies relating to the Collateral under the First Lien Documents or otherwise;

(3) subject to their rights under clause (a)(1) above, will not object to the forbearance by the Directing First Lien Collateral Agent or the other First Lien Claimholders from bringing or pursuing any Enforcement Action or any other foreclosure proceeding or action or any other exercise of any rights or remedies relating to the Collateral, in each case so long as any proceeds received by the Directing First Lien Collateral Agent in excess of those necessary to achieve a Discharge of First Lien Obligations are distributed in accordance with Section 4.1; and

(4) will not take or receive any Collateral, or any proceeds of or payment with respect to any Collateral, in connection with any Enforcement Action or any other exercise of any right or remedy with respect to any Collateral in its capacity as a creditor or in connection with any insurance policy award or any award in a condemnation or similar proceeding (or deed in lieu of condemnation) with respect to any Collateral, in each case unless and until the Discharge of First Lien Obligations has occurred, except in connection with any foreclosure or exercise of a power of sale expressly permitted by Section 3.1(a)(1), to the extent such Second Lien Collateral Agent and its Related Second Lien Claimholders are permitted to retain the proceeds thereof in accordance with Section 4.1.

Without limiting the generality of the foregoing, until the Discharge of First Lien Obligations has occurred, except as expressly provided in Sections 3.1(a)(1), 3.1(c) and 6.3(b), the sole right of each Second Lien Collateral Agent and the other Second Lien Claimholders with respect to the Collateral (other than inspection, monitoring, reporting and similar rights provided for in the Second Lien Financing Documents) is to hold a Lien on the Collateral pursuant to the Second Lien Collateral Documents for the period and to the extent granted therein and to receive a share of the proceeds thereof, if any, after the Discharge of First Lien Obligations has occurred.

(b) Until the Discharge of First Lien Obligations has occurred, whether or not any Insolvency or Liquidation Proceeding has been commenced by or against any First Lien Obligor, subject to Sections 3.1(a)(1), 3.1(c) and 6.3(b), the First Lien Collateral Agents and the other First Lien Claimholders (and any receiver appointed by any of them) shall have the exclusive right to commence and maintain an Enforcement Action or otherwise exercise any rights and remedies (including set-off, recoupment and the right to “credit bid” their debt, except that the Second Lien Collateral Agents shall have the “credit bid” rights set forth in Section 3.1(c)(7)), and make determinations regarding the release, Disposition, or restrictions with respect to the Collateral, in each case without any consultation with or the consent of any Second Lien Collateral Agent or any other Second Lien Claimholder; provided that any proceeds received by any First Lien Collateral Agent in excess of those necessary to achieve a Discharge of First Lien Obligations are distributed in accordance with Section 4.1. In commencing or maintaining any Enforcement Action or otherwise exercising rights and remedies with respect to the Collateral, the First Lien Collateral Agents and the other First Lien Claimholders (and any receiver appointed by any of them) may enforce the provisions of the First Lien Documents and exercise rights and remedies thereunder, all in such order and in such manner as they may determine in the exercise of their sole discretion in compliance with any applicable law and without consultation with any Second Lien Collateral Agent or any other Second Lien Claimholder and regardless of whether any such exercise is adverse to the interest of any Second Lien Claimholder. Such exercise and enforcement shall include the rights of an agent or receiver appointed by them to sell or otherwise Dispose of Collateral upon foreclosure, exercise of a power of sale or other enforcement action or proceeding to incur expenses in connection with such sale or other Disposition, and to exercise all the rights and remedies of a secured creditor under the UCC or other applicable law and of a secured creditor under Debtor Relief Laws of any applicable jurisdiction.

(c) Notwithstanding the foregoing, each Second Lien Collateral Agent and any other Second Lien Claimholder may:

(1) file a claim, proof of claim or statement of interest with respect to the Second Lien Obligations; provided that an Insolvency or Liquidation Proceeding has been commenced by or against any of the Second Lien Obligors;

(2) take any action in order to create, perfect, preserve or protect (but not enforce) its Lien on the Collateral to the extent (A) not adverse to the priority status of the Liens on the Collateral securing the First Lien Obligations, or the rights of any First Lien Collateral Agent or the other First Lien Claimholders to exercise rights and remedies in respect thereof, and (B) not otherwise inconsistent with the terms of this Agreement, including the automatic release of Liens provided in Section 5.1;

(3) file any necessary or appropriate responsive or defensive pleadings in opposition to any motion, claim, adversary proceeding or other pleading made by any Person objecting to or otherwise seeking the disallowance of the claims of the Second Lien Claimholders, including any claims or Liens secured by the Collateral, if any, in each case to the extent not inconsistent with the terms of this Agreement;

(4) subject to clause (e) below, file any pleadings, objections, motions or agreements which assert rights or interests available to unsecured creditors of the Obligors arising under either the applicable Debtor Relief Law or applicable non-bankruptcy law, in each case if not otherwise in contravention of the terms of this Agreement, or as may otherwise expressly be consented to by the Directing First Lien Collateral Agent;

(5) vote on any plan of reorganization, plan of arrangement, plan of compromise or arrangement, proposal or similar dispositive restructuring plan, arrangement, compromise or liquidation, make other filings and make any arguments and motions with respect to the Second Lien Obligations and the Collateral that are, in each case, in accordance with the terms of this Agreement; provided that no filing of any claim or vote, or pleading relating to such claim or vote, to accept or reject a disclosure statement, plan of reorganization, arrangement, compromise or liquidation, or any other document, agreement or proposal similar to the foregoing by any Second Lien Collateral Agent or any other Second Lien Claimholder may be inconsistent with the terms of this Agreement;

(6) exercise any of its rights or remedies with respect to the Collateral after the termination of the Standstill Period to the extent permitted by Section 3.1(a)(1); and

(7) bid for or purchase any Collateral at any public, private or judicial foreclosure or exercise of a power of sale upon such Collateral initiated by the Directing First Lien Collateral Agent or any other First Lien Claimholder, or any sale of any Collateral during an Insolvency or Liquidation Proceeding; provided that such bid may not include a “credit bid” in respect of any Second Lien Obligations unless the cash proceeds of such bid are otherwise sufficient to cause the Discharge of First Lien Obligations.

(d) Subject to Sections 3.1(a)(1), 3.1(c) and 6.3(b), each Second Lien Collateral Agent, for itself and on behalf of its Related Second Lien Claimholders:

(1) agrees that it and its Related Second Lien Claimholders will not take any action that would hinder, delay, limit or prohibit any exercise of rights or remedies under the First Lien Documents or is otherwise prohibited hereunder, including any collection or Disposition of any Collateral, whether by foreclosure or otherwise, or that would limit, invalidate, avoid or set aside any Lien securing any First Lien Obligations or any First Lien Collateral Document or subordinate the priority of the First Lien Obligations to the Second Lien Obligations or grant the Liens securing the Second Lien Obligations equal ranking to the Liens securing the First Lien Obligations;

(2) hereby waives any and all rights it or its Related Second Lien Claimholders may have as a junior Lien creditor or otherwise (whether arising under the UCC or under any other law) to object to the manner in which the First Lien Collateral Agents or the other First Lien Claimholders seek to enforce or collect the First Lien Obligations or the Liens securing the First Lien Obligations, regardless of whether any action or failure to act by or on behalf of any First Lien Collateral Agent or any other First Lien Claimholders is adverse to the interest of any Second Lien Claimholders; and

(3) hereby acknowledges and agrees that no covenant, agreement or restriction contained in the Second Lien Collateral Documents or any other Second Lien Document shall be deemed to restrict in any way the rights and remedies of any First Lien Collateral Agent or the other First Lien Claimholders with respect to the Collateral as set forth in this Agreement and the First Lien Documents.

(e) The Second Lien Collateral Agents and the other Second Lien Claimholders may exercise rights and remedies as unsecured creditors against the Obligors that have guaranteed or granted Liens to secure the Second Lien Obligations in accordance with the terms of the Second Lien Documents and applicable law (other than initiating or joining in an involuntary case or proceeding under any Insolvency or Liquidation Proceeding with respect to any Obligor, prior to the termination of the Standstill Period); provided that (i) any such exercise shall not be inconsistent with the terms of this Agreement (including Section 6) and (ii) in the event that any Second Lien Claimholder becomes a judgment Lien creditor in respect of any Collateral as a result of its enforcement of its rights as an unsecured creditor with respect to the Second Lien Obligations, such judgment Lien shall be subject to the terms of this Agreement for all purposes (including in relation to the First Lien Obligations) as the other Liens securing the Second Lien Obligations are subject to this Agreement. Nothing in this Agreement shall prohibit the receipt by any Second Lien Collateral Agent or any other Second Lien Claimholder of the required payments of principal, premium, interest, fees and other amounts due under the Second Lien Documents so long as such receipt is not the direct or indirect result of the exercise by a Second Lien Collateral Agent or other Second Lien Claimholder of rights or remedies as a secured creditor in respect of Collateral.

SECTION 4. Payments.

4.1 Application of Proceeds. So long as the Discharge of First Lien Obligations has not occurred, whether or not any Insolvency or Liquidation Proceeding has been commenced by or against any Obligor, any Collateral or any proceeds (whether in cash or otherwise) thereof received in connection with any Enforcement Action or other exercise of rights or remedies by any First Lien Collateral Agent or the other First Lien Claimholders (including any Disposition referred to in Section 5.1), shall be applied by the First Lien Collateral Agents to the First Lien Obligations in accordance with the terms of the First Lien Documents, including any other intercreditor agreement among the First Lien Collateral Agents. Upon the Discharge of First Lien Obligations, each First Lien Collateral Agent shall deliver to the Directing Second Lien Collateral Agent any remaining Collateral and proceeds thereof then held by it in the same form as received, with any necessary endorsements (such endorsements shall be without recourse and without representation or warranty) to the Directing Second Lien Collateral Agent, or as a court of competent jurisdiction may otherwise direct, to be applied by the Second Lien Collateral Agents to the Second Lien Obligations in accordance with the terms of the Second Lien Documents, including any other intercreditor agreement among the Second Lien Collateral Agents.

4.2 Payments Over.

(a) So long as the Discharge of First Lien Obligations has not occurred, whether or not any Insolvency or Liquidation Proceeding has been commenced by or against any Obligor, any Collateral or proceeds thereof (including any assets or proceeds subject to Liens that have been avoided or otherwise invalidated), any assets or proceeds subject to Liens referred to in Section 2.3, any amounts referred to in the last sentence of Section 6.3(b) or any other distribution (whether or not expressly characterized as such) in respect of the Collateral (including in connection with any Disposition of any Collateral) received by any Second Lien Collateral Agent or any other Second Lien Claimholders in connection with any Enforcement Action or other exercise of any right or remedy (including set-off or recoupment) relating to the Collateral in contravention of this Agreement, or received by any Second Lien Collateral Agent or any other Second Lien Claimholders in connection with any insurance policy claim or any condemnation award (or deed in lieu of condemnation), in each case, shall be segregated and held in trust and forthwith paid over to the Directing First Lien Collateral Agent for the benefit of the First Lien Claimholders in the same form as received, with any necessary endorsements, or as a court of competent jurisdiction may otherwise direct.

(b) Except as otherwise set forth in Section 6.3, so long as the Discharge of First Lien Obligations has not occurred, if in any Insolvency or Liquidation Proceeding any Second Lien Collateral Agent or any other Second Lien Claimholders shall receive any distribution of money or other property in respect of or on account of the Collateral (including any assets or proceeds subject to Liens that have been avoided or otherwise invalidated or any amounts referred to in the last sentence of Section 6.3(b)), such money, other property or amounts shall be segregated and held in trust and forthwith paid over to the Directing First Lien Collateral Agent for the benefit of the First Lien Claimholders in the same form as received, with any necessary endorsements. Any Lien received by any Second Lien Collateral Agent or any other Second Lien Claimholders in respect of any of the Second Lien Obligations in any Insolvency or Liquidation Proceeding shall be subject to the terms of this Agreement.

(c) Until the Discharge of First Lien Obligations occurs, each Second Lien Collateral Agent, for itself and on behalf of its Related Second Lien Claimholders, hereby irrevocably constitutes and appoints the Directing First Lien Collateral Agent and any officer or agent of the Directing First Lien Collateral Agent, with full power of substitution, as its true and lawful attorney-in-fact with full irrevocable power and authority in the place and stead of such Second Lien Collateral Agent or any such Second Lien Claimholder or in the Directing First Lien Collateral Agent's own name, from time to time in the Directing First Lien Collateral Agent's discretion, for the purpose of carrying out the terms of this Section 4.2, to take any and all appropriate action and to execute any and all documents and instruments which may be necessary to accomplish the purposes of this Section 4.2, including any endorsements or other instruments of transfer or release. This power is coupled with an interest and is irrevocable until the Discharge of First Lien Obligations.

SECTION 5. Other Agreements.

5.1 Releases.

(a) In connection with any Enforcement Action by the Directing First Lien Collateral Agent or any other exercise by the Directing First Lien Collateral Agent of its rights or remedies in respect of the Collateral (including any Disposition of any of the Collateral by any Obligor, with the consent of the Directing First Lien Collateral Agent, after the occurrence and during the continuance of an "event of default" under the First Lien Documents), in each case, prior to the Discharge of First Lien Obligations, the Directing First Lien Collateral Agent is irrevocably authorized (at the cost of the Obligors in accordance with the terms of the applicable First Lien Financing Document and without any consent, sanction, authority or further confirmation from the Directing Second Lien Collateral Agent, any other Second Lien Claimholder or any Obligor): (i) to release any of its Liens on any part of the Collateral or any other claim over the asset that is the subject of such Enforcement Action, in which case the Liens or any other claim over the asset that is the subject of such Enforcement Action, if any, of any Second Lien Collateral Agent, for itself or for the benefit of the other Second Lien Claimholders, shall be automatically, unconditionally and simultaneously released to the same extent as the Liens or other claims of the Directing First Lien Collateral Agent and each other First Lien Collateral Agent are so released (and the Directing First Lien Collateral Agent is irrevocably authorized to execute and deliver or enter into any release of such Liens or claims that may, in the discretion of the Directing First Lien Collateral Agent, be considered necessary or reasonably desirable in connection with such releases); and (ii) if the asset that is the subject of such Enforcement Action consists of the equity interests of any Obligor, to release (x) such Obligor and any subsidiary of such Obligor from all or any part of its First Lien Obligations, in which case such Obligor and any subsidiary of such Obligor shall be automatically, unconditionally and simultaneously released to the same extent from its Second Lien Obligations, on behalf of the Second Lien Claimholders and the Obligors and (y) any Liens or other claims on any assets of such Obligor and any subsidiary of such Obligor, in which case the Liens or other claims on such assets of each Second Lien Collateral Agent, for itself or for the benefit of its Related Second Lien Claimholders, shall be automatically, unconditionally and simultaneously released to the same extent as such Liens of the Directing First Lien Collateral Agent and each other First Lien Collateral Agent are so released (and the Directing First Lien Collateral Agent is irrevocably authorized to execute and deliver or enter into any release of such Liens or claims that may, in the discretion of the Directing First Lien Collateral Agent, be considered necessary or reasonably desirable in connection with such releases). Each Second Lien Collateral Agent, for itself or on behalf of its Related Second Lien Claimholders, promptly shall execute and deliver to the Directing First Lien Collateral Agent or such Obligor such termination statements, releases and other documents as the Directing First Lien Collateral Agent or such Obligor may request to effectively confirm the foregoing releases promptly upon delivery to the Second Lien Collateral Agents of copies of such termination statements, releases and other documents used to effect such releases with respect to the Collateral securing the First Lien Obligations from a Responsible Officer of the requesting party. In the case of any Disposition of any of the Collateral that is subject to this Section 5.1(a) by the Directing First Lien Collateral Agent or by any Obligor with the consent of the Directing First Lien Collateral Agent (the party so Disposing of such Collateral being called the "**Disposing Party**"). The proceeds of any such Disposition shall be applied in accordance with Section 4.1; provided that the parties' respective Liens shall attach to such proceeds in the same priority as set forth in this Agreement (including Section 2.1 hereof) prior to such application.

(b) If in connection with any sale, lease, exchange, transfer or other disposition (collectively, a “**Disposition**”) of any Collateral (including any equity interests in an Obligor) by any Obligor permitted under the terms of both the First Lien Financing Documents and the Second Lien Financing Documents (other than in connection with an Enforcement Action or other exercise of any First Lien Collateral Agent’s rights or remedies in respect of the Collateral, which shall be governed by Section 5.1(a) above) the Liens on any part of the Collateral or the obligations of any Obligor under its guaranty of the First Lien Obligations shall have been automatically released in accordance with Section 9.18 of the First Lien Credit Agreement (or any similar provision of any First Lien Document), other than in connection with, or following, the Discharge of First Lien Obligations, then the Liens, if any, of each Second Lien Collateral Agent, for itself or for the benefit of its Related Second Lien Claimholders, on such Collateral, and the obligations of such Obligor under its guaranty of the Second Lien Obligations, shall be automatically, unconditionally and simultaneously released; provided that such release by such Second Lien Collateral Agent, for itself or for the benefit of its Related Second Lien Claimholders, shall not extend to or otherwise affect any of the rights of the Second Lien Claimholders to the proceeds from any such Disposition and the parties’ respective Liens shall attach to such proceeds in the same priority as set forth in this Agreement (including Section 2.1 hereof) prior to the application thereof in accordance with Section 4.1. Each Second Lien Collateral Agent, for itself or on behalf of its Related Second Lien Claimholders, promptly shall execute and deliver to the Directing First Lien Collateral Agent or such Obligor such termination statements, releases and other documents as the Directing First Lien Collateral Agent or such Obligor may request to effectively confirm such releases promptly upon delivery to the Second Lien Collateral Agents of copies of such termination statements, releases and other documents used to effect such release with respect to the Collateral securing the First Lien Obligations from a Responsible Officer of the Parent Borrower or the Directing First Lien Collateral Agent and an officer’s certificate of a Responsible Officer of the requesting party stating that such Disposition has been consummated in compliance with the terms of the Second Lien Credit Agreement.

(c) Until the Discharge of First Lien Obligations occurs, each Second Lien Collateral Agent, for itself and on behalf of its Related Second Lien Claimholders, hereby irrevocably constitutes and appoints the Directing First Lien Collateral Agent and any officer or agent of the Directing First Lien Collateral Agent, with full power of substitution, as its true and lawful attorney-in-fact with full irrevocable power and authority in the place and stead of such Second Lien Collateral Agent or such Second Lien Claimholders or in the Directing First Lien Collateral Agent's own name, from time to time in the Directing First Lien Collateral Agent's discretion, for the purpose of carrying out the terms of this Section 5.1, to take any and all appropriate action and to execute any and all documents and instruments which may be necessary to accomplish the purposes of this Section 5.1, including any endorsements or other instruments of transfer or release. This power is coupled with an interest and is irrevocable until the Discharge of First Lien Obligations occurs.

(d) Until the Discharge of First Lien Obligations occurs, to the extent that any First Lien Collateral Agent or the other First Lien Claimholders (i) have released any Lien on Collateral or any Obligor from its obligation under its guaranty and any such Liens or guaranty are later reinstated or (ii) obtain any additional guarantees from any Obligor or any subsidiary of Holdings, then each applicable Second Lien Collateral Agent, for itself and on behalf of its Related Second Lien Claimholders, shall be granted such Liens or guaranty.

(e) If, prior to the Discharge of First Lien Obligations, a subordination of the First Lien Collateral Agent's Lien on any Collateral is permitted (or in good faith believed by the Directing First Lien Collateral Agent to be permitted) under the First Lien Credit Agreement or other First Lien Financing Documents to another Lien permitted under the First Lien Credit Agreement or other First Lien Financing Documents (a "**Priority Lien**"), then the Directing First Lien Collateral Agent is authorized to execute and deliver a subordination agreement with respect thereto in form and substance satisfactory to it, and each Second Lien Collateral Agent, for itself and on behalf of the Second Lien Claimholders, shall promptly execute and deliver to the Directing First Lien Collateral Agent or the relevant Obligor an identical subordination agreement subordinating the Liens of such Second Lien Collateral Agent for the benefit of the Second Lien Claimholders to such Priority Lien.

5.2 Insurance and Condemnation Awards. Until the Discharge of First Lien Obligations has occurred, the Directing First Lien Collateral Agent (acting at the direction of, or pursuant to authority granted by, the Required First Lien Claimholders) shall have the sole and exclusive right, subject to the rights of the First Lien Obligors under the First Lien Financing Documents, to settle or adjust claims over any insurance policy covering the Collateral in the event of any loss thereunder and to approve any award granted in any condemnation or similar proceeding (or any deed in lieu of condemnation) affecting the Collateral. Until the Discharge of First Lien Obligations has occurred, and subject to the rights of the First Lien Obligors under the First Lien Financing Documents, all proceeds of any such policy and any such award (or any payments with respect to a deed in lieu of condemnation) in respect of the Collateral shall be paid to the Directing First Lien Collateral Agent for the benefit of the First Lien Claimholders pursuant to the terms of the First Lien Documents, including any other intercreditor agreement among the First Lien Collateral Agents (including, without limitation, for purposes of cash collateralization of commitments, First Lien Letters of Credit and obligations under First Lien Hedge Agreements governing any First Lien Secured Hedging Obligations) and thereafter, if the Discharge of First Lien Obligations has occurred, and subject to the rights of the Second Lien Obligors under the Second Lien Financing Documents, to the Directing Second Lien Collateral Agent for the benefit of the Second Lien Claimholders to the extent required under the Second Lien Financing Documents, and thereafter, if the Discharge of the Second Lien Obligations has occurred, to the owner of the subject property, as directed by the Parent Borrower or as a court of competent jurisdiction may otherwise direct. Until the Discharge of First Lien Obligations has occurred, if any Second Lien Collateral Agent or any other Second Lien Claimholders shall, at any time, receive any proceeds of any such insurance policy or any such award or payment in contravention of this Agreement, it shall segregate and hold in trust and forthwith pay such proceeds over to the Directing First Lien Collateral Agent in accordance with the terms of Section 4.2.

5.3 Amendments to the First Lien Financing Documents and Second Lien Financing Documents.

(a) The First Lien Financing Documents may be amended, restated, amended and restated, supplemented or otherwise modified in accordance with their terms, and the First Lien Financing Documents and any First Lien Obligations thereunder may be Refinanced, in each case, without notice to, or the consent of, any Second Lien Collateral Agent or any other Second Lien Claimholder, all without affecting the Lien subordination or other provisions of this Agreement; provided that the holders of such Refinancing debt bind themselves in a writing addressed to the Second Lien Collateral Agents and the other Second Lien Claimholders to the terms of this Agreement or another intercreditor agreement that is reasonably satisfactory to the First Lien Collateral Agents and the Second Lien Collateral Agents, and any such amendment, restatement, amendment and restatement, supplement, modification or Refinancing shall not, without the consent of the Directing Second Lien Collateral Agent (acting at the direction of the Required Second Lien Claimholders) contravene the provisions of this Agreement; provided, that notwithstanding the provisions of this Section 5.3(a) and for the avoidance of doubt, the First Lien Financing Documents may be amended, restated, amended and restated, supplemented or otherwise modified and/or Refinanced from time to time in accordance with their terms in order to effect the making or provision of (x) any First Lien Incremental Facility, (y) any First Lien Replacement Term Loan or First Lien Replacement Revolving Facility or (z) any Extended Term Loans, Extended Revolving Loans or Extended Revolving Credit Commitment (each as defined in the First Lien Credit Agreement as in effect on the date hereof), in each case, as and to the extent provided in the First Lien Credit Agreement as in effect on the date hereof, without notice to, or the consent of, any Second Lien Collateral Agent or any other Second Lien Claimholder.

(b) The Second Lien Financing Documents may be amended, restated, amended and restated, supplemented or otherwise modified in accordance with their terms, and the Second Lien Financing Documents and any Second Lien Obligations thereunder may be Refinanced, in each case, without notice to, or the consent of, any First Lien Collateral Agent or any other First Lien Claimholders (in each case, except to the extent such notice to or consent is otherwise expressly required under the First Lien Financing Documents), all without affecting the Lien subordination or other provisions of this Agreement; provided that the holders of such Refinancing debt (or a Representative thereof), if not already a party to this Agreement, bind themselves in a writing addressed to the First Lien Collateral Agents and the other First Lien Claimholders to the terms of this Agreement or another intercreditor agreement that is reasonably satisfactory to the First Lien Collateral Agents and the Second Lien Collateral Agents; provided, further, that notwithstanding the provisions of this Section 5.3(b) and for the avoidance of doubt, the Second Lien Financing Documents may be amended, restated, amended and restated, supplemented or otherwise modified and/or Refinanced from time to time in accordance with their terms in order to effect the making or provision of (x) any Second Lien Incremental Facility, (y) any Second Lien Replacement Loan or (z) any Extended Term Loans (each as defined in the Second Lien Credit Agreement as in effect on the date hereof), in each case, as and to the extent provided in the Second Lien Credit Agreement as in effect on the date hereof, without notice to, or the consent of, any First Lien Collateral Agent or any other First Lien Claimholder.

(c) [Reserved].

(d) In the event that any First Lien Collateral Agent or the First Lien Claimholders and the relevant Obligor(s) enter into any amendment, restatement, amendment and restatement, supplement, waiver, consent or other modification in respect of or that replaces any of the First Lien Collateral Documents for purposes of adding to, or deleting from, or waiving or consenting to any departures from any provisions of any First Lien Collateral Document or changing in any manner the rights of the applicable First Lien Collateral Agent, the First Lien Claimholders, or any Obligor thereunder, then such amendment, restatement, amendment and restatement, supplement, waiver, consent or other modification shall apply automatically to any comparable provisions of each comparable Second Lien Collateral Document without the consent of any Second Lien Collateral Agent, any Second Lien Claimholder or any Obligor; provided, however that (1) such amendment, restatement, amendment and restatement, supplement or other modification shall not (A) remove assets subject to any Liens on the Collateral securing any of the Second Lien Obligations or release any such Liens, except to the extent such removal of assets or release is permitted or required by Section 5.1 and provided there is a substantially concurrent removal of assets or release of the corresponding Liens securing the First Lien Obligations, (B) affect the rights or duties of any Second Lien Collateral Agent without its consent, (C) permit other Liens on the Collateral not permitted under the terms of the Second Lien Financing Documents or Section 6 hereof, or (D) otherwise materially adversely affect the rights of the applicable Second Lien Claimholders or the interest of the applicable Second Lien Claimholders in the Collateral and not the First Lien Collateral Agent or the First Lien Claimholders that have a Lien on the affected Collateral in a like manner, and (2) written notice of such amendment, restatement, amendment and restatement, supplement, waiver, consent or other modification shall have been given to each Second Lien Collateral Agent within five Business Days of the effectiveness thereof (it being understood and agreed that the failure to deliver such notice shall not impair the effectiveness of any such amendment, restatement, amendment and restatement, supplement or other modification).

5.4 Confirmation of Subordination in Second Lien Collateral Documents. Each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, agrees that each Second Lien Collateral Document shall include the following language (or language to similar effect approved by the Directing First Lien Collateral Agent):

“Notwithstanding anything herein to the contrary, the lien and security interest granted to the Second Lien Collateral Agent pursuant to this Agreement and the exercise of any right or remedy by the Second Lien Collateral Agent hereunder are subject to the provisions of the Intercreditor Agreement, dated as of [], 20[] (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Intercreditor Agreement”), by and among JEFFERIES FINANCE LLC, in its capacity as collateral agent under the First Lien Credit Agreement and the First Lien Collateral Documents relating thereto (in each case, as defined in the Intercreditor Agreement) (in such capacity and together with its successors and permitted assigns in such capacity, the “**First Lien Credit Agreement Collateral Agent**”), [], in its capacity as collateral agent under the Second Lien Credit Agreement and the Second Lien Collateral Documents relating thereto (in each case, as defined in the Intercreditor Agreement) (in such capacity and together with its successors and permitted assigns in such capacity, the “**Second Lien Credit Agreement Collateral Agent**”), each other REPRESENTATIVE (as defined in the Intercreditor Agreement) that is from time to time party thereto and acknowledged and agreed to by CERTARA HOLDCO, INC., a Delaware corporation (the “**Parent Borrower**”), CERTARA USA, INC., a Delaware corporation (the “**Co-Borrower**” and together with the Parent Borrower, the “**Borrowers**”), EQT AVATAR INTERMEDIATE, INC., a Delaware corporation (“**Holdings**”), and the other OBLIGORS (as defined below).”

5.5 Gratuitous Bailee/Agent for Perfection.

(a) The Directing First Lien Collateral Agent agrees to hold that part of the Collateral that is in its possession or control (or in the possession or control of its agents or bailees) to the extent that possession or control thereof is taken to perfect a Lien thereon under the UCC or other applicable law (such Collateral being the “**Pledged Collateral**”) as collateral agent for each other First Lien Collateral Agent and the First Lien Claimholders and as gratuitous bailee on behalf of and for the benefit of each Second Lien Collateral Agent (such bailment being intended, among other things, to satisfy the requirements of Sections 8-106(d)(3), 8-301(a)(2) and 9-313(c) of the UCC or equivalent provisions of other applicable law) and any permitted assignee thereof solely for the purpose of perfecting, or improving the priority of, the security interest granted under the First Lien Collateral Documents and the Second Lien Collateral Documents, as applicable, subject to the terms and conditions of this Section 5.5.

(b) Until the Discharge of First Lien Obligations has occurred, the Directing First Lien Collateral Agent shall be entitled to deal with the Pledged Collateral in accordance with the terms of the First Lien Financing Documents as if the Liens of any Second Lien Collateral Agent under the Second Lien Collateral Documents did not exist. The rights of each Second Lien Collateral Agent shall at all times be subject to the terms of this Agreement and to each First Lien Collateral Agent’s rights under the First Lien Financing Documents.

(c) No Collateral Agent shall have any obligation whatsoever to any Claimholder to ensure that the Pledged Collateral is genuine or owned by any of the Obligors or to preserve rights or benefits of any Person with respect thereto except as expressly set forth in this [Section 5.5](#) or, in the case of any Second Lien Collateral Agent, the other provisions hereof (including the turnover provisions set forth in [Section 4.2](#)). The duties or responsibilities of each Collateral Agent under this [Section 5.5](#) shall be limited solely to holding the Pledged Collateral as bailee in accordance with this [Section 5.5](#) and, in the case of any First Lien Collateral Agent, delivering the Pledged Collateral to the Directing Second Lien Collateral Agent upon a Discharge of First Lien Obligations as provided in [paragraph \(e\)](#) below or, in the case of any Second Lien Collateral Agent, delivering the Pledged Collateral to the Directing First Lien Collateral Agent in accordance with the provisions hereof (including the turnover provisions set forth in [Section 4.2](#)).

(d) Each Collateral Agent, for itself and on behalf of its Related Claimholders, hereby waives and releases each other Collateral Agent and each other Claimholder from all claims and liabilities arising pursuant to any Collateral Agent's role under this [Section 5.5](#) as gratuitous bailee and gratuitous agent with respect to the Pledged Collateral. None of the First Lien Collateral Agents or any other First Lien Claimholders shall have by reason of the First Lien Collateral Documents, the Second Lien Collateral Documents, this Agreement or any other document, a fiduciary relationship in respect of any Second Lien Collateral Agent or any other Second Lien Claimholder, and each Second Lien Collateral Agent and the other Second Lien Claimholders hereby waive and release the Directing First Lien Collateral Agent, each other First Lien Collateral Agent and each other First Lien Claimholder from all claims and liabilities arising pursuant to the Directing First Lien Collateral Agent's role under this [Section 5.5](#) as gratuitous bailee with respect to the Pledged Collateral. It is understood and agreed that the interests of the First Lien Collateral Agents and the other First Lien Claimholders, on the one hand, and the Second Lien Collateral Agents and the other Second Lien Claimholders, on the other hand, may differ and that the First Lien Collateral Agents and the other First Lien Claimholders shall be fully entitled to act in their own interest without taking into account the interests of the Second Lien Collateral Agents or the other Second Lien Claimholders.

(e) Upon the Discharge of First Lien Obligations, the Directing First Lien Collateral Agent shall deliver the remaining Pledged Collateral in its possession (if any) (or proceeds thereof) together with any necessary endorsements (such endorsement shall be without recourse and without any representation or warranty), first, to the Directing Second Lien Collateral Agent, to the extent the Discharge of Second Lien Obligations has not occurred, and second, upon the Discharge of Second Lien Obligations, to the Obligors to the extent no Obligations remain outstanding (in each case, so as to allow such Person to obtain possession or control of such Pledged Collateral) or as a court of competent jurisdiction or applicable laws may otherwise direct. Following the Discharge of First Lien Obligations, the Directing First Lien Collateral Agent further agrees to take, at the expense of the Obligors (which expense reimbursement shall be subject to the provisions of the applicable First Lien Documents), all other actions reasonably requested by the Directing Second Lien Collateral Agent in connection with the Directing Second Lien Collateral Agent obtaining a first-priority interest in the Pledged Collateral.

5.6 When Discharge of First Lien Obligations Deemed to Not Have Occurred. If, substantially concurrently with or after the Discharge of First Lien Obligations having occurred, any Borrower or any other First Lien Obligor enters into any Refinancing of any First Lien Financing Document evidencing a First Lien Obligation, which Refinancing is permitted hereby and by the terms of the Second Lien Financing Documents, then such Discharge of First Lien Obligations shall automatically be deemed not to have occurred for all purposes of this Agreement, and the obligations under such Refinancing of the First Lien Financing Document shall automatically be treated as First Lien Obligations for all purposes of this Agreement, including for purposes of the Lien priorities and rights in respect of the Collateral set forth herein, and the New First Lien Agent (as defined below) under such First Lien Financing Documents shall be a First Lien Collateral Agent (and, if applicable in accordance with the definition of such term, the Directing First Lien Collateral Agent) for all purposes of this Agreement. Upon receipt of a notice from the Parent Borrower or any other First Lien Obligor stating that the Parent Borrower or such other First Lien Obligor has entered into a Refinancing of any First Lien Financing Document (which notice shall include the identity of the new first lien collateral agent (such agent, the “**New First Lien Agent**”)), each Collateral Agent shall promptly (a) enter into such documents and agreements (including amendments or supplements to, or amendment and restatement of, this Agreement) as the Parent Borrower, such other First Lien Obligor or the New First Lien Agent shall reasonably request in order to provide to the New First Lien Agent the rights contemplated hereby, in each case consistent in all material respects with the terms of this Agreement and (b) in the case of each Second Lien Collateral Agent only, deliver to the New First Lien Agent (if it is the Directing First Lien Collateral Agent) any Pledged Collateral held by it together with any necessary endorsements (or otherwise allow the New First Lien Agent to obtain control of such Pledged Collateral). The New First Lien Agent shall agree in a writing addressed to the other Collateral Agents and the other Claimholders to be bound by the terms of this Agreement, for itself and on behalf of its Related First Lien Claimholders. If the new First Lien Obligations under the new First Lien Financing Documents are secured by assets of the Obligors constituting Collateral that do not also secure the Second Lien Obligations, then the Second Lien Obligations shall be secured at such time by a second priority Lien on such assets to the same extent provided in the Second Lien Collateral Documents and this Agreement.

5.7 Purchase Right.

(a) Without prejudice to the enforcement of any of the First Lien Claimholders' rights or remedies under this Agreement, any other First Lien Financing Documents, at law or in equity or otherwise, each First Lien Collateral Agent, on behalf of itself and its Related First Lien Claimholders, agrees that at any time following (i) an acceleration of all the First Lien Obligations in accordance with the terms of the First Lien Financing Documents or (ii) the commencement of any Insolvency or Liquidation Proceeding with respect to any Obligor which constitutes an Event of Default (as defined in the First Lien Credit Agreement or any similar terms in any other First Lien Document) (each a "**Purchase Event**"), the Second Lien Claimholders shall have the right, upon written request to the Directing First Lien Collateral Agent within 30 days after the first date on which a Purchase Event occurs (the "**Exercise Period**"), to purchase the entire aggregate outstanding amount of the First Lien Obligations (and to assume the entire amount of unfunded commitments under the First Lien Financing Documents), for an amount equal to the Purchase Price (together with the deposit of cash collateral as set forth below), without warranty or representation or recourse except as provided in Section 5.7(c). The Purchase Price shall be accompanied by delivery to the Directing First Lien Collateral Agent of cash collateral in immediately available funds, to be deposited under the sole dominion and control of the Directing First Lien Collateral Agent, in such amount as the Directing First Lien Collateral Agent determines is reasonably necessary to secure the First Lien Claimholders in connection with any issued and outstanding First Lien Letters of Credit under the First Lien Financing Documents but in any event not to exceed 105% of the sum of (x) the aggregate undrawn amount of all such First Lien Letters of Credit outstanding pursuant to the First Lien Financing Documents and (y) the aggregate facing and similar fees which will accrue thereon through the stated maturity of the First Lien Letters of Credit (assuming no drawings thereon before stated maturity). It is understood and agreed that (i) at the time any facing or similar fees are owing to an issuer with respect to any First Lien Letter of Credit, the Directing First Lien Collateral Agent may apply amounts deposited with it as described above to pay same and (ii) upon any drawing under any First Lien Letter of Credit, the Directing First Lien Collateral Agent shall apply amounts deposited with it as described above to repay the respective unpaid drawing. After giving effect to any payment made as described above in this paragraph (a), those amounts (if any) then on deposit with the Directing First Lien Collateral Agent as cash collateral, described in this paragraph (a) which exceed 105% of the sum of the aggregate undrawn amount of all then outstanding First Lien Letters of Credit and the aggregate facing and similar fees (to the respective issuers) which will accrue thereon through the stated maturity of the then outstanding First Lien Letters of Credit (assuming no drawings thereon before stated maturity), shall be returned to the respective purchaser or purchasers, as their interests appear. Furthermore, at such time as all First Lien Letters of Credit have been cancelled, expired or been fully drawn, as the case may be, and after all applications described above have been made, any excess cash collateral then on deposit with the Directing First Lien Collateral Agent as described above in this paragraph (a) (and not previously applied or released as provided above) shall be returned to the respective purchaser or purchasers, as their interests appear.

(b) If such purchase right is exercised, the parties shall endeavor to close shortly thereafter but in any event within 10 Business Days of such request. The Second Lien Claimholders shall only be permitted to acquire the entire amount of the First Lien Obligations pursuant to this Section 5.7, and may not acquire less than all of such First Lien Obligations. If any Second Lien Claimholders exercise such purchase right, it shall be exercised pursuant to documentation mutually acceptable to each of the First Lien Collateral Agents and the relevant Second Lien Collateral Agents. If none of the Second Lien Claimholders exercise such right during the Exercise Period, the First Lien Claimholders shall have no further obligations pursuant to this Section 5.7 and may take any further actions in their sole discretion in accordance with the First Lien Documents and this Agreement. Each First Lien Claimholder will retain all rights to indemnification and expense reimbursement provided in the relevant First Lien Documents for all claims and other amounts relating to periods prior to the purchase of the First Lien Obligations pursuant to this Section 5.7. Upon the consummation of the purchase and sale of the First Lien Obligations, each First Lien Collateral Agent shall, at the request of the Directing Second Lien Collateral Agent, resign from its role in accordance with the applicable First Lien Document (and comply with any provisions contained therein with respect to successors to such role or the powers granted in connection with such role) and cooperate with an orderly transition of Liens in the Collateral.

(c) The purchase and sale of the First Lien Obligations under this Section 5.7 will be without recourse and without representation or warranty of any kind by the First Lien Claimholders, except that the First Lien Claimholders shall severally and not jointly represent and warrant to the Second Lien Claimholders that on the date of the purchase, immediately before giving effect to such purchase:

(1) the principal of and accrued and unpaid interest on the First Lien Obligations, and the fees, expenses and other amounts in respect thereof owed to the respective First Lien Claimholders, are as stated in any assignment agreement prepared in connection with the purchase and sale of the First Lien Obligations;

(2) each First Lien Claimholder owns the First Lien Obligations purported to be owned by it free and clear of any Liens; and

(3) that such First Lien Claimholder has the right to assign the First Lien Obligations being assigned by it and its assignment has been duly authorized and delivered.

SECTION 6. Insolvency or Liquidation Proceedings.

6.1 Finance and Sale Issues.

(a) Until the Discharge of First Lien Obligations has occurred, if any Obligor shall be subject to any Insolvency or Liquidation Proceeding and the Directing First Lien Collateral Agent shall desire to permit the use of “Cash Collateral” (as such term is defined in Section 363(a) of the Bankruptcy Code or any similar Debtor Relief Law) on which the First Lien Collateral Agents or any other creditor has a Lien or to permit any Obligor to obtain financing, whether from the First Lien Claimholders or any other Person, under Section 364 of the Bankruptcy Code or any similar Debtor Relief Law (“**DIP Financing**”), then each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, agrees that it and its Related Second Lien Claimholders will raise no objection to, or oppose or contest (or join with or support any third party opposing, objecting or contesting), such Cash Collateral use or DIP Financing (including any proposed orders for such Cash Collateral use and/or DIP Financing which are acceptable to the Directing First Lien Collateral Agent) and it and its Related Second Lien Claimholders will be deemed to have consented to such Cash Collateral use or DIP Financing (including such proposed orders), and to the extent the Liens securing the First Lien Obligations are subordinated to or *pari passu* with such DIP Financing, each Second Lien Collateral Agent will be deemed to have subordinated its Liens in the Collateral to the Liens securing such DIP Financing (and all obligations relating thereto and any customary “carve-outs” agreed to on behalf of the First Lien Claimholders by the Directing First Lien Collateral Agent) and to all Liens granted to the First Lien Claimholders on the same basis as the Liens securing the Second Lien Obligations are subordinated to the Liens securing the First Lien Obligations under this Agreement and will not request adequate protection or any other relief in connection therewith (except as expressly agreed by the Directing First Lien Collateral Agent or to the extent permitted by Section 6.3); provided that (x) the aggregate principal amount of Indebtedness for borrowed money under the DIP Financing plus the aggregate outstanding principal amount of Indebtedness for borrowed money under the First Lien Financing Documents (which, for the avoidance of doubt, excludes any First Lien Other Obligations) plus the aggregate face amount of any First Lien Letters of Credit (except any portion thereof that is no longer available for drawing as a result of any disbursement thereunder that has been reimbursed) does not exceed the Cap Amount and (y) nothing herein shall prevent the Second Lien Claimholders from proposing a DIP Financing secured by Liens that are junior to the Liens securing the First Lien Obligations.

(b) Each Second Lien Collateral Agent, for itself and on behalf of its Related Second Lien Claimholders, agrees that it and its Related Second Lien Claimholders will not (i) raise any objection to, or support any objection to or otherwise contest, any lawful exercise by any First Lien Claimholder of the right to credit bid the First Lien Obligations under Section 363(k) of the Bankruptcy Code (or any similar provision under or made pursuant to any other applicable Debtor Relief Law) or at any sale in foreclosure of or exercise of a power of sale over any Collateral or other collateral securing any First Lien Obligations or (ii) seek consultation rights in connection with, and will raise no objection or oppose or contest (or join with or support any third party objecting, opposing or contesting) a motion to sell, liquidate or otherwise Dispose of Collateral under Section 363 of the Bankruptcy Code (or any similar provision under or order made pursuant to any other applicable law) if the requisite First Lien Claimholders have consented to such sale, liquidation or other Disposition; provided that (1)(a) to the extent the net cash proceeds of such sale or other Disposition are used to pay the principal amount of Indebtedness for borrowed money constituting First Lien Obligations, or to reimburse disbursements under, or cash collateralize the face amount of, the First Lien Letters of Credit constituting First Lien Obligations, the Liens of the Second Lien Secured Parties shall attach to any remaining proceeds and (b) the parties' respective Liens otherwise attach to the net cash proceeds of such sale or other Disposition subject to the same priorities set forth herein (including Section 2.1) to the extent such proceeds are not so immediately used to pay the First Lien Obligations, and (2) such motion does not impair the rights of the Second Lien Claimholders under Section 363(k) of the Bankruptcy Code (or any similar provision under or order made pursuant to any other applicable law).

6.2 Relief from the Automatic Stay. Until the Discharge of First Lien Obligations has occurred, each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, agrees that none of them shall (a) seek (or support any other Person seeking) relief from or modification of the automatic stay or any other stay in any Insolvency or Liquidation Proceeding in respect of any of the Collateral, in each case without the prior written consent of the Directing First Lien Collateral Agent, or (b) oppose (or support any other Person in opposing) any request by any First Lien Collateral Agent for relief from or modification of such stay.

6.3 Adequate Protection.

(a) Each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, agrees that none of them shall contest (or support any other Person contesting):

(i) any request by any First Lien Collateral Agent or the other First Lien Claimholders for adequate protection under any Debtor Relief Law; or

(ii) any objection by any First Lien Collateral Agent or the other First Lien Claimholders to any motion, relief, action or proceeding based on such First Lien Collateral Agent or the other First Lien Claimholders claiming a lack of adequate protection with respect to the Collateral.

(b) Notwithstanding the foregoing provisions in this Section 6.3, in any Insolvency or Liquidation Proceeding:

(i) if the First Lien Claimholders (or any subset thereof) are granted adequate protection in the form of a Lien on additional or replacement collateral in connection with any use of Cash Collateral or DIP Financing, then each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, may seek or request adequate protection in the form of a Lien on such additional or replacement collateral, which Lien will be subordinated to the Liens securing the First Lien Obligations and such use of Cash Collateral or DIP Financing (and all obligations relating thereto) on the same basis as the other Liens securing the Second Lien Obligations are so subordinated to the Liens securing the First Lien Obligations under this Agreement; and

(ii) the Second Lien Collateral Agents and the other Second Lien Claimholders shall only be permitted to seek adequate protection with respect to their respective rights in the Collateral in any Insolvency or Liquidation Proceeding in the form of (A) a Lien on additional collateral; provided that as adequate protection for the First Lien Obligations, each First Lien Collateral Agent, on behalf of itself and its Related First Lien Claimholders, is also granted a Lien on such additional collateral that is senior to any Lien thereon granted to the Second Lien Collateral Agents and the other Second Lien Claimholders; (B) a Lien on replacement collateral; provided that as adequate protection for the First Lien Obligations, each First Lien Collateral Agent, on behalf of itself and its Related First Lien Claimholders, is also granted a Lien on such replacement collateral that is senior to any Lien thereon granted to the Second Lien Collateral Agents and the other Second Lien Claimholders; (C) an administrative expense claim; provided that as adequate protection for the First Lien Obligations, each First Lien Collateral Agent, on behalf of itself and its Related First Lien Claimholders, is also granted an administrative expense claim that is senior and prior to the administrative expense claim of the Second Lien Collateral Agents and the other Second Lien Claimholders; and (D) cash payments with respect to current fees and expenses; provided that (1) as adequate protection for the First Lien Obligations, each First Lien Collateral Agent, on behalf of itself and its Related First Lien Claimholders, is also granted cash payments with respect to current fees and expenses and (2) each First Lien Collateral Agent may object to the amounts of fees and expenses sought by the Second Lien Collateral Agents and the other Second Lien Claimholders; and (E) cash payments with respect to interest on the Second Lien Obligations; provided that (1) as adequate protection for the First Lien Obligations, each First Lien Collateral Agent, on behalf of itself and its Related First Lien Claimholders, is also granted cash payments with respect to interest on the First Lien Obligations represented by it, (2) such cash payments do not exceed an amount equal to the interest accruing on the principal amount of Second Lien Obligations outstanding on the date such relief is granted at the interest rate under the applicable Second Lien Financing Documents and accruing from the date the applicable Second Lien Collateral Agent is granted such relief and (3) such cash payments are held in the Escrow Account as described below. If any Second Lien Claimholder is entitled by order of a court of competent jurisdiction to receive or receives adequate protection payments for post-petition interest in an Insolvency or Liquidation Proceeding (“**Second Lien Adequate Protection Interest Payments**”), and a Discharge of First Lien Obligations does not occur in connection therewith, then all such payments shall be payable or transferred to, and held in, an escrow account (the “**Escrow Account**”) pursuant to terms mutually satisfactory to the Directing First Lien Collateral Agent and the Directing Second Lien Collateral Agent, in each case until the effectiveness of the plan of reorganization, plan of arrangement, plan of compromise or arrangement, proposal or similar dispositive restructuring plan for, or conclusion of, that Insolvency or Liquidation Proceeding. If the First Lien Claimholders do not receive payment in full in cash of all First Lien Obligations upon the effectiveness of the plan of reorganization, plan of arrangement, plan of compromise or arrangement, proposal or similar dispositive restructuring plan for, or conclusion of, that Insolvency or Liquidation Proceeding, then, each Second Lien Claimholder agrees that an amount contained in the Escrow Account shall be paid over to the First Lien Claimholders (the “**Pay-Over Amount**”) equal to the lesser of (x) the Second Lien Adequate Protection Interest Payments received by such Second Lien Claimholders and (y) the amount of the short-fall (the “**Short Fall**”) in payments needed to achieve a Discharge of First Lien Obligations; provided that to the extent any portion of the Short Fall represents payments received by the First Lien Claimholders in the form of promissory notes, equity or other property equal in value to the cash paid in respect of the Pay-Over Amount, the First Lien Claimholders shall, upon receipt of the Pay-Over Amount, transfer those promissory notes, equity or other property, equal in value to the cash paid in respect of the Pay-Over Amount, to the applicable Second Lien Claimholders pro rata in exchange for the Pay-Over Amount. Upon the effectiveness of the plan of reorganization, plan of arrangement, proposal for a composition, scheme or plan of arrangement or similar dispositive restructuring plan for, or conclusion of, that Insolvency or Liquidation Proceeding, any amounts remaining in the Escrow Account after application of amounts provided for above shall be paid to the Second Lien Claimholders as their interests may appear. It is understood and agreed that nothing in this Section 6.3(b) shall modify or otherwise affect the other agreements by or on behalf of the Second Lien Collateral Agents and the other Second Lien Claimholders set forth in this Agreement (including the agreements to raise no objection to, or oppose or contest, that are set forth in Section 6.01). To the extent the First Lien Collateral Agents are not granted such adequate protection in the applicable form, any amounts recovered by or distributed to any Second Lien Collateral Agent or any other Second Lien Claimholder pursuant to or as a result of any such additional collateral, any such replacement Lien, any such administrative expense claim or any such cash payment shall be subject to Section 4.2.

6.4 No Waiver. Subject to Section 6.7(b), nothing contained herein shall prohibit or in any way limit any First Lien Collateral Agent or any other First Lien Claimholder from objecting in any Insolvency or Liquidation Proceeding or otherwise to any action taken by any Second Lien Collateral Agent or any other Second Lien Claimholders, including the seeking by any Second Lien Collateral Agent or any other Second Lien Claimholders of adequate protection or the assertion by any Second Lien Collateral Agent or any other Second Lien Claimholders of any of its rights and remedies under the Second Lien Financing Documents or otherwise. Without limiting the foregoing, notwithstanding anything herein to the contrary, the First Lien Claimholders shall not be deemed to have consented to, and expressly retain their rights to object to, the grant of adequate protection in the form of cash payments to the Second Lien Claimholders made pursuant to Section 6.3(b).

6.5 Reinstatement. If any First Lien Claimholder is required in any Insolvency or Liquidation Proceeding or otherwise to turn over or otherwise pay to the estate of any Obligor any amount paid in respect of First Lien Obligations (a “**Recovery**”), then such First Lien Claimholder shall be entitled to a reinstatement of its First Lien Obligations with respect to all such recovered amounts on the date of such Recovery, and from and after the date of such reinstatement the Discharge of First Lien Obligations shall be deemed not to have occurred for all purposes hereunder. If this Agreement shall have been terminated prior to such Recovery, this Agreement shall be reinstated in full force and effect, and such prior termination shall not diminish, release, discharge, impair or otherwise affect the obligations of the parties hereto from such date of reinstatement. Any amounts received by any Second Lien Collateral Agent or any other Second Lien Claimholder on account of the Second Lien Obligations after the termination of this Agreement shall, upon a reinstatement of this Agreement pursuant to this Section 6.5, be segregated and held in trust for and paid over to the Directing First Lien Collateral Agent for the benefit of the First Lien Claimholders, for application to the reinstated First Lien Obligations. This Section 6.5 shall survive termination of this Agreement.

6.6 Reorganization Securities; Voting.

(a) If, in any Insolvency or Liquidation Proceeding, debt obligations of the reorganized debtor secured by Liens upon any property of the reorganized debtor are distributed pursuant to a plan of reorganization, arrangement, compromise or liquidation or similar dispositive restructuring plan, both on account of First Lien Obligations and on account of Second Lien Obligations, then, to the extent the debt obligations distributed on account of the First Lien Obligations and on account of the Second Lien Obligations are secured by Liens upon the same property, the provisions of this Agreement will survive the distribution of such debt obligations pursuant to such plan and will apply with like effect to the Liens securing such debt obligations.

(b) No Second Lien Claimholder may support or vote in favor of any plan of reorganization, plan of arrangement, proposal for a composition, scheme or plan of arrangement or similar dispositive restructuring plan that is not consistent with the terms of this Agreement other than (x) with the prior written consent of the Directing First Lien Collateral Agent or (y) to the extent any such plan (i) provides for the Discharge of First Lien Obligations or (ii) is proposed or supported by the number of First Lien Claimholders required under Section 1126(c) of the Bankruptcy Code.

6.7 Post-Petition Interest.

(a) Each Second Lien Collateral Agent, for itself and on behalf of its Related Second Lien Claimholders, agrees that neither it nor its Related Second Lien Claimholders shall oppose or seek to challenge (or join with any other Person opposing or challenging) any claim by any First Lien Collateral Agent or any other First Lien Claimholder for allowance in any Insolvency or Liquidation Proceeding of First Lien Obligations consisting of Post-Petition Interest. Regardless of whether any such claim for Post-Petition Interest is allowed or allowable, and without limiting the generality of the other provisions of this Agreement, this Agreement expressly is intended to include, and does include, the “rule of explicitness,” and is intended to provide the First Lien Claimholders with the right to receive payment of all Post-Petition Interest through distributions made pursuant to the provisions of this Agreement even though such Post-Petition Interest may not be not allowed or allowable against the bankruptcy estate of the Parent Borrower or any other Obligor under Section 502(b)(2) or Section 506(b) of the Bankruptcy Code or under any other provision of the Bankruptcy Code or any other Debtor Relief Law.

(b) Except to the extent otherwise provided herein, and subject to Section 6.3(b), neither any First Lien Collateral Agent nor any of its Related First Lien Claimholders shall oppose or seek to challenge any claim by any Second Lien Collateral Agent or any other Second Lien Claimholder for allowance in any Insolvency or Liquidation Proceeding of Second Lien Obligations consisting of Post-Petition Interest so long as the First Lien Claimholders are receiving Post-Petition Interest in at least the same form being requested by the Second Lien Claimholders and then only to the extent of the value of the Lien of any Second Lien Collateral Agent, on behalf of the Second Lien Claimholders, on the Collateral (after taking into account the amount of the First Lien Obligations); provided however, that to the extent that any such payments are later recharacterized as payments of principal by the applicable bankruptcy court, such payments shall, upon such recharacterization, be turned over to the First Lien Claimholders and applied to the First Lien Obligations in accordance with Section 4.1 hereof.

6.8 Waivers. (a) Each Second Lien Collateral Agent, for itself and on behalf of its Related Second Lien Claimholders, waives any claim it or its Related Second Lien Claimholders may hereafter have against any First Lien Claimholder arising out of (a) the election of any First Lien Claimholder of the application of Section 1111(b)(2) of the Bankruptcy Code or any similar provision of any other Debtor Relief Law or (b) any cash collateral or financing arrangement, or any grant of a security interest in connection with the Collateral, in any Insolvency or Liquidation Proceeding so long as such actions are not in express contravention of the terms of this Agreement.

(b) Each Second Lien Collateral Agent, for itself and on behalf of its Related Second Lien Claimholders, agrees that it will not assert or enforce any claim under Section 506(c) of the Bankruptcy Code or any similar provision of any other Debtor Relief Law senior to or on a parity with the Liens securing the First Lien Obligations for costs or expenses of preserving or disposing of any Collateral.

6.9 Separate Grants of Security and Separate Classification. Each Second Lien Collateral Agent, for itself and on behalf of its Related Second Lien Claimholders, and each First Lien Collateral Agent, for itself and on behalf of its Related First Lien Claimholders, acknowledges and agrees that:

(a) the grants of Liens pursuant to the First Lien Collateral Documents and the Second Lien Collateral Documents constitute two separate and distinct grants of Liens; and

(b) with respect to any Insolvency or Liquidation Proceeding under the Bankruptcy Code or any other Debtor Relief Law, because of, among other things, their differing rights in the Collateral, the Second Lien Obligations are fundamentally different from the First Lien Obligations and must, subject to applicable law, be separately classified in any plan of reorganization, plan of arrangement, proposal for a composition, scheme or plan of arrangement or similar dispositive restructuring plan proposed, confirmed or adopted in an Insolvency or Liquidation Proceeding.

To further effectuate the intent of the parties as provided in the immediately preceding sentence, if it is held that the claims of the First Lien Claimholders and the Second Lien Claimholders in respect of the Collateral constitute only one secured claim (rather than separate classes of senior and junior secured claims), then each of the parties hereto hereby acknowledges and agrees that, subject to Sections 2.1 and 4.1, all distributions shall be made as if there were separate classes of senior and junior secured claims against the Obligors in respect of the Collateral (with the effect being that, to the extent that the aggregate value of the Collateral is sufficient (for this purpose ignoring all claims held by the Second Lien Claimholders), the First Lien Claimholders shall be entitled to receive, in addition to amounts distributed to them in respect of principal, pre-petition interest and other claims, all amounts owing (or that would be owing if there were such separate classes of senior and junior secured claims) in respect of Post-Petition Interest, including any additional interest payable pursuant to the First Lien Documents arising from or related to a default, regardless of whether any such claim is allowed or allowable in any Insolvency or Liquidation Proceeding, before any distribution is made in respect of the claims held by the Second Lien Claimholders with respect to the Collateral, with each Second Lien Collateral Agent, for itself and on behalf of its Related Second Lien Claimholders, hereby acknowledging and agreeing to turn over to the Directing First Lien Collateral Agent, for itself and on behalf of the First Lien Claimholders, the Collateral or proceeds of the Collateral or any other distribution (whether or not expressly characterized as such) in respect of the Collateral, otherwise received or receivable by them to the extent necessary to effectuate the intent of this sentence, even if such turnover has the effect of reducing the claim or recovery of the Second Lien Claimholders.

6.10 Effectiveness in Insolvency Proceedings. The parties acknowledge that this Agreement is a “subordination agreement” under Section 510(a) of the Bankruptcy Code and under comparable provisions of any other applicable law, which will be effective before, during and after the commencement of any Insolvency or Liquidation Proceeding. All references in this Agreement to any Obligor will include such Person as a debtor-in-possession and any receiver or trustee for such Person in any Insolvency or Liquidation Proceeding.

SECTION 7. Reliance; Waivers; Etc.

7.1 Reliance. Other than any reliance on the terms of this Agreement, each First Lien Collateral Agent, on behalf of itself and its Related First Lien Claimholders, acknowledges that it and its Related First Lien Claimholders have, independently and without reliance on any Second Lien Collateral Agent or any other Second Lien Claimholder, and based on documents and information deemed by them appropriate, made their own credit analysis and decision to enter into each of the First Lien Documents (as applicable) and be bound by the terms of this Agreement, and they will continue to make their own credit decision in taking or not taking any action under the First Lien Documents or this Agreement. Each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, acknowledges that it and its Related Second Lien Claimholders have, independently and without reliance on any First Lien Collateral Agent or any other First Lien Claimholder, and based on documents and information deemed by them appropriate, made their own credit analysis and decision to enter into each of the Second Lien Documents (as applicable) and be bound by the terms of this Agreement, and they will continue to make their own credit decision in taking or not taking any action under the Second Lien Documents or this Agreement.

7.2 No Warranties or Liability.

(a) Each First Lien Collateral Agent, on behalf of itself and its Related First Lien Claimholders, acknowledges and agrees that, except as set forth in Section 8.14, no Second Lien Collateral Agent or other Second Lien Claimholder has made any express or implied representation or warranty, including with respect to the execution, validity, legality, completeness, collectability or enforceability of any of the Second Lien Documents, the ownership of any Collateral or the perfection or priority of any Liens thereon. The Second Lien Claimholders will be entitled to manage and supervise their respective extensions of credit under the Second Lien Documents in accordance with law and as they may otherwise, in their sole discretion, deem appropriate.

(b) Each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, acknowledges and agrees that, except as set forth in Section 8.14, no First Lien Collateral Agent or other First Lien Claimholder has made any express or implied representation or warranty, including with respect to the execution, validity, legality, completeness, collectability or enforceability of any of the First Lien Documents, the ownership of any Collateral or the perfection or priority of any Liens thereon. The First Lien Claimholders will be entitled to manage and supervise their respective loans and extensions of credit under the First Lien Documents in accordance with law and as they may otherwise, in their sole discretion, deem appropriate.

(c) The Second Lien Collateral Agents and the other Second Lien Claimholders shall have no duty to the First Lien Collateral Agents or any of the other First Lien Claimholders, and the First Lien Collateral Agents and the other First Lien Claimholders shall have no duty to the Second Lien Collateral Agents or any of the other Second Lien Claimholders, to act or refrain from acting in a manner which allows, or results in, the occurrence or continuance of an event of default or default under any agreements with any Obligor (including the First Lien Financing Documents and the Second Lien Financing Documents, but in each case other than this Agreement), regardless of any knowledge thereof which they may have or be charged with.

7.3 No Waiver of Lien Priorities.

(a) No right of the First Lien Collateral Agents or any other First Lien Claimholders, or any of them, to enforce any provision of this Agreement or of any First Lien Document shall at any time in any way be prejudiced or impaired by any act or failure to act on the part of any Obligor or by any act or failure to act by any First Lien Collateral Agent or any other First Lien Claimholder, or by any noncompliance by any Person with the terms, provisions and covenants of this Agreement, any of the First Lien Documents or any of the Second Lien Documents, regardless of any knowledge thereof which the First Lien Collateral Agents or the other First Lien Claimholders, or any of them, may have or be otherwise charged with.

(b) Without in any way limiting the generality of the foregoing paragraph (a) (but subject to the rights of the First Lien Obligors under the First Lien Documents and subject to the provisions of Section 5.3(a)), the First Lien Collateral Agents and the other First Lien Claimholders, or any of them, may at any time and from time to time in accordance with the First Lien Documents and/or applicable law, without the consent of, or notice to, any Second Lien Collateral Agent or any other Second Lien Claimholders, without incurring any liabilities to any Second Lien Collateral Agent or any other Second Lien Claimholders and without impairing or releasing the Lien priorities and other benefits provided in this Agreement (even if any right of subrogation or other right or remedy of any Second Lien Collateral Agent or any other Second Lien Claimholders is affected, impaired or extinguished thereby) do any one or more of the following:

(1) make loans and advances to any Obligor or issue, provide or obtain First Lien Letters of Credit for account of any Obligor or otherwise extend credit to any Obligor, in any amount and on any terms, whether pursuant to a commitment or as a discretionary advance and whether or not any default or event of default or failure of condition is then continuing;

(2) change the manner, place or terms of payment of, or change or extend the time of payment of, or amend, renew, exchange, increase or alter the terms of, any of the First Lien Obligations or any Lien on any First Lien Collateral or guaranty thereof or any liability of any Obligor, or any liability incurred directly or indirectly in respect thereof (including any increase in or extension of the First Lien Obligations, without any restriction as to the tenor or terms of any such increase or extension) or otherwise amend, renew, exchange, extend, modify or supplement in any manner any Liens held by any First Lien Collateral Agent or any of the other First Lien Claimholders, the First Lien Obligations or any of the First Lien Documents;

(3) sell, exchange, release, surrender, realize upon, enforce or otherwise deal with in any manner and in any order any part of the First Lien Collateral or any liability of any Obligor to any First Lien Collateral Agent or any other First Lien Claimholders, or any liability incurred directly or indirectly in respect thereof;

(4) settle or compromise any First Lien Obligation or any other liability of any Obligor or any security therefor or any liability incurred directly or indirectly in respect thereof and apply any sums by whomsoever paid and however realized to any liability (including the First Lien Obligations) in any manner or order;

(5) exercise or delay in or refrain from exercising any right or remedy against any Obligor or any security or any other Person or with respect to any security, elect any remedy and otherwise deal freely with any Obligor or any First Lien Collateral and any security and any guarantor or any liability of any Obligor to the First Lien Claimholders or any liability incurred directly or indirectly in respect thereof; and

(6) release or discharge any First Lien Obligation or any guaranty thereof or any agreement or obligation of any Obligor or any other Person or entity with respect thereto.

(c) Until the Discharge of First Lien Obligations, each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, agrees not to assert and hereby waives, to the fullest extent permitted by law, any right to demand, request, plead or otherwise assert or otherwise claim the benefit of, any marshalling, appraisal, valuation or other similar right that may otherwise be available under applicable law with respect to the Collateral or any other similar rights a junior secured creditor may have under applicable law.

7.4 Waiver of Liability.

(a) Each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, agrees that the First Lien Collateral Agents and the other First Lien Claimholders shall have no liability to any Second Lien Collateral Agent or any other Second Lien Claimholders, and each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, hereby waives any claim against any First Lien Collateral Agent or any other First Lien Claimholder, arising out of any and all actions which any First Lien Collateral Agent or any other First Lien Claimholders may take or permit or omit to take with respect to: (i) the First Lien Documents (including, without limitation, any failure to perfect or obtain perfected security interests in the First Lien Collateral), (ii) the collection of the First Lien Obligations or (iii) the foreclosure upon, or sale, liquidation or other Disposition of, any First Lien Collateral. Each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, also agrees that the First Lien Collateral Agents and the other First Lien Claimholders have no duty, express or implied, fiduciary or otherwise, to them in respect of the maintenance or preservation of the First Lien Collateral, the First Lien Obligations or otherwise. Neither the First Lien Collateral Agents nor any other First Lien Claimholder nor any of their respective directors, officers, employees or agents will be liable for failure to demand, collect or realize upon any of the Collateral or for any delay in doing so, or will be under any obligation to sell or otherwise Dispose of any Collateral upon the request of any Obligor or upon the request of any Second Lien Collateral Agent, any other Second Lien Claimholder or any other Person or to take any other action whatsoever with regard to the Collateral or any part thereof. Without limiting the foregoing, each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, agrees that neither any First Lien Collateral Agent nor any other First Lien Claimholder (in directing the First Lien Collateral Agent to take any action with respect to the Collateral) shall have any duty or obligation to realize first upon any type of Collateral or to sell, liquidate or otherwise Dispose of all or any portion of the Collateral in any manner, including as a result of the application of the principles of marshaling or otherwise, that would maximize the return to any First Lien Claimholders or any Second Lien Claimholders, notwithstanding that the order and timing of any such realization, sale, liquidation or other Disposition may affect the amount of proceeds actually received by such Claimholders from such realization, sale, liquidation or other Disposition.

(b) With respect to its share of the First Lien Obligations, Jefferies shall have and may exercise the same rights and powers hereunder as, and shall be subject to the same obligations and liabilities as and to the extent set forth herein for, any other Claimholder, all as if Jefferies were not the First Lien Credit Agreement Collateral Agent. With respect to its share of the Second Lien Obligations, [] shall have and may exercise the same rights and powers hereunder as, and shall be subject to the same obligations and liabilities as and to the extent set forth herein for, any other Claimholder, all as if [] were not the Second Lien Credit Agreement Collateral Agent. The term "Claimholders" or any similar term shall, unless the context clearly otherwise indicates, include Jefferies and [], in their respective individual capacities as Claimholders. Jefferies, [] and their respective Affiliates may lend money to, and generally engage in any kind of business with, the Obligors or any of their Affiliates as if Jefferies were not acting as the First Lien Credit Agreement Collateral Agent and [] were not acting as the Second Lien Credit Agreement Collateral Agent, respectively, and without any duty to account therefor to any other Claimholder.

7.5 Obligations Unconditional. All rights, interests, agreements and obligations of the First Lien Collateral Agents and the other First Lien Claimholders and the Second Lien Collateral Agents and the other Second Lien Claimholders, respectively, hereunder (including the Lien priorities established hereby) shall remain in full force and effect irrespective of:

- (a) any lack of validity or enforceability of any First Lien Documents or any Second Lien Documents;
- (b) any change in the time, manner or place of payment of, or in any other terms of, all or any of the First Lien Obligations or Second Lien Obligations, or any amendment or waiver or other modification, including any increase in the amount thereof, whether by course of conduct or otherwise, of the terms of any First Lien Document or any Second Lien Document;
- (c) any exchange of any security interest in any Collateral or any other collateral, or any amendment, waiver or other modification, whether in writing or by course of conduct or otherwise, of all or any of the First Lien Obligations or Second Lien Obligations or any guaranty thereof;

(d) the commencement of any Insolvency or Liquidation Proceeding in respect of any Obligor; or

(e) any other circumstances which otherwise might constitute a defense available to, or a discharge of, any Obligor in respect of any First Lien Collateral Agent, any other First Lien Claimholder, the First Lien Obligations, any Second Lien Collateral Agent, any other Second Lien Claimholder or the Second Lien Obligations in respect of this Agreement.

SECTION 8. Miscellaneous.

8.1 Conflicts. In the event of any conflict between the provisions of this Agreement and the provisions of the First Lien Documents or the Second Lien Documents, the provisions of this Agreement shall govern and control.

8.2 Effectiveness; Continuing Nature of this Agreement; Severability. This Agreement shall become effective when executed and delivered by the parties hereto. This is a continuing agreement of Lien subordination and each of the First Lien Claimholders and the Second Lien Claimholders may continue, at any time and without notice to any Second Lien Collateral Agent or any other Second Lien Claimholder or any First Lien Collateral Agent or any other First Lien Claimholder, to extend credit and other financial accommodations and lend monies to or for the benefit of any Obligor constituting First Lien Obligations or Second Lien Obligations in reliance hereon. Each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, hereby waives any right it may have under applicable law to revoke this Agreement or any of the provisions of this Agreement. Each First Lien Collateral Agent, on behalf of itself and its Related First Lien Claimholders, hereby waives any right it may have under applicable law to revoke this Agreement or any of the provisions of this Agreement. Each Representative, on behalf of itself and its Related Claimholders, hereby waives any right it may have under applicable law to revoke this Agreement or any of the provisions of this Agreement. The terms of this Agreement shall survive, and shall continue in full force and effect, in any Insolvency or Liquidation Proceeding. Any provision of this Agreement that is prohibited or unenforceable in any jurisdiction shall not invalidate the remaining provisions hereof, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction. All references to any Obligor shall include such Obligor as debtor and debtor-in-possession and any receiver, trustee or similar Person for any Obligor (as the case may be) in any Insolvency or Liquidation Proceeding. This Agreement shall terminate and be of no further force and effect:

(a) with respect to any First Lien Collateral Agent, the other First Lien Claimholders and the First Lien Obligations, upon the Discharge of First Lien Obligations, subject to Section 5.6 and the rights of the First Lien Claimholders under Section 6.5; and

(b) with respect to any Second Lien Collateral Agent, the other Second Lien Claimholders and the Second Lien Obligations, upon the Discharge of Second Lien Obligations.

Notwithstanding the foregoing, such termination shall not relieve any such party of its obligations incurred hereunder prior to the date of such termination.

8.3 Amendments; Waivers. Neither this Agreement nor any provision hereof may be amended, modified or waived except pursuant to an agreement or agreements in writing entered into by each First Lien Collateral Agent, each Second Lien Collateral Agent and each other Representative then party hereto or its authorized agent, acting (a) in the case of the Directing First Lien Collateral Agent, with the approval or instructions of the Required First Lien Claimholders to the extent required under the First Lien Credit Agreement or any Additional First Lien Obligations Agreements and (b) in the case of the Directing Second Lien Collateral Agent, with the approval or instructions of the Required Second Lien Claimholders to the extent required under the Second Lien Credit Agreement or any Additional Second Lien Obligations Agreements; provided that (a) the Directing First Lien Collateral Agent and the Directing Second Lien Collateral Agent may, at the expense of the Obligors and without the written consent of any other Claimholder or any Obligor, agree to any amendment to or other modifications of this Agreement for the purpose of giving effect to Section 8.21 or any Refinancing of any First Lien Obligations or Second Lien Obligations and (b) additional Obligors may be added as parties hereto upon the execution and delivery of a counterpart of the Intercreditor Joinder Agreement in the form of Exhibit A hereto in accordance with the provisions of Section 8.18. Each of the Directing First Lien Collateral Agent and the Directing Second Lien Collateral Agent shall execute and deliver an amendment, supplement or other modification of this Agreement at the other's request to permit new creditors to become a party hereto as set forth in the proviso to the immediately preceding sentence. Notwithstanding the provisions of any other First Lien Document or Second Lien Document, the Directing First Lien Collateral Agent and the Directing Second Lien Collateral Agent may, with the consent of the Parent Borrower if required pursuant to the last sentence of this Section 8.3, make any amendments, restatements, amendment and restatements, supplements or other modifications to this Agreement to correct any ambiguity, defect or inconsistency contained herein without the consent of any other Person. Each waiver of the terms of this Agreement, if any, shall be a waiver only with respect to the specific instance involved and shall in no way impair the rights of the parties making such waiver or the obligations of the other parties owed to such party in any other respect or at any other time. Notwithstanding the foregoing, no Obligor shall have any right to consent to or approve any amendment, modification or waiver of any provision of this Agreement except (x) to the extent such Obligor's rights are directly and adversely affected by such amendment, modification or waiver, (y) to the extent applicable to such Obligor with respect to any provision identified in Section 8.16 or (z) any amendment, modification or waiver of the Cap Amount, if the effect of such amendment, modification or waiver is to reduce the amount thereof from the amount thereof in effect on the date hereof; provided, however, that the Parent Borrower shall be given notice of any amendment, modification or waiver of this Agreement promptly after the effectiveness thereof (it being understood that the failure to deliver such notice to the Parent Borrower shall in no way impact the effectiveness of any such amendment, modification or waiver).

8.4 Information Concerning Financial Condition of the Obligors and its Subsidiaries. Each of the First Lien Collateral Agents and the other First Lien Claimholders, on the one hand, and the other Representatives and the other Claimholders, on the other hand, shall be responsible for keeping themselves informed of (a) the financial condition of the Obligors and their subsidiaries and all endorsers and/or guarantors of the Obligations and (b) all other circumstances bearing upon the risk of nonpayment of the First Lien Obligations or the Second Lien Obligations. The First Lien Collateral Agents and the other First Lien Claimholders shall have no duty to advise any other Representative or any other Claimholder of information known to it or them regarding such condition or any such circumstances or otherwise. In the event any First Lien Collateral Agent or any of the other First Lien Claimholders, in its or their sole discretion, undertakes at any time or from time to time to provide any such information to any other Representative or any other Claimholder, it or they shall be under no obligation:

- (i) to make, and such First Lien Collateral Agent and such First Lien Claimholders shall not make, any express or implied representation or warranty, including with respect to the accuracy, completeness, truthfulness or validity of any such information so provided;
- (ii) to provide any additional information or to provide any such information on any subsequent occasion;
- (iii) to undertake any investigation; or
- (iv) to disclose any information, which pursuant to accepted or reasonable commercial finance practices, such party wishes to maintain confidential or is otherwise required to maintain confidential.

8.5 Subrogation. With respect to the value of any payments or distributions in cash, property or other assets that any Representative or any other Claimholder pays over to the Directing First Lien Collateral Agent or the other First Lien Claimholders under the terms of this Agreement, such Representative or such other Claimholders shall be subrogated to the rights of each First Lien Collateral Agent and the other First Lien Claimholders; provided that each Representative, on behalf of itself and its Related Claimholders, hereby agrees that neither it nor its Related Claimholders shall assert or enforce any such rights of subrogation it may acquire as a result of any payment hereunder until the Discharge of First Lien Obligations has occurred. Each Obligor acknowledges and agrees that the value of any payments or distributions in cash, property or other assets received by any Representative or the other Claimholders and paid over to the Directing First Lien Collateral Agent or the other First Lien Claimholders pursuant to, and applied in accordance with, this Agreement, shall not relieve or reduce any of the obligations under the respective Debt Documents.

8.6 Application of Payments. All payments received by any First Lien Collateral Agent or the other First Lien Claimholders may be applied, reversed and reapplied, in whole or in part, to such part of the First Lien Obligations as the First Lien Claimholders, in their sole discretion, deem appropriate, subject to the terms of the First Lien Documents. Each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, consents to any extension or postponement of the time of payment of the First Lien Obligations or any part thereof and to any other indulgence with respect thereto, to any substitution, exchange or release of any security which may at any time secure any part of the First Lien Obligations and to the addition or release of any other Person primarily or secondarily liable therefor.

(a) EACH PARTY HERETO (IN THE CASE OF EACH REPRESENTATIVE, FOR ITSELF AND ON BEHALF OF ITS RELATED CLAIMHOLDERS) HEREBY IRREVOCABLY AND UNCONDITIONALLY SUBMITS, FOR ITSELF AND ITS (AND THEIR RESPECTIVE) PROPERTY, TO THE EXCLUSIVE JURISDICTION OF ANY U.S. FEDERAL OR NEW YORK STATE COURT SITTING IN THE BOROUGH OF MANHATTAN, IN THE CITY OF NEW YORK (OR ANY APPELLATE COURT THEREFROM) OVER ANY SUIT OR ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT, AND AGREES THAT ALL CLAIMS IN RESPECT OF ANY SUCH ACTION OR PROCEEDING SHALL BE HEARD AND DETERMINED EXCLUSIVELY IN SUCH NEW YORK STATE OR, TO THE EXTENT PERMITTED BY LAW, IN SUCH FEDERAL COURT. EACH OF THE PARTIES HERETO (IN THE CASE OF EACH REPRESENTATIVE, FOR ITSELF AND ON BEHALF OF ITS RELATED CLAIMHOLDERS) AGREES THAT SERVICE OF ANY PROCESS, SUMMONS, NOTICE OR DOCUMENTS BY REGISTERED MAIL ADDRESSED TO SUCH PERSON SHALL BE EFFECTIVE SERVICE OF PROCESS AGAINST SUCH PERSON FOR ANY SUIT, ACTION OR PROCEEDING BROUGHT IN ANY SUCH COURT. EACH OF THE PARTIES HERETO (IN THE CASE OF EACH REPRESENTATIVE, FOR ITSELF AND ON BEHALF OF ITS RELATED CLAIMHOLDERS) HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY OBJECTION TO THE LAYING OF VENUE OF ANY SUCH SUIT, ACTION OR PROCEEDING BROUGHT IN ANY SUCH COURT AND ANY CLAIM THAT ANY SUCH SUIT, ACTION OR PROCEEDING HAS BEEN BROUGHT IN AN INCONVENIENT FORUM. EACH OF THE PARTIES HERETO (IN THE CASE OF EACH REPRESENTATIVE, FOR ITSELF AND ON BEHALF OF ITS RELATED CLAIMHOLDERS) AGREES THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY LAW.

(b) TO THE EXTENT PERMITTED BY LAW, EACH PARTY HERETO (IN THE CASE OF EACH REPRESENTATIVE, FOR ITSELF AND ON BEHALF OF ITS RELATED CLAIMHOLDERS) HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF ANY AND ALL PROCESS UPON IT AND AGREES THAT ALL SUCH SERVICE OF PROCESS MAY BE MADE BY REGISTERED MAIL (OR ANY SUBSTANTIALLY SIMILAR FORM OF MAIL) DIRECTED TO IT AT ITS ADDRESS FOR NOTICES AS PROVIDED FOR IN SECTION 8.8. EACH PARTY HERETO (IN THE CASE OF EACH REPRESENTATIVE, FOR ITSELF AND ON BEHALF OF ITS RELATED CLAIMHOLDERS) HEREBY WAIVES ANY OBJECTION TO SUCH SERVICE OF PROCESS AND FURTHER IRREVOCABLY WAIVES AND AGREES NOT TO PLEAD OR CLAIM IN ANY ACTION OR PROCEEDING COMMENCED HEREUNDER THAT SERVICE OF PROCESS WAS INVALID AND INEFFECTIVE. NOTHING IN THIS AGREEMENT WILL AFFECT THE RIGHT OF ANY PARTY TO THIS AGREEMENT TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY LAW.

(c) EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES (IN THE CASE OF EACH REPRESENTATIVE, FOR ITSELF AND ON BEHALF OF ITS RELATED CLAIMHOLDERS), TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT (OR THEY) MAY HAVE TO A TRIAL BY JURY IN ANY SUIT, ACTION, PROCEEDING OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY) DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT, ANY FIRST LIEN DOCUMENT, ANY SECOND LIEN DOCUMENT, ANY OTHER DEBT DOCUMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY. EACH PARTY HERETO (IN THE CASE OF EACH REPRESENTATIVE, FOR ITSELF AND ON BEHALF OF ITS RELATED CLAIMHOLDERS) (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION.

8.8 Notices. All notices to the Claimholders permitted or required under this Agreement shall also be sent to the related Representative (and, for this purpose, the Directing First Lien Collateral Agent shall be deemed to be an agent for the First Lien Secured Hedging Obligations and the First Lien Banking Services Obligations, and the Directing Second Lien Collateral Agent shall be deemed to be an agent for the Second Lien Secured Hedging Obligations and the Second Lien Banking Services Obligations). Unless otherwise specifically provided herein, any notice hereunder shall be in writing and may be personally served, sent by facsimile or sent by other electronic transmission or United States mail or courier service and shall be deemed to have been given when delivered in person or by courier service and signed for against receipt thereof, upon receipt of facsimile or other electronic transmission, or three Business Days after depositing it in the United States mail with postage prepaid and properly addressed. For the purposes hereof, the addresses of the parties hereto shall be as set forth below each party's name on the signature pages hereto, or, as to each party, at such other address as may be designated by such party in a written notice to all of the other parties.

8.9 Further Assurances. Each First Lien Collateral Agent, on behalf of itself and its Related First Lien Claimholders, and each Second Lien Collateral Agent, on behalf of itself and its Related Second Lien Claimholders, and each Obligor, agrees that each of them shall take such further action and shall execute and deliver such additional documents and instruments (in recordable form, if requested) as the Directing First Lien Collateral Agent or the Directing Second Lien Collateral Agent may reasonably request to effectuate the terms of and the Lien priorities contemplated by this Agreement.

8.10 CHOICE OF LAW. THIS AGREEMENT AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS AGREEMENT, WHETHER IN TORT, CONTRACT (AT LAW OR IN EQUITY) OR OTHERWISE, SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

8.11 Binding on Successors and Assigns. This Agreement shall be binding upon each First Lien Collateral Agent, the other First Lien Claimholders, each Second Lien Collateral Agent, the other Second Lien Claimholders, each other Representative, the other Claimholders and their respective successors and permitted assigns. If any Representative resigns or is replaced pursuant to the applicable Debt Documents, its successor shall be deemed to be a party to this Agreement and shall have all the rights of, and be subject to all the obligations of, this Agreement.

8.12 Headings. Section headings and the Table of Contents used herein are for convenience of reference only, are not part of this Agreement and shall not affect the construction of, or be taken into consideration in interpreting, this Agreement.

8.13 Counterparts. This Agreement may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page of this Agreement or any document or instrument delivered in connection herewith by facsimile or other electronic transmission (including “.pdf” or “.tif” format) shall be effective as delivery of a manually executed counterpart of this Agreement or such other document or instrument, as applicable.

8.14 Authorization; Binding Effect on Claimholders. By its signature, each Person executing this Agreement on behalf of a party hereto represents and warrants to the other parties hereto that it is duly authorized to execute this Agreement. Each Claimholder, by its acceptance of the benefits of the applicable Debt Documents shall be deemed to have agreed to be bound by the agreements made herein, including the agreements made by any Representative on its behalf.

8.15 Exclusive Means of Exercising Rights under this Agreement.

(a) The First Lien Claimholders shall be deemed to have irrevocably appointed the Directing First Lien Collateral Agent as their exclusive agent hereunder. Consistent with such appointment, the First Lien Claimholders further shall be deemed to have agreed that only the Directing First Lien Collateral Agent (and not any individual claimholder or group of claimholders) as agent for the First Lien Claimholders, or any of the Directing First Lien Collateral Agent’s agents, shall have the sole right on their behalf to take, direct and/or exercise any rights, powers and/or remedies under or in connection with this Agreement with respect to Collateral or otherwise (including bringing any action to interpret or otherwise enforce the provisions of this Agreement); provided that (i) holders of the First Lien Secured Hedging Obligations and the First Lien Banking Services Obligations may exercise customary netting and set off rights under the First Lien Hedge Agreements and First Lien Banking Services Agreements to which they are, respectively, a party, (ii) cash collateral may be held pursuant to the terms of the First Lien Documents (including any relating to the First Lien Hedge Agreements) and any such individual First Lien Claimholder may act against such cash collateral in accordance with the terms of the relevant First Lien Document or applicable law and (iii) the First Lien Claimholders may exercise customary rights of setoff against depository or other accounts maintained with them in accordance with the terms of the relevant First Lien Document or applicable law. Specifically, but without limiting the generality of the foregoing, no First Lien Claimholder or group of First Lien Claimholders, other than the Directing First Lien Collateral Agent (acting at the direction of, or pursuant to a grant of authority by, the Required First Lien Claimholders), shall be entitled to take or file, and shall be precluded from taking or filing (whether in any Insolvency or Liquidation Proceeding or otherwise), any action, judicial or otherwise, to enforce any right or power or pursue any remedy under this Agreement (including any declaratory judgment or other action to interpret or otherwise enforce the provisions of this Agreement), except solely as provided in the proviso in the immediately preceding sentence. For the avoidance of doubt, the Directing First Lien Collateral Agent shall be entitled to the benefit of all the exculpatory, indemnity and reimbursement provisions set forth in any First Lien Document for the benefit of any “collateral agent” (or any other agent or similar representative) with respect to any exercise by the Directing First Lien Collateral Agent of any of the rights or remedies under this Agreement, including any such exercise of any right or remedy with respect to any Collateral, or any other action or inaction by it in its capacity as the Directing First Lien Collateral Agent.

(b) The Second Lien Claimholders shall be deemed to have irrevocably appointed the Directing Second Lien Collateral Agent as their exclusive agent hereunder. Consistent with such appointment, the Second Lien Claimholders further shall be deemed to have agreed that only the Directing Second Lien Collateral Agent (and not any individual claimholder or group of claimholders) as agent for the Second Lien Claimholders, or any of the Directing Second Lien Collateral Agent's agents, shall have the sole right on their behalf to take, direct, and/or exercise any rights, powers and/or remedies under or in connection with this Agreement with respect to Collateral or otherwise (including bringing any action to interpret or otherwise enforce the provisions of this Agreement); provided that, subject to the limitations, restrictions and other agreements set forth herein, (i) holders of the Second Lien Secured Hedging Obligations and the Second Lien Banking Services Obligations may exercise customary netting and set off rights under the Second Lien Hedge Agreements and Second Lien Banking Services Agreements to which they are, respectively, a party, (ii) cash collateral may be held pursuant to the terms of the Second Lien Documents (including any relating to Second Lien Hedge Agreements) and any such individual Second Lien Claimholder may act against such cash collateral in accordance with the terms of the relevant Second Lien Document or applicable law and (iii) the Second Lien Claimholders may exercise customary rights of setoff against depository or other accounts maintained with them in accordance with the terms of the relevant Second Lien Document or applicable law. Specifically, but without limiting the generality of the foregoing, each Second Lien Claimholder or group of Second Lien Claimholders, other than the Directing Second Lien Collateral Agent (acting at the direction of, or pursuant to a grant of authority by, the Required Second Lien Claimholders), shall not be entitled to take or file, but instead shall be precluded from taking or filing (whether in any Insolvency or Liquidation Proceeding or otherwise), any action, judicial or otherwise, to enforce any right or power or pursue any remedy under this Agreement (including any declaratory judgment or other action to interpret or otherwise enforce the provisions of this Agreement), except solely as provided in the proviso in the immediately preceding sentence. For the avoidance of doubt, the Directing Second Lien Collateral Agent shall be entitled to the benefit of all the exculpatory, indemnity and reimbursement provisions set forth in any Second Lien Document for the benefit of any "collateral agent" (or any other agent or similar representative) with respect to any exercise by the Directing Second Lien Collateral Agent of any of the rights or remedies under this Agreement, including any such exercise of any right or remedy with respect to any Collateral, or any other action or inaction by it in its capacity as the Directing Second Lien Collateral Agent.

8.16 No Third Party Beneficiaries; Provisions Solely to Define Relative Rights. This Agreement and the rights and benefits hereof shall inure to the benefit of each of the parties hereto and its respective successors and assigns and shall inure to the benefit of each of the Claimholders. The provisions of this Agreement are and are intended solely for the purpose of defining the relative rights of (i) the First Lien Collateral Agents and the other First Lien Claimholders, on the one hand, and the Second Lien Collateral Agent and the other Second Lien Claimholders, on the other hand, and (ii) the First Lien Collateral Agents and the other First Lien Claimholders, on the one hand, and the other Representatives, on the other hand. None of the Obligors or any creditor thereof shall have any rights hereunder and no Obligor or any creditor thereof may rely on the terms hereof, other than any provision hereof expressly preserving any right of, or directly affecting, any Obligor under this Agreement, any First Lien Document or any Second Lien Financing Document, including Section 3.1 (as to the definition of “Standstill Period”), 4.1, 5.1, 5.2, 5.3, 5.4, 5.6, 5.7, 6.1, 6.2, 7.1, 8.1, 8.2, 8.3, 8.6, 8.7, 8.8, 8.9, 8.10, 8.11, 8.13, 8.14, 8.15, this Section 8.16, Section 8.17, 8.18, and 8.21. Nothing in this Agreement is intended to or shall impair the obligations of the Obligors, which are absolute and unconditional, to pay the Obligations as and when the same shall become due and payable in accordance with their terms.

8.17 No Indirect Actions. Unless otherwise expressly stated, if a party may not take an action under this Agreement, then it may not take that action indirectly, or support any other Person in taking that action directly or indirectly. “Taking an action indirectly” means taking an action that is not expressly prohibited for the party but is intended to have substantially the same effects as the prohibited action; provided, that, notwithstanding the foregoing, nothing in this Section 8.17 shall be deemed to limit the right of any party hereto to vote on any plan of reorganization, arrangement, compromise or liquidation in any Insolvency or Liquidation Proceeding to the extent not inconsistent with the terms of this Agreement.

8.18 Obligors; Additional Obligors. It is understood and agreed that Holdings, the Borrowers and each other Obligor on the date of this Agreement shall constitute the original Obligors party hereto. The original Obligors hereby covenant and agree to cause each subsidiary of Holdings which becomes a “Subsidiary Guarantor” as defined in the First Lien Credit Agreement or the Second Lien Credit Agreement (or any similar term in any other First Lien Financing Document or Second Lien Financing Document), as applicable, after the date hereof to contemporaneously become a party hereto (as an Obligor) by duly executing and delivering a counterpart of the Intercreditor Joinder Agreement in the form of Exhibit A hereto to the Directing First Lien Collateral Agent in accordance with the relevant provisions of the relevant First Lien Financing Documents and/or Second Lien Financing Documents, as applicable. The parties hereto further agree that, notwithstanding any failure to take the actions required by the immediately preceding sentence, each Person which becomes a “Subsidiary Guarantor” as defined in the First Lien Credit Agreement or the Second Lien Credit Agreement (or any similar term in any other First Lien Financing Document or Second Lien Financing Document), as applicable, at any time shall be subject to the provisions hereof as fully as if same constituted an Obligor party hereto and had complied with the requirements of the immediately preceding sentence.

8.19 Right of First Lien Collateral Agent to Continue. Any Person serving as First Lien Collateral Agent shall be entitled to continue, including to continue to perform his, her or its rights, obligations and duties, as the First Lien Collateral Agent, notwithstanding whether any such Person has served or is serving as a Second Lien Collateral Agent or as a Representative for any other Claimholder. Without limiting the generality of the preceding sentence of this Section 8.19, any Person serving as a First Lien Collateral Agent shall be entitled to continue to so serve in such capacity (including to continue to perform any of such First Lien Collateral Agent's rights, obligations and/or duties) even if any such Person has resigned as a Representative under any other Debt Documents, but such resignation has not become effective for any reason, including because a successor Representative has not been appointed or has accepted such appointment, without any liability to any of the Claimholders by virtue of any such resignation and any of the circumstances relating in any manner whatsoever to such resignation.

8.20 Claimholders. Notwithstanding anything to the contrary in this Agreement, it is understood and agreed that this Agreement only applies to the Claimholders in their capacities as holders of the applicable Obligations. Without limiting the foregoing, this Agreement does not restrict or apply to the Claimholders in their capacities as holders of any Indebtedness or other obligations of the Obligors other than the Obligations, or in their capacities as holders of equity interests of the Obligors.

8.21 Additional Obligations. Subject to the terms and conditions of this Agreement, the Obligors will be permitted from time to time to designate as an additional holder of Obligations hereunder, each Person that is, or that becomes or is to become, the holder of any Additional Obligations (or the Representative in respect of such Additional Obligations). Upon the issuance or incurrence of any such Additional Obligations:

(a) the Parent Borrower shall deliver to each of the Directing First Lien Collateral Agent and the Directing Second Lien Collateral Agent a certificate of a Responsible Officer stating that the applicable Obligors intend to enter or have entered into an Additional Obligation Agreement and certifying that the issuance or incurrence of such Additional Obligations and the Liens securing such Additional Obligations are permitted by the First Lien Financing Documents, the Second Lien Financing Documents and each then existing Additional First Lien Obligations Agreement and Additional Second Lien Obligations Agreement, as applicable. Each of the Representatives shall be entitled to rely conclusively on the determination by the Parent Borrower that such issuance and/or incurrence does not violate the provisions of the First Lien Financing Documents, the Second Lien Financing Documents or any then existing Additional First Lien Obligations Agreement or Additional Second Lien Obligations Agreement, as applicable, if such determination is set forth in such officer's certificate delivered to each of the Directing First Lien Collateral Agent and the Directing Second Lien Collateral Agent; provided, however, that such determination will not affect whether or not the Obligors have complied with their undertakings in the First Lien Financing Documents, the Second Lien Financing Documents or any then existing Additional First Lien Obligations Agreement or Additional Second Lien Obligation Agreement, as applicable;

(b) the Representative for such Additional Obligations shall execute and deliver to each of the Directing First Lien Collateral Agent and the Directing Second Lien Collateral Agent a counterpart of the Joinder Agreement in the form of Exhibit B hereto acknowledging that such Additional Obligations and the holders of such Additional Obligations shall be bound by the terms hereof to the extent applicable to the First Lien Claimholders or the Second Lien Claimholders, as applicable, and

(c) each existing Representative shall promptly enter into such documents and agreements (including amendments, restatements, amendments and restatements, supplements or other modifications to this Agreement) as any existing Representative (but no other Claimholder) may reasonably request in order to provide to it the rights, remedies and powers and authorities contemplated hereby, in each case consistent in all respects with the terms of this Agreement; provided that, for the avoidance of doubt and notwithstanding anything in this Agreement to the contrary, it is understood and agreed that any such amendment, restatement, amendment and restatement, supplement or other modification to this Agreement requested pursuant to this clause (c) may be entered into by the existing Representatives without the consent of any other Claimholder to effect the provisions of this Section 8.21 and may contain additional intercreditor terms applicable solely to the holders of such Additional Obligations *vis-à-vis* the holders of the relevant obligations hereunder or the holders of such Additional Obligations *vis-à-vis* the Directing First Lien Collateral Agent and the First Lien Claimholders or the Directing Second Lien Collateral Agent and the Second Lien Claimholders, as applicable.

Notwithstanding the foregoing, nothing in this Agreement will be construed to allow any Obligor to incur additional Indebtedness unless otherwise permitted by the terms of each applicable First Lien Financing Document and Second Lien Financing Document and each then existing Additional First Lien Obligations Agreement and Additional Second Lien Obligations Agreement.

8.22 Additional Intercreditor Agreements.

(a) Each party hereto agrees that the First Lien Claimholders (as among themselves) and the Second Lien Claimholders (as among themselves) may each enter into intercreditor agreements (or similar arrangements) with the applicable First Lien Collateral Agents or Second Lien Collateral Agents, as the case may be, governing the rights, benefits and privileges as among the First Lien Claimholders in respect of any or all of the First Lien Collateral, this Agreement and the First Lien Collateral Documents or as among the Second Lien Claimholders in respect of any or all of the Second Lien Collateral, this Agreement or the Second Lien Collateral Documents, as the case may be, including as to the application of proceeds of any Collateral, voting rights, control of any Collateral and waivers with respect to any Collateral, in each case so long as the terms thereof do not violate or conflict with the terms of this Agreement or the First Lien Documents or the Second Lien Documents, as applicable. In any event, if a respective intercreditor agreement (or similar arrangement) exists, the provisions thereof shall not be (or be construed to be) an amendment, modification or other change to this Agreement or any other First Lien Document or Second Lien Document, and the provisions of this Agreement and the other First Lien Documents and Second Lien Documents shall remain in full force and effect in accordance with the terms hereof and thereof (as such provisions may be amended, modified or otherwise supplemented from time to time in accordance with the terms thereof, including to give effect to any intercreditor agreement (or similar arrangement)).

(b) In addition, in the event that the Parent Borrower or any of its subsidiaries incurs any obligations in respect of Indebtedness that is permitted by the First Lien Documents and the Second Lien Documents to be incurred and secured by a Lien on any Collateral that is *pari passu* with or junior to the Liens thereon securing any First Lien Obligations and any Second Lien Obligations and such obligations are not designated by the Parent Borrower as Second Lien Obligations, then the First Lien Collateral Agents and/or the Second Lien Collateral Agents shall upon the request of the Parent Borrower enter into a Acceptable Intercreditor Agreement (as defined in the First Lien Credit Agreement and the Second Lien Credit Agreement on the date hereof and/or, in each case, any similar term in any First Lien Document and/or any Second Lien Document, as applicable) or another intercreditor agreement that is reasonably satisfactory to the First Lien Collateral Agents and the Second Lien Collateral Agents with the holders of such other obligations (or their agent, trustee or other representative) to reflect the relative Lien priorities of such parties with respect to the Collateral (or the relevant portion thereof) and governing the relative rights, benefits and privileges as among such parties in respect of such Collateral, including as to application of the proceeds of such Collateral, voting rights, control of such Collateral and waivers with respect to such Collateral, in each case, so long as such secured obligations are not prohibited by, and the terms of such intercreditor agreement do not violate or conflict with, the provisions of this Agreement or any of the First Lien Documents or Second Lien Documents, as the case may be. If any such intercreditor agreement (or similar arrangement) is entered into, the provisions thereof shall not be (or be construed to be) an amendment, modification or other change to this Agreement or any First Lien Documents or Second Lien Documents, and the provisions of this Agreement, the First Lien Documents and the Second Lien Documents shall remain in full force and effect in accordance with the terms hereof and thereof (as such provisions may be amended, modified or otherwise supplemented from time to time in accordance with the respective terms thereof, including to give effect to any intercreditor agreement (or similar arrangement)) and in the event of any conflict between the terms of this Agreement and the terms of such other intercreditor agreement as it related to the First Lien Claimholders on the one hand and the Second Lien Claimholders on the other hand, the provisions of this Agreement shall govern and control.

[Signature pages follow]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first written above.

First Lien Credit Agreement Collateral Agent

JEFFERIES FINANCE LLC,
as First Lien Credit Agreement Collateral Agent

By: _____

Name:

Title:

Address for Notices:

Attention:

Tel.:

Email:

[Signature Page to Project Avatar Intercreditor Agreement]

Second Lien Credit Agreement Collateral Agent

[_____],
as Second Lien Credit Agreement Collateral Agent

By: _____
Name:
Title:

Address for Notices:
Attention:
Tel.:
Email:

[Signature Page to Intercreditor Agreement]

Acknowledged and Agreed to by:

CERTARA HOLDCO, INC., as the Parent Borrower

By: _____
Name:
Title:

CERTARA USA, INC., as the Co-Borrower

By: _____
Name:
Title:

EQT AVATAR INTERMEDIATE, INC., as Holdings

By: _____
Name:
Title:

[Signature Page to Project Avatar Intercreditor Agreement]

Other Obligors

[]

By: _____

Name:

Title:

[Signature Page to Intercreditor Agreement]

FORM OF INTERCREDITOR JOINDER AGREEMENT

Reference is made to the Intercreditor Agreement, dated as of [], 20[] (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “**Intercreditor Agreement**”), among JEFFERIES FINANCE LLC, in its capacity as collateral agent under the First Lien Credit Agreement and the First Lien Collateral Documents relating thereto (in each case, as defined in the Intercreditor Agreement) (in such capacity and together with its successors and assigns in such capacity, the “**First Lien Credit Agreement Collateral Agent**”), [], in its capacity as collateral agent under the Second Lien Credit Agreement and the Second Lien Collateral Documents relating thereto (in each case, as defined in the Intercreditor Agreement) (in such capacity and together with its successors and assigns in such capacity, the “**Second Lien Credit Agreement Collateral Agent**”), each other REPRESENTATIVE that is from time to time party thereto and acknowledged and agreed to by CERTARA HOLDCO, INC., a Delaware corporation (the “**Parent Borrower**”), CERTARA USA, INC., a Delaware corporation (the “**Co-Borrower**” and together with the Parent Borrower, the “**Borrowers**”), EQT AVATAR INTERMEDIATE, INC., a Delaware corporation (“**Holdings**”), and the other OBLIGORS (as defined in the Intercreditor Agreement) from time to time party thereto. Capitalized terms used but not defined herein shall have the meanings assigned to such terms in the Intercreditor Agreement.

This Intercreditor Joinder Agreement, dated as of [●], 201[●] (this “**Joinder Agreement**”), is being delivered pursuant to requirements of the Intercreditor Agreement.

1. Joinder. The undersigned, [●], a [●], hereby agrees to become party to the Intercreditor Agreement as an Obligor thereunder for all purposes thereof on the terms set forth therein, and to be bound by the terms, conditions and provisions of the Intercreditor Agreement as fully as if the undersigned had executed and delivered the Intercreditor Agreement as of the date thereof.
2. Agreements. The undersigned Obligor hereby agrees, for the enforceable benefit of all existing and future Claimholders that the undersigned is bound by the terms, conditions and provisions of the Intercreditor Agreement to the extent set forth therein.
3. Notice Information. The address of the undersigned Obligor for purposes of all notices and other communications hereunder and under the Intercreditor Agreement is [●], Attention of [●] (Facsimile No. [●], electronic mail address: [●]).]
4. Counterparts. This Joinder Agreement may be executed in two or more counterparts, each of which shall constitute an original but all of which when taken together shall constitute one contract. Delivery of an executed signature page to this Joinder Agreement by facsimile transmission or by email as a “.pdf” or “.tif” attachment shall be as effective as delivery of a manually signed counterpart of this Joinder Agreement.
5. Governing Law. THIS JOINDER AGREEMENT AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS JOINDER AGREEMENT, WHETHER IN TORT, CONTRACT (AT LAW OR IN EQUITY) OR OTHERWISE, SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

6. Loan Document. This Joinder Agreement shall constitute a “Loan Document”, under and as defined in, each of the First Lien Credit Agreement and Second Lien Credit Agreement.

7. Miscellaneous. The provisions of Section 8 of the Intercreditor Agreement shall apply with like effect to this Joinder Agreement.

[Signature Pages Follow]

IN WITNESS WHEREOF, the undersigned has caused this Joinder Agreement to be duly executed by its authorized representative, and each Representative has caused the same to be accepted by its authorized representative, as of the day and year first above written.

[NAME OF OBLIGOR],
as an Obligor

By: _____
Name:
Title:

Acknowledged and Agreed to by:

JEFFERIES FINANCE LLC,
as First Lien Credit Agreement Collateral Agent,

By: _____
Name:
Title:

[_____],
as Second Lien Credit Agreement Collateral Agent,

By: _____
Name:
Title:

FORM OF JOINDER AGREEMENT

Reference is made to the Intercreditor Agreement, dated as of May 14, 2015 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “**Intercreditor Agreement**”), among JEFFERIES FINANCE LLC, in its capacity as collateral agent under the First Lien Credit Agreement and the First Lien Collateral Documents relating thereto (in each case, as defined in the Intercreditor Agreement) (in such capacity and together with its successors and assigns in such capacity, the “**First Lien Credit Agreement Collateral Agent**”), [], in its capacity as collateral agent under the Second Lien Credit Agreement and the Second Lien Collateral Documents relating thereto (in each case, as defined in the Intercreditor Agreement) (in such capacity and together with its successors and assigns in such capacity, the “**Second Lien Credit Agreement Collateral Agent**”), each other REPRESENTATIVE that is from time to time party thereto and acknowledged and agreed to by CERTARA HOLDCO, INC., a Delaware corporation (the “**Parent Borrower**”), CERTARA USA, INC., a Delaware corporation (the “**Co-Borrower**” and together with the Parent Borrower, the “**Borrowers**”), EQT AVATAR INTERMEDIATE, INC., a Delaware corporation (“**Holdings**”), and the other OBLIGORS (as defined in the Intercreditor Agreement) from time to time party thereto. Capitalized terms used but not defined herein shall have the meanings assigned to such terms in the Intercreditor Agreement.

This Intercreditor Joinder Agreement, dated as of [●], 201[●] (this “**Joinder Agreement**”), is being delivered pursuant to requirements of the Intercreditor Agreement. The undersigned [[First Lien Representative] [Second Lien Representative]]⁵² (the “**New Representative**”) is executing this Joinder Agreement in accordance with the requirements of the Intercreditor Agreement. Each reference to a “Representative” and a [[“First Lien Representative,”] [“Second Lien Representative,”]]⁵³ in the Intercreditor Agreement shall be deemed to include, as applicable, the New Representative.

1. Joinder. The undersigned New Representative hereby agrees to become party to the Intercreditor Agreement as a [[First Lien Representative] [Second Lien Representative]]⁵⁴ thereunder for all purposes thereof on the terms and conditions set forth therein, and to be bound by the terms, conditions and provisions of the Intercreditor Agreement as fully as if the undersigned had executed and delivered the Intercreditor Agreement as of the date thereof.

2. Agreements. The undersigned New Representative hereby agrees, for the enforceable benefit of all existing and future Claimholders that the undersigned is bound by the terms, conditions and provisions of the Intercreditor Agreement to the extent set forth therein.

3. Notice Information. The address of the undersigned New Representative for purposes of all notices and other communications hereunder and under the Intercreditor Agreement is [●], Attention of [●] (Facsimile No. [●], electronic mail address: [●].)

⁵² Choose the applicable title.

⁵³ Choose the applicable title.

⁵⁴ Choose the applicable title.

4. Counterparts. This Joinder Agreement may be executed in two or more counterparts, each of which shall constitute an original but all of which when taken together shall constitute one contract. Delivery of an executed signature page to this Joinder Agreement by facsimile transmission or by email as a “.pdf” or “.tif” attachment shall be as effective as delivery of a manually signed counterpart of this Joinder Agreement.

5. Governing Law. THIS JOINDER AGREEMENT AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS JOINDER AGREEMENT, WHETHER IN TORT, CONTRACT (AT LAW OR IN EQUITY) OR OTHERWISE, SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

6. Miscellaneous. The provisions of Section 8 of the Intercreditor Agreement shall apply with like effect to this Joinder Agreement.

[Signature Pages Follow]

IN WITNESS WHEREOF, the undersigned has caused this Joinder Agreement to be duly executed by its authorized representative, and each New Representative has caused the same to be accepted by its authorized representative, as of the day and year first above written.

[NAME OF NEW REPRESENTATIVE],
as a New Representative

By: _____
Name:
Title:

Acknowledged and Agreed to by:

JEFFERIES FINANCE LLC,
as First Lien Credit Agreement Collateral Agent,

By: _____
Name:
Title:

[_____],
as Second Lien Credit Agreement Collateral Agent,

By: _____
Name:
Title:

[FORM OF]
GLOBAL INTERCOMPANY NOTE

[], 2017

FOR VALUE RECEIVED, each of the undersigned, to the extent owing from time to time any Indebtedness to any other Person listed on the signature pages hereto (each, in such capacity, an “**Intercompany Debtor**”), hereby promises to pay on demand to such other Person (each, in such capacity, an “**Intercompany Lender**”), in lawful money of the United States of America, or in such other currency as agreed to by such Intercompany Debtor and such Intercompany Lender, in immediately available funds, at such location as such Intercompany Lender shall from time to time designate, the unpaid principal amount of all Indebtedness owed by such Intercompany Debtor to such Intercompany Lender (any such Indebtedness, “**Intercompany Indebtedness**”). Each Intercompany Debtor promises also to pay interest on the unpaid principal amount of all Intercompany Indebtedness owing by such Intercompany Debtor to any Intercompany Lender in like money at such location from the date such Intercompany Indebtedness was incurred until such Intercompany Indebtedness is paid in full at such rate per annum as shall be agreed upon from time to time by such Intercompany Debtor and such Intercompany Lender. Certain Intercompany Indebtedness may also be evidenced by one or more promissory notes issued prior to, or from time to time after, the date hereof by an Intercompany Debtor to an Intercompany Lender (each, an “**Intercompany Note**”). This note (this “**Global Note**”) shall evidence all Intercompany Indebtedness owing to a Loan Party, whether or not any Intercompany Indebtedness is also evidenced by a separate Intercompany Note. In the event of a conflict between the provisions of any Intercompany Note and the provisions of this Global Note (excluding the subordination provisions incorporated by reference into this Global Note pursuant to the third succeeding paragraph below), the provisions of such Intercompany Note shall control. In the event of a conflict between the provisions of any Intercompany Note and the subordination provisions incorporated by reference into this Global Note pursuant to the third succeeding paragraph below, such subordination provisions shall control, and such Intercompany Note shall be deemed modified to the extent of such conflict.

Capitalized terms used in this Global Note but not otherwise defined herein shall have the meanings assigned to them in the Credit Agreement dated as of [August 15], 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), immediately prior to the Closing Date Assumption (as defined therein), EQT Avatar Holdings, Inc., a Delaware corporation (the “Initial Borrower”), and thereafter, each of (i) Certara Holdco, Inc., a Delaware corporation and the direct wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (as defined therein) (the “Parent Borrower”), and (ii) Certara USA, Inc., a Delaware corporation and the indirect wholly-owned subsidiary of the Buyer after giving effect to the Acquisition (the “Co-Borrower” and, together with the Initial Borrower and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Lenders from time to time party thereto, Jefferies Finance LLC, in its capacities as administrative agent and collateral agent for the Lenders (the “Administrative Agent”), and Jefferies Finance LLC and Golub Capital LLC as Issuing Banks.

This Global Note shall be pledged by each Intercompany Lender that is a Loan Party to the Collateral Agent, for the benefit of the Secured Parties, pursuant to the Loan Documents as security for the payment or performance, as the case may be, in full of the Secured Obligations, including the Guarantees of the Secured Obligations. Notwithstanding anything to the contrary set forth herein, this Global Note shall not be construed to constitute a pledge by any Intercompany Lender that is not a Loan Party of any Intercompany Indebtedness owed to such Intercompany Lender that is not a Loan Party and evidenced hereby.

Each Intercompany Lender that is not a Loan Party agrees that this Global Note, and all of the obligations hereunder of each Intercompany Debtor that is a Loan Party to such Intercompany Lender, shall be subordinate and junior to all Senior Debt Obligations (as defined in Annex A hereto), regardless of the tranche(s), class(es) or series of Senior Debt Obligations, with respect to which such Intercompany Debtor is obligated, on the terms and conditions set forth in Annex A hereto, which Annex A is incorporated herein by reference and made a part hereof in its entirety.

Each Intercompany Debtor hereby waives diligence, presentment, demand, protest or notice of any kind whatsoever in connection with this Global Note. Each Intercompany Lender is hereby authorized to record all amounts owing in respect of Intercompany Indebtedness extended by such Intercompany Lender to any Intercompany Debtor (all of which shall be evidenced by this Global Note), and all repayments or prepayments thereof, in its books and records, such books and records constituting prima facie evidence of the accuracy of the information contained therein; provided, however, that the failure of any Intercompany Lender to record any such information shall not affect any Intercompany Debtor's obligations in respect of Intercompany Indebtedness extended by such Intercompany Lender to such Intercompany Debtor.

This Global Note shall be binding upon each Intercompany Debtor and its successors and assigns, and the terms and provisions of this Global Note shall inure to the benefit of each Intercompany Lender and its successors and assigns, including subsequent holders hereof. From time to time after the date hereof, additional Subsidiaries of Holdings may become parties hereto (as Intercompany Debtors and/or Intercompany Lenders, as the case may be) by executing a counterpart signature page to this Global Note, with the same force and effect as if originally named as such on the signature pages hereto. Each Intercompany Debtor expressly agrees that its obligations arising hereunder shall not be affected or diminished by the addition or release of any other Intercompany Debtor or Intercompany Lender hereunder. This Global Note shall be fully effective as to any Intercompany Debtor or Intercompany Lender that is or becomes a party hereto regardless of whether any other Person becomes or fails to become or ceases to be an Intercompany Debtor or Intercompany Lender hereunder.

No amendment, modification or waiver of, or consent with respect to, any provisions of this Global Note shall be effective unless the same shall be in writing and signed and delivered by each Intercompany Debtor and Intercompany Lender whose rights or obligations shall be affected thereby. Subject to the foregoing provisions of this paragraph, this Global Note shall be construed as a separate agreement with respect to each party hereto and may be amended, modified, supplemented, waived or released with respect thereto without the approval of, and without affecting the rights and obligations of, any other party hereto.

THIS GLOBAL NOTE SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAW OF THE STATE OF NEW YORK.

[Signature pages follow]

[INTERCOMPANY LENDERS]

By: _____
Name:
Title:

[INTERCOMPANY DEBTORS]

By: _____
Name:
Title:

SUBORDINATION PROVISIONS

SECTION 1.01. Subordination of Liabilities. Each Intercompany Debtor, for itself, and its successors and assigns, covenants and agrees, and each Intercompany Lender by its acceptance of the Note to which this Annex A is attached (the “**Note**”) likewise covenants and agrees, that the payment of the principal of, interest on, and all other amounts owing in respect of, the Note from an Intercompany Debtor that is a Loan Party to an Intercompany Lender that is not a Loan Party (the “**Subordinated Indebtedness**”) is hereby expressly subordinated, to the extent and in the manner hereinafter set forth, to the prior payment in full in cash of all Senior Debt Obligations (as defined in Section 1.06 of this Annex A). The provisions of this Annex A shall constitute a continuing offer to all persons who, in reliance upon such provisions, become holders of, or continue to hold, Senior Debt Obligations, and such provisions are made for the benefit of the holders of Senior Debt Obligations.

SECTION 1.02. Intercompany Debtor Not to Make Payments with Respect to Subordinated Indebtedness in Certain Circumstances. (a) Where the applicable Intercompany Debtor is a Loan Party and the applicable Intercompany Lender is not a Loan Party, such Intercompany Debtor shall not, directly or indirectly, make any payment of any Subordinated Indebtedness for cash or property until all Senior Debt Obligations have been paid in full in cash if any Event of Default under the Credit Agreement is then in existence or would result therefrom.

(b) Each Intercompany Lender that is not a Loan Party hereby agrees that, so long as any such payment or bankruptcy Event of Default under the preceding subsection (a) of this Section 1.02 exists, it will not ask, demand, sue for, or otherwise take, accept or receive, any amounts owing in respect of the Note.

(c) In the event that, notwithstanding the provisions of the preceding subsection (a) of this Section 1.02, any Intercompany Debtor that is a Loan Party shall make any payment on account of (or any Intercompany Lender that is not a Loan Party receives any payment on account of) the Subordinated Indebtedness at a time when payment is not permitted by said subsection (a), such payment shall be held by such Intercompany Lender, in trust for the benefit of, and shall be paid forthwith over and delivered to, the Administrative Agent.

SECTION 1.03. Subordination to Prior Payment of All Senior Debt Obligations, Dissolution, Liquidation or Reorganization of Intercompany Debtors. Upon any dissolution, winding up, liquidation or reorganization of any Intercompany Debtor that is a Loan Party (whether in bankruptcy, insolvency or receivership proceedings or upon an assignment for the benefit of creditors or otherwise), other than dissolution, winding up, liquidation or reorganization of such Intercompany Debtor permitted under the Credit Agreement:

(a) the holders of all Senior Debt Obligations shall first be entitled to receive payment in full in cash of all Senior Debt Obligations then due and payable (including, without limitation, post-petition interest at the rate provided in the documentation with respect to the Senior Debt Obligations whether or not such post-petition interest is an allowed claim against the debtor in any bankruptcy or similar proceeding) before any Intercompany Lender is entitled to receive any payment of any kind or character on account of the Subordinated Indebtedness until such time that there is no Default or Event of Default after giving effect to the distribution of assets of such Intercompany Debtor;

(b) so long as a Default or an Event of Default has occurred and is continuing, upon a written notice from the Administrative Agent, any payment or distributions of assets of such Intercompany Debtor of any kind or character, whether in cash, property or securities, to which an Intercompany Lender that is not a Loan Party would be entitled except for the provisions of this Annex A, shall be paid by the liquidating trustee or agent or other person making such payment or distribution, whether a trustee in bankruptcy, a receiver or liquidating trustee or other trustee or agent, first, directly to the Administrative Agent to the extent necessary to make payment in full in cash of all Secured Obligations remaining unpaid after giving effect to any concurrent payment or distribution to the holders of the Secured Obligations; and

(c) so long as a Default or an Event of Default has occurred and is continuing, in the event that, notwithstanding the foregoing provisions of this Section 1.03, any payment or distribution of assets of such Intercompany Debtor of any kind or character, whether they be cash, property or securities, shall be received by an Intercompany Lender that is not a Loan Party on account of Subordinated Indebtedness before all Senior Debt Obligations are paid in full in cash, such payment or distribution shall be received and held in trust for and shall forthwith be paid over first, upon a written notice from the Administrative Agent, to the Administrative Agent, for application to the payment of the Secured Obligations until all Secured Obligations shall have been paid in full in cash, after giving effect to any concurrent payment or distribution to the holders of the Secured Obligations.

Without in any way modifying the provisions of this Annex A or affecting the subordination effected hereby, if the hereafter referenced notice is not given, each Intercompany Debtor that is a Loan Party shall give prompt written notice to the applicable Intercompany Lender that is not a Loan Party of any dissolution, winding up, liquidation or reorganization of such Intercompany Debtor (whether in bankruptcy, insolvency or receivership proceedings or upon assignment for the benefit of creditors or otherwise).

SECTION 1.04. Obligation of the Intercompany Debtors Unconditional. Nothing contained in this Annex A or in the Note is intended to or shall impair, as between the Intercompany Debtors and the Intercompany Lenders, the obligation of each Intercompany Debtor, which is absolute and unconditional, to pay to the Intercompany Lenders the principal of and interest on the Note as and when the same shall become due and payable in accordance with their terms, or is intended to or shall affect the relative rights of the Intercompany Lenders and other creditors of the Intercompany Debtors other than the Senior Debt Obligations, nor, except as specifically provided herein, shall anything herein or therein prevent the Intercompany Lenders from exercising all remedies otherwise permitted by applicable law upon an event of default under the Note, subject to the rights, if any, under this Annex A of the holders of Senior Debt Obligations in respect of cash, property, or securities of the Intercompany Debtors received upon the exercise of any such remedy. Upon any distribution of assets of an Intercompany Debtor, each Intercompany Lender shall be entitled to rely upon any order or decree made by any court of competent jurisdiction in which such dissolution, winding up, liquidation or reorganization proceedings are pending, or a certificate of the liquidating trustee or agent or other person making any distribution to the Intercompany Lenders, for the purpose of ascertaining the persons entitled to participate in such distribution, the holders of the Senior Debt Obligations and other indebtedness of the Intercompany Debtor, the amount thereof or payable thereon, the amount or amounts paid or distributed thereon and all other facts pertinent thereto or to this Annex A.

SECTION 1.05. Subordination Rights Not Impaired by Acts or Omissions of the Intercompany Debtors or Intercompany Lenders. No right of any present or future holders of any Senior Debt Obligations to enforce subordination as herein provided shall at any time in any way be prejudiced or impaired by any act or failure to act on the part of an Intercompany Debtor, or by any noncompliance by an Intercompany Debtor with the terms and provisions of the Note, regardless of any knowledge thereof which any such holder may have or be otherwise charged with.

SECTION 1.06. Senior Debt Obligations. The term “**Senior Debt Obligations**” shall mean the Secured Obligations under and as defined in the Credit Agreement.

SECTION 1.07. Miscellaneous. If, at any time, all or part of any payment with respect to Senior Debt Obligations theretofore by an Intercompany Debtor that is a Loan Party or any other person on its behalf is rescinded or must otherwise be returned by the holder of Senior Debt Obligations for any reason whatsoever (including, without limitation, the insolvency, bankruptcy or reorganization of the Intercompany Debtor or such other persons), the subordination provisions set forth herein shall continue to be effective and be reinstated, as the case may be, all as though such payment had not been made.

FIRST AMENDMENT, dated as of January 24, 2018 (this “**Agreement**”), to the Credit Agreement dated as of August 15, 2017 (as amended, restated, amended and restated, supplemented, or otherwise modified from time to time, the “**Credit Agreement**”), among EQT Avatar Holdings, Inc., a Delaware corporation, Certara Holdco, Inc., a Delaware corporation (the “**Parent Borrower**”), Certara USA, Inc., a Delaware corporation (the “**Co-Borrower**” and, together with the Parent Borrower, the “**Borrowers**”), EQT Avatar Intermediate, Inc., a Delaware corporation (“**Holdings**”), the financial institutions from time to time party thereto, Jefferies Finance LLC (“**Jefferies**”), as Administrative Agent (in such capacity, the “**Administrative Agent**”), and Jefferies and Golub Capital LLC, as Issuing Banks.

A. Pursuant to Section 2.22(a) of the Credit Agreement, the Borrowers have requested that the Person set forth on Schedule I hereto (the “**Incremental Term Loan Lender**”) extend additional senior secured first lien incremental term loans to the Parent Borrower under the Credit Agreement in an aggregate principal amount equal to \$25,000,000 (the “**Incremental Term Loans**”).

B. The Incremental Term Loan Lender is willing to provide the Incremental Term Loans to the Borrowers on the First Amendment Closing Date (as defined in Section 6 hereof) on the terms set forth herein and in the Credit Agreement and subject to the conditions set forth herein.

C. The Incremental Term Loans shall have the same terms (other than with respect to issue price) as, and become part of the same Class of Term Loans as, the Initial Term Loans outstanding under the Credit Agreement immediately prior to the effectiveness of this Agreement.

D. The proceeds of the Incremental Term Loans will be used, together with cash on hand of the Parent Borrower, (a) for general corporate purposes, including the funding of one or more acquisitions and (b) to pay related fees and expenses incurred in connection herewith and therewith. Accordingly, in consideration of the mutual agreements herein contained and other good and valuable consideration, the sufficiency and receipt of which are hereby acknowledged, the parties hereto agree as follows:

SECTION 1. Definitions. Capitalized terms used but not defined in this Agreement have the meanings assigned thereto in the Credit Agreement. The provisions of Section 1.03 of the Credit Agreement are hereby incorporated by reference herein, *mutatis mutandis*. This Agreement shall be an “Incremental Facility Agreement” for all purposes of the Credit Agreement, and shall be a “Loan Document” for all purposes of the Credit Agreement and the other Loan Documents. The Incremental Term Loan Lender shall, upon the effectiveness of this Agreement in accordance with Section 6 hereof, be a party to the Credit Agreement, have the rights and obligations of a Lender thereunder, and shall be a “Lender” for all purposes of the Credit Agreement and the other Loan Documents.

SECTION 2. Incremental Term Loans.

(a) Incremental Term Loans. On the terms and subject to the conditions set forth herein, the Incremental Term Loan Lender hereby agrees to make Incremental Term Loans to the Borrowers on the First Amendment Closing Date in an aggregate principal amount set forth opposite its name under the heading "Incremental Term Commitment" on Schedule I hereto (each, an "**Incremental Term Commitment**" and collectively, the "**Incremental Term Commitments**"). It is understood and agreed that, once funded, the Incremental Term Loans shall be added to (and form part of) each Term Borrowing of outstanding Term Loans on a pro rata basis (based on the relative sizes of the various outstanding Borrowings), so that each Term Lender will participate proportionately in each then outstanding Term Borrowing. Interest will begin accruing on the Incremental Term Loans on the First Amendment Closing Date. Unless previously terminated, the Incremental Term Commitments shall terminate at 5:00 p.m., New York City time, on the First Amendment Closing Date. Amounts borrowed under this Section 2(a) and repaid or prepaid may not be reborrowed.

(b) The Incremental Term Loans shall be an "Incremental Facility" for all purposes of the Credit Agreement and the other Loan Documents. The Incremental Term Loans shall have the same terms applicable to, and shall constitute, "Loans", "Initial Term Loans", "Term Loans" and "Additional Term Loans" under the Credit Agreement. From and after the First Amendment Closing Date, the Incremental Term Loan Lender shall constitute an "Initial Term Lender", a "Term Lender", an "Additional Lender" and a "Lender" for all purposes of the Credit Agreement and the other Loan Documents.

SECTION 3. Amendments to the Credit Agreement. Subject to the satisfaction or waiver of the conditions set forth in Section 6 hereof, the Credit Agreement is hereby amended as follows:

(a) Section 1.01 of the Credit Agreement is hereby amended by inserting the following definitions in the appropriate alphabetical order therein:

"First Amendment" means the First Amendment, dated as of January 24, 2018, among the Borrowers, Holdings, the Guarantors party thereto, the Administrative Agent and the Lenders party thereto.

"First Amendment Closing Date" has the meaning assigned to such term in the First Amendment.

"First Amendment Incremental Term Lender" has the meaning assigned to the term "Incremental Term Loan Lender" in the First Amendment.

"First Amendment Incremental Term Loans" has the meaning assigned to the term "Incremental Term Loans" in the First Amendment.

(b) Section 1.01 of the Credit Agreement is hereby amended by amending and restating the definition of "Initial Term Loans" in its entirety to read as follows:

“Initial Term Loans”: means (i) prior to the First Amendment Closing Date, the term loans made by the Initial Term Lenders to the Initial Borrower pursuant to Section 2.01(a)(i), on the Closing Date and (ii) on and after the First Amendment Closing Date, the collective reference to (a) the term loans made by the Initial Term Lenders to the Initial Borrower pursuant to Section 2.01(a)(i) on the Closing Date and (b) the First Amendment Incremental Term Loans made on the First Amendment Closing Date.

(c) Section 1.01 of the Credit Agreement is hereby amended by inserting “the First Amendment,” after “this Agreement,” in the definition of “Loan Documents”.

(d) Section 2.01(a)(i) of the Credit Agreement is hereby amended by inserting “or, in the case of the First Amendment Incremental Term Loans, on the First Amendment Closing Date” after “Closing Date” in such subclause (a)(i).

(e) Section 2.09(a)(i) of the Credit Agreement is hereby amended by inserting “or, in the case of the First Amendment Incremental Term Loans, on the First Amendment Closing Date” after “Closing Date” in each instance where such term appears in such subclause (a)(i).

(f) Section 2.10(a)(i) of the Credit Agreement is hereby replaced in its entirety as follows:

“(a)(i) The Parent Borrower hereby unconditionally promises to repay the outstanding principal amount of the Term Loans to the Administrative Agent for the account of each Term Lender (A) commencing March 2018, on the last Business Day of each December, March, June and September prior to the Initial Term Loan Maturity Date (each such date being referred to as a “Loan Installment Date”), in each case in the amounts set forth in the table below (as such payments may be reduced from time to time as a result of the application of prepayments in accordance with Section 2.11 and purchases or assignments in accordance with Section 9.05(g) or increased as a result of any increase in the amount of such Term Loans pursuant to Section 2.22(a)), and (B) on the Initial Term Loan Maturity Date, in an amount equal to the remainder of the principal amount of the Initial Term Loans outstanding on such date, together in each case with accrued and unpaid interest on the principal amount to be paid to but excluding the date of such payment.

Installment	Principal Amount
March 31, 2018	\$687,656.64
June 30, 2018	\$687,656.64
September 30, 2018	\$687,656.64
December 31, 2018	\$687,656.64
March 31, 2019	\$687,656.64
June 30, 2019	\$687,656.64
September 30, 2019	\$687,656.64
December 31, 2019	\$687,656.64
March 31, 2020	\$687,656.64
June 30, 2020	\$687,656.64
September 30, 2020	\$687,656.64
December 31, 2020	\$687,656.64
March 31, 2021	\$687,656.64
June 30, 2021	\$687,656.64
September 30, 2021	\$687,656.64
December 31, 2021	\$687,656.64
March 31, 2022	\$687,656.64
June 30, 2022	\$687,656.64
September 30, 2022	\$687,656.64
December 31, 2022	\$687,656.64
March 31, 2023	\$687,656.64
June 30, 2023	\$687,656.64
September 30, 2023	\$687,656.64
December 31, 2023	\$687,656.64
March 31, 2024	\$687,656.64
June 30, 2024	\$687,656.64

(g) Section 3.19 of the Credit Agreement is hereby replaced in its entirety as follows:

“3.19 Use of Proceeds. The Borrowers shall use the proceeds of (a) the Initial Term Loans incurred on the Closing Date to finance the Transactions (including to pay Transaction Costs), (b) the Revolving Loans incurred on the Closing Date to pay a portion of the Transaction Costs and on and after the Closing Date for working capital and general corporate purposes (including any purpose not prohibited by this Agreement), (c) the First Amendment Incremental Term Loans incurred on the First Amendment Closing Date, together with cash on hand of the Borrowers, (i) for general corporate purposes, including the funding of one or more acquisitions and (ii) to pay related fees and expenses incurred in connection therewith and with the First Amendment, and (d) any Incremental Facility for working capital and other general corporate purposes, including the financing of Permitted Acquisitions, other Investments and any other use not prohibited by this Agreement.”

(h) Section 5.11 of the Credit Agreement is hereby amended by adding the following clause (e) to the end of such Section 5.11:

“(e) The Borrowers shall use the proceeds of the First Amendment Incremental Term Loans incurred on the First Amendment Closing Date, together with cash on hand of the Borrowers, (i) for general corporate purposes, including the funding of one or more acquisitions and (ii) to pay related fees and expenses incurred in connection therewith and with the First Amendment.

SECTION 4. Other Agreements. The Borrowers acknowledge and agree that as of the First Amendment Closing Date, the aggregate principal amount of all Incremental Facilities and/or Incremental Equivalent Debt incurred or issued in reliance on the Incremental Amount is \$0.

SECTION 5. Representations and Warranties. To induce the other parties hereto to enter into this Agreement, Holdings and the Borrowers hereby jointly and severally represent and warrant to the Administrative Agent and each Lender that, as of the First Amendment Closing Date:

(a) Holdings and each Borrower have the organizational power and authority, and the legal right, to enter into this Agreement and to carry out the transactions contemplated by, and perform its obligations under, this Agreement, the Credit Agreement and the other Loan Documents;

(b) Holdings and each Borrower have taken all necessary organizational action to authorize the execution, delivery and performance of this Agreement;

(c) This Agreement has been duly executed and delivered on behalf of Holdings and each Borrower and constitutes the legal, valid and binding obligation of Holdings and each Borrower, enforceable against Holdings and each Borrower in accordance with its terms, except as enforceability may be limited by any applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the enforcement of creditor's rights generally, by general equitable principles (whether enforcement is sought by proceedings in equity or at law) and by general principles of good faith and fair dealing; and

(d) Each of the representations and warranties made by any Loan Party in or pursuant to the Loan Documents are true and correct in all material respects on and as of the First Amendment Closing Date as if made on and as of such date, except for representations and warranties expressly stated to relate to a specified date, in which case such representations and warranties are true and correct in all material respects as of such earlier date (it being understood and agreed that the reference in Section 3.12 of the Credit Agreement to "the Closing Date, immediately after the consummation of the Transactions to occur on the Closing Date" shall be deemed to refer instead to "the First Amendment Closing Date, immediately after giving effect to the transactions to be consummated on the First Amendment Closing Date").

SECTION 6. Conditions Precedent to Effectiveness of this Agreement. This Agreement shall become effective on the first date (the "**First Amendment Closing Date**") on which the following conditions precedent are satisfied or waived:

(i) the Administrative Agent (or its counsel) shall have received counterparts of this Agreement that, when taken together, bear the signatures of (1) each Borrower, (2) Holdings, (3) the Reaffirming Loan Parties (as defined in Section 9 hereof), (4) the Administrative Agent and (5) the Incremental Term Loan Lender;

(ii) all fees and expenses in connection with this Agreement or under any other Loan Document or other agreement with any Borrower relating to the transactions contemplated hereby (including reasonable and documented out-of-pocket legal fees and expenses required to be paid by the Parent Borrower pursuant to Section 9.03(a) of the Credit Agreement) payable by the Parent Borrower on or before the First Amendment Closing Date shall have been paid to the extent then due; provided that any such expenses shall be required to be paid, as a condition precedent to the First Amendment Closing Date, only to the extent invoiced at least two (2) Business Days prior to the First Amendment Closing Date;

(iii) the Administrative Agent shall have received a duly executed officer's certificate of the Parent Borrower certifying, as of the First Amendment Closing Date, that (A) each of the representations and warranties set forth in Section 5 above are true and correct on and as of the First Amendment Closing Date and (B) no Default or Event of Default has occurred and is continuing both before and immediately after giving effect to this Agreement and the transactions contemplated hereby;

(iv) the Administrative Agent shall have received the following:

(i) a copy of a short form certificate of the Secretary of State or other applicable Governmental Authority of the jurisdiction in which each Loan Party is organized, dated reasonably near the First Amendment Closing Date, certifying that such Loan Party is duly organized and in good standing or full force and effect under the laws of such jurisdiction; and

(ii) a certificate of the Secretary, Assistant Secretary or other appropriate Responsible Officer of each Loan Party, dated the First Amendment Closing Date and certifying (1) (x) that attached thereto is a true and complete copy of the by-laws, limited liability company agreement or limited partnership agreement, as applicable, of such Loan Party as in effect on the First Amendment Closing Date and at all times since a date prior to the date of the resolutions described in clause (2) below or (y) that the by-laws, limited liability company agreement or limited partnership agreement, as applicable, of such Loan Party provided in the certificate delivered on the Closing Date are still in effect, (2) (x) that attached thereto is a true and complete copy of resolutions duly adopted by the board of directors, board of managers, members or other governing body, as applicable, of such Loan Party authorizing the execution, delivery and performance of this Agreement and the borrowings hereunder, in the case of the Borrowers, and any Loan Documents to which each such Loan Party is a party, and that such resolutions have not been modified, rescinded or amended and are in full force and effect or (y) that the resolutions adopted by the board of directors, board of managers, members or other governing body, as applicable, of such Loan Party in connection with the entry into the Credit Agreement on the Closing Date have not been modified, rescinded or amended and are in full force and effect, and (3) (x) as to the incumbency and specimen signature of each officer executing this Agreement or any other Loan Document or any other document delivered in connection herewith on behalf of such Loan Party or (y) that the incumbency and specimen signature of each officer executing this Agreement provided on the Closing Date have not changed;

(v) the Administrative Agent shall have received, on behalf of itself and the Lenders and each Issuing Bank, an opinion of Simpson Thacher & Bartlett LLP, in its capacity as New York counsel to the Loan Parties, dated the First Amendment Closing Date and addressed to the Administrative Agent and each Lender and Issuing Bank and in form and substance consistent with the opinions delivered by such counsel on the Closing Date, taking into account the nature of this Agreement and the transactions contemplated hereby;

(vi) delivery of a Borrowing Request pursuant to Section 2.03 of the Credit Agreement;

(vii) the Borrowers shall have paid all unpaid interest and any other amounts in respect of the Initial Term Loans that has accrued to but excluding the First Amendment Closing Date; and

(viii) no later than three Business Days in advance of the First Amendment Closing Date, the Administrative Agent shall have received all documentation and other information reasonably requested with respect to any Loan Party (including any entities that will become Loan Parties in connection with the transactions contemplated by this Agreement) in writing by the Administrative Agent (including on behalf of the Lenders) at least ten Business Days in advance of the First Amendment Closing Date, which documentation or other information is required by regulatory authorities under applicable "know your customer" and anti-money laundering rules and regulations, including the USA PATRIOT Act.

SECTION 7. Reserved.

SECTION 8. Effect of this Agreement. Except as expressly set forth herein, this Agreement shall not by implication or otherwise limit, impair, constitute a waiver of, or otherwise affect the rights and remedies of the Lenders or the Agents under, the Credit Agreement or any other Loan Document, and shall not alter, modify, amend or in any way affect any of the terms, conditions, obligations, covenants or agreements contained in the Credit Agreement or any other Loan Document, all of which are ratified and affirmed in all respects and shall continue in full force and effect. Nothing herein shall be deemed to entitle any Loan Party to a consent to, or a waiver, amendment, modification or other change of, any of the terms, conditions, obligations, covenants or agreements contained in the Credit Agreement or any other Loan Document in similar or different circumstances. Nothing herein can or may be construed as a novation of the Credit Agreement or any other Loan Document. This Agreement shall apply and be effective only with respect to the provisions of the Credit Agreement specifically referred to herein. After the First Amendment Closing Date, any reference to the Credit Agreement shall mean the Credit Agreement as modified hereby.

SECTION 9. Reaffirmation. Each of Holdings, each Borrower and each Guarantor identified on the signature pages hereto (collectively, Holdings, the Borrowers and such Guarantors, the “**Reaffirming Loan Parties**”) hereby acknowledges that it expects to receive substantial direct and indirect benefits as a result of this Agreement and the transactions contemplated hereby. Each Reaffirming Loan Party hereby confirms its respective guarantees (including in respect of the Incremental Term Loans), pledges and grants of security interests, as applicable, under each of the Loan Documents to which it is party, and agrees that, notwithstanding the effectiveness of this Agreement and the transactions contemplated hereby, such guarantees, pledges and grants of security interests shall continue to be in full force and effect and shall accrue to the benefit of the Secured Parties (including in respect of the Incremental Term Loan Lender). Each of the Reaffirming Loan Parties hereby reaffirms its obligations under each provision of each Loan Document to which it is party.

SECTION 10. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery by telecopier (or other electronic transmission) of an executed counterpart of a signature page to this Agreement shall be effective as delivery of an original executed counterpart of this Agreement.

SECTION 11. Headings. Section headings used herein are for convenience of reference only, are not part of this Agreement and are not to affect the construction of, or to be taken into consideration in interpreting, this Agreement.

SECTION 12. Governing Law; Jurisdiction, etc. This Agreement shall be construed in accordance with and governed by the laws of the State of New York. The provisions of Sections 9.10 and 9.11 of the Credit Agreement shall apply to this Agreement, *mutatis mutandis*.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed by their respective authorized officers as of the day and year first above written.

EQT AVATAR INTERMEDIATE, INC., as Holdings

By: /s/ Jason Howard

Name: Jason Howard

Title: President

By: /s/ Robert Bradburn

Name: Robert Bradburn

Title: Vice President and Secretary

EQT AVATAR HOLDINGS, INC., as a Loan Guarantor

By: /s/ Jason Howard

Name: Jason Howard

Title: President

By: /s/ Robert Bradburn

Name: Robert Bradburn

Title: Vice President and Secretary

CERTARA HOLDCO, INC., as the Parent Borrower

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

CERTARA USA, INC., as the Co-Borrower

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

SUBSIDIARY GUARANTORS

CERTARA HOLDING, INC.

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

MBDD US, LLC

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

TRIPOS INVESTMENTS, L.L.C.

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

SYNCHROGENIX INFORMATION STRATEGIES, LLC

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

CERTARA, L.P.

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

JEFFERIES FINANCE LLC, as
Administrative Agent and Incremental Term
Loan Lender

by

/s/ J. Paul McDonnell

Name: J. Paul McDonnell

Title: Managing Director

Incremental Term Commitments

Incremental Term Loan Lender	Incremental Term Commitment
Jefferies Finance LLC	\$ 25,000,000
Total	\$ 25,000,000

SECOND AMENDMENT, dated as of April 3, 2018 (this “**Agreement**”), to the Credit Agreement dated as of August 15, 2017 (as amended by the First Amendment thereto, dated as of January 24, 2018 and as further amended, restated, amended and restated, supplemented, or otherwise modified from time to time, the “**Credit Agreement**”), among EQT Avatar Holdings, Inc., a Delaware corporation, Certara Holdco, Inc., a Delaware corporation (the “**Parent Borrower**”), Certara USA, Inc., a Delaware corporation (the “**Co-Borrower**” and, together with the Parent Borrower, the “**Borrowers**”), EQT Avatar Intermediate, Inc., a Delaware corporation (“**Holdings**”), the financial institutions from time to time party thereto, Jefferies Finance LLC (“**Jefferies**”), as Administrative Agent (in such capacity, the “**Administrative Agent**”), and Jefferies and Golub Capital LLC, as Issuing Banks.

A. Pursuant to Section 9.02(c)(i) of the Credit Agreement, the Parent Borrower has requested to incur “Replacement Term Loans” (as defined in the Credit Agreement) to replace in full all Term Loans outstanding under the Credit Agreement immediately prior to the effectiveness of this Agreement (the “**Existing Term Loans**”) with the Replacement Term Loans (as defined below), and which Replacement Term Loans shall have the same terms (other than to the extent expressly provided in this Agreement) under the Loan Documents as the Existing Term Loans.

B. Each Lender that executes and delivers a signature page to this Agreement in the form of the Lender New Commitment (the “**Lender New Commitment**”) posted on LendAmend on March 13, 2018 (each, a “**Consenting Lender**”), will be deemed to have irrevocably agreed and consented to the terms of this Agreement.

C. The person set forth on Schedule I hereto (the “**Replacement Term Loan Lender**”) will be deemed to have irrevocably agreed and consented to the terms of this Agreement and will commit to make the Replacement Term Loans (the “**Replacement Term Loans**”) to the Parent Borrower under the Credit Agreement on the Second Amendment Closing Date (as defined in Section 7 hereof) in the amount set forth opposite such Replacement Term Loan Lender’s name on Schedule I hereto, on the terms set forth herein and in the Credit Agreement and subject to the conditions set forth herein.

D. Pursuant to Section 2.22(a) of the Credit Agreement, the Parent Borrower has requested that the Person set forth on Schedule II hereto (the “**Incremental Term Loan Lender**”) extend additional senior secured first lien incremental term loans to the Parent Borrower under the Credit Agreement in an aggregate principal amount equal to \$40,000,000 (the “**Incremental Term Loans**”).

E. The Incremental Term Loan Lender is willing to provide the Incremental Term Loans to the Borrowers on the Second Amendment Closing Date, on the terms set forth herein and in the Credit Agreement and subject to the conditions set forth herein.

F. The Incremental Term Loans shall have the same terms (other than with respect to issue price) as, and become part of the same Class of Term Loans as, the Replacement Term Loans.

G. The proceeds of (i) the Replacement Term Loans will be used, together with cash on hand of the Parent Borrower, to replace in full all Existing Term Loans, on the terms and subject to the conditions set forth herein and (ii) the Incremental Term Loans will be used, together with cash on hand of the Parent Borrower, (a) for general corporate purposes, including the funding of one or more acquisitions and (b) to pay related fees and expenses incurred in connection herewith and therewith. Accordingly, in consideration of the mutual agreements herein contained and other good and valuable consideration, the sufficiency and receipt of which are hereby acknowledged, the parties hereto agree as follows:

SECTION 1. Definitions. Capitalized terms used but not defined in this Agreement have the meanings assigned thereto in the Credit Agreement. The provisions of Section 1.03 of the Credit Agreement are hereby incorporated by reference herein, *mutatis mutandis*. This Agreement shall be a “Refinancing Amendment” and an “Incremental Facility Agreement”, in each case for all purposes of the Credit Agreement, and shall be a “Loan Document” for all purposes of the Credit Agreement and the other Loan Documents. The Replacement Term Loan Lender and the Incremental Term Loan Lender shall, upon the effectiveness of this Agreement in accordance with Section 7 hereof, be a party to the Credit Agreement, have the rights and obligations of a Lender thereunder, and shall be a “Lender” for all purposes of the Credit Agreement and the other Loan Documents.

SECTION 2. Consenting Lenders; Replacement Term Loans; Administrative Agent Authorization.

(a) Consenting Lenders; Replacement Term Loan Lender. On the terms set forth herein and in the Credit Agreement and subject to the conditions set forth herein, (i) each Consenting Lender, severally and not jointly, irrevocably agrees to the terms of this Agreement and (ii) the Replacement Term Loan Lender (A) irrevocably agrees to the terms of this Agreement and (B) irrevocably commits to make, upon the Second Amendment Closing Date, Replacement Term Loans in the amount set forth opposite its name on Schedule I hereto. From and after the Second Amendment Closing Date, the Replacement Term Loan Lender shall be a “Lender”, a “Term Lender” and an “Additional Lender” under, and for all purposes of, the Credit Agreement and the other Loan Documents. The commitments of the Replacement Term Loan Lender and the undertakings of the Consenting Lenders are several.

(b) Replacement Term Loans.

(i) As of the Second Amendment Closing Date, the Replacement Term Loans shall be “Loans”, “Initial Term Loans”, “Term Loans”, “Replacement Term Loans” and “Additional Term Loans” under, and for all purposes of, the Credit Agreement and the other Loan Documents. The Replacement Term Loans shall have the same terms as the Existing Term Loans outstanding immediately prior to the Second Amendment Closing Date, other than to the extent expressly provided in this Agreement. Without limiting the foregoing, the Replacement Term Loans shall have the same maturity date as the Existing Term Loans outstanding immediately prior to the Second Amendment Closing Date. Upon the Second Amendment Closing Date, the Replacement Term Loans shall be treated as part of the same Class for all purposes of the Credit Agreement and the other Loan Documents.

(ii) On the Second Amendment Closing Date, the proceeds of the Replacement Term Loans shall be applied to replace in full the principal of all of the Existing Term Loans, on the terms and subject to the conditions set forth herein. Notwithstanding anything herein or in the Credit Agreement to the contrary, the aggregate principal amount of the Replacement Term Loans shall not exceed the aggregate principal amount of the Existing Term Loans outstanding immediately prior to the Second Amendment Closing Date.

(iii) It is acknowledged and agreed that pursuant to the Cashless Settlement of Existing Term Loans, dated the date hereof, among the Borrowers, Jefferies Finance LLC, as the New Lender (as defined therein), the Administrative Agent and each Consenting Lender party thereto as an Existing Lender (as defined therein), each such Consenting Lender has waived any breakage loss, cost or expense due and payable to it by the Borrower pursuant to Section 2.16 of the Credit Agreement with respect to the repayment of the Existing Term Loans on a date other than the last day of the Interest Period relating to such Existing Term Loans.

(iv) The Borrower and the Administrative Agent hereby consent to any assignments made by the Replacement Term Loan Lender or any affiliate thereof to the Persons included in the list of allocations separately provided to the Borrower and the Administrative Agent (or any Approved Funds or Affiliate of such Persons) in connection with the primary syndication of the Replacement Term Loans.

(c) Administrative Agent Authorization. The Borrower, each Consenting Lender and the Replacement Term Loan Lender hereby authorize the Administrative Agent to (i) determine all amounts, percentages and other information with respect to the Loans of each Lender, which amounts, percentages and other information may be determined only upon receipt by the Administrative Agent of the Lender New Commitments of the Consenting Lenders and (ii) enter and complete all such amounts, percentages and other information in the Register. The Administrative Agent's determination and entry and completion shall be conclusive evidence of the existence, amounts, percentages and other information with respect to the obligations of the Borrower under the Credit Agreement, in each case, absent manifest error.

SECTION 3. Incremental Term Loans.

(a) On the terms and subject to the conditions set forth herein, the Incremental Term Loan Lender hereby agrees to make Incremental Term Loans to the Borrowers on the Second Amendment Closing Date in an aggregate principal amount set forth opposite its name under the heading "Incremental Term Commitment" on Schedule II hereto (each, an "**Incremental Term Commitment**" and collectively, the "**Incremental Term Commitments**"). It is understood and agreed that, once funded, the Incremental Term Loans shall be added to (and form part of) each Term Borrowing of outstanding Term Loans on a pro rata basis (based on the relative sizes of the various outstanding Borrowings), so that each Term Lender will participate proportionately in each then outstanding Term Borrowing. Interest will begin accruing on the Incremental Term Loans on the Second Amendment Closing Date. Unless previously terminated, the Incremental Term Commitments shall terminate at 5:00 p.m., New York City time, on the Second Amendment Closing Date. Amounts borrowed under this Section 3(a) and repaid or prepaid may not be reborrowed.

(b) The Incremental Term Loans shall be an “Incremental Facility” for all purposes of the Credit Agreement and the other Loan Documents. The Incremental Term Loans shall have the same terms applicable to, and shall constitute, “Loans”, “Initial Term Loans”, “Term Loans” and “Additional Term Loans” under the Credit Agreement. From and after the Second Amendment Closing Date, the Incremental Term Loan Lender shall constitute an “Initial Term Lender”, a “Term Lender”, an “Additional Lender” and a “Lender” for all purposes of the Credit Agreement and the other Loan Documents.

SECTION 4. Amendments to the Credit Agreement. Subject to the satisfaction or waiver of the conditions set forth in Section 7 hereof, the Credit Agreement is hereby amended as follows:

(a) Section 1.01 of the Credit Agreement is hereby amended by inserting the following definitions in the appropriate alphabetical order therein:

“Existing Term Loans” has the meaning assigned to the term “Existing Term Loans” in the Second Amendment.

“Second Amendment” means the Second Amendment, dated as of April 3, 2018, among the Borrowers, Holdings, the Guarantors party thereto, the Administrative Agent and the Lenders party thereto.

“Second Amendment Closing Date” has the meaning assigned to such term in the Second Amendment.

“Second Amendment Incremental Term Loans” has the meaning assigned to the term “Incremental Term Loans” in the Second Amendment.

“Second Amendment Replacement Term Loans” has the meaning assigned to the term “Replacement Term Loans” in the Second Amendment.

(b) Section 1.01 of the Credit Agreement is hereby amended by replacing the text “1.00%” with the text “0.00%” in clause (b) of the definition of “Adjusted Eurocurrency Rate”.

(c) Section 1.01 of the Credit Agreement is hereby amended by amending and restating the definition of “Applicable Rate” in its entirety to read as follows:

“Applicable Rate” means, for any day, (a) with respect to any Initial Term Loan, (i) for Adjusted Eurocurrency Loans, 3.50% and (ii) for ABR Loans, 2.50%, (b) with respect to any Initial Revolving Loan, the rate per annum set forth below under the caption “ABR Spread” or “Adjusted Eurocurrency Rate” of the grid based upon the First Lien Leverage Ratio and (c) with respect to any Additional Term Loan and Additional Revolving Loan of any Class, the rate or rates per annum specified in the applicable Refinancing Amendment, Incremental Facility Agreement or Extension Amendment:

	First Lien Leverage Ratio	ABR Spread	Adjusted Eurocurrency Rate Spread
<u>Category 1</u>			
	Greater than 4.50 to 1.00	3.00%	4.00%
<u>Category 2</u>			
	Less than or equal to 4.50 to 1.00 but greater than 4.00 to 1.00	2.75%	3.75%
<u>Category 3</u>			
	Less than or equal 4.00 to 1.00	2.50%	3.50%

The Applicable Rate with respect to Initial Revolving Loans shall be adjusted quarterly on a prospective basis on each Adjustment Date based upon the First Lien Leverage Ratio in accordance with the table above; provided that if financial statements (and the corresponding Compliance Certificate required pursuant to Section 5.01(c)) are not delivered when required pursuant to Section 5.01(a) or (b), as applicable, the “Applicable Rate” for any Initial Revolving Loan shall, at the option of the Administrative Agent (at the direction of the Required Lenders) and upon notice to the Parent Borrower, be the rate per annum set forth above in Category 1 of the table above until such financial statements (and the corresponding Compliance Certificate required pursuant to Section 5.01(c)) are delivered in compliance with Section 5.01(a) or (b), as applicable.

(d) Section 1.01 of the Credit Agreement is hereby amended by amending and restating the definition of “Initial Term Loans” in its entirety to read as follows:

“Initial Term Loans”: means (i) prior to the First Amendment Closing Date, the term loans made by the Initial Term Lenders to the Initial Borrower pursuant to Section 2.01(a)(i) on the Closing Date, (ii) on and after the First Amendment Closing Date but prior to the Second Amendment Closing Date, the collective reference to (a) the term loans made by the Initial Term Lenders to the Initial Borrower pursuant to Section 2.01(a)(i) on the Closing Date and (b) the First Amendment Incremental Term Loans made on the First Amendment Closing Date and (iii) on and after the Second Amendment Closing Date, the collective reference to the Second Amendment Replacement Term Loans and Second Amendment Incremental Term Loans made on the Second Amendment Closing Date.

(e) Section 1.01 of the Credit Agreement is hereby amended by inserting “the Second Amendment,” after “the First Amendment,” in the definition of “Loan Documents”.

(f) Section 2.01(a)(i) of the Credit Agreement is hereby amended by inserting “or, in the case of the Second Amendment Replacement Term Loans and Second Amendment Incremental Term Loans, on the Second Amendment Closing Date,” after “the First Amendment Closing Date,” in such subclause (a)(i).

(g) Section 2.09(a)(i) of the Credit Agreement is hereby amended by inserting “or, in the case of the Second Amendment Replacement Term Loans and Second Amendment Incremental Term Loans, on the Second Amendment Closing Date,” after “the First Amendment Closing Date,” in each instance where such term appears in such subclause (a)(i).

(h) Section 2.10(a)(i) of the Credit Agreement is hereby replaced in its entirety as follows:

“(a)(i) The Parent Borrower hereby unconditionally promises to repay the outstanding principal amount of the Term Loans to the Administrative Agent for the account of each Term Lender (A) commencing June 2018, on the last Business Day of each December, March, June and September prior to the Initial Term Loan Maturity Date (each such date being referred to as a “Loan Installment Date”), in each case in the amounts set forth in the table below (as such payments may be reduced from time to time as a result of the application of prepayments in accordance with Section 2.11 and purchases or assignments in accordance with Section 9.05(g) or increased as a result of any increase in the amount of such Term Loans pursuant to Section 2.22(a)), and (B) on the Initial Term Loan Maturity Date, in an amount equal to the remainder of the principal amount of the Initial Term Loans outstanding on such date, together in each case with accrued and unpaid interest on the principal amount to be paid to but excluding the date of such payment.

Installment	Principal Amount
June 30, 2018	\$788,159.15
September 30, 2018	\$788,159.15
December 31, 2018	\$788,159.15
March 31, 2019	\$788,159.15
June 30, 2019	\$788,159.15
September 30, 2019	\$788,159.15
December 31, 2019	\$788,159.15
March 31, 2020	\$788,159.15
June 30, 2020	\$788,159.15
September 30, 2020	\$788,159.15
December 31, 2020	\$788,159.15
March 31, 2021	\$788,159.15
June 30, 2021	\$788,159.15
September 30, 2021	\$788,159.15
December 31, 2021	\$788,159.15
March 31, 2022	\$788,159.15
June 30, 2022	\$788,159.15
September 30, 2022	\$788,159.15
December 31, 2022	\$788,159.15
March 31, 2023	\$788,159.15
June 30, 2023	\$788,159.15
September 30, 2023	\$788,159.15
December 31, 2023	\$788,159.15
March 31, 2024	\$788,159.15
June 30, 2024	\$788,159.15

(i) Section 2.12(e) of the Credit Agreement is hereby amended by replacing “Closing Date” in each instance such term appears in such section with “Second Amendment Closing Date”.

(j) Section 3.19 of the Credit Agreement is hereby replaced in its entirety as follows:

“3.19 Use of Proceeds. The Borrowers shall use the proceeds of (a) the Initial Term Loans incurred on the Closing Date to finance the Transactions (including to pay Transaction Costs), (b) the Revolving Loans incurred on the Closing Date to pay a portion of the Transaction Costs and on and after the Closing Date for working capital and general corporate purposes (including any purpose not prohibited by this Agreement), (c) the First Amendment Incremental Term Loans incurred on the First Amendment Closing Date, together with cash on hand of the Borrowers, (i) for general corporate purposes, including the funding of one or more acquisitions and (ii) to pay related fees and expenses incurred in connection therewith and with the First Amendment, (d) the Second Amendment Replacement Term Loans incurred on the Second Amendment Closing Date to replace in full all Existing Term Loans, on the terms and subject to the conditions set forth in the Second Amendment, (e) the Second Amendment Incremental Term Loans incurred on the Second Amendment Closing Date, together with cash on hand of the Borrowers, (i) for general corporate purposes, including the funding of one or more acquisitions and (ii) to pay related fees and expenses incurred in connection therewith and with the Second Amendment and (f) any Incremental Facility for working capital and other general corporate purposes, including the financing of Permitted Acquisitions, other Investments and any other use not prohibited by this Agreement.”

(k) Section 5.11 of the Credit Agreement is hereby amended by adding the following clause (f) to the end of such Section 5.11:

“(e) The Borrowers shall use the proceeds of (i) the Second Amendment Replacement Term Loans incurred on the Second Amendment Closing Date to replace in full all Existing Term Loans, on the terms and subject to the conditions set forth in the Second Amendment and (ii) the Second Amendment Incremental Term Loans incurred on the Second Amendment Closing Date, together with cash on hand of the Borrowers, (A) for general corporate purposes, including the funding of one or more acquisitions and (B) to pay related fees and expenses incurred in connection therewith and with the Second Amendment

SECTION 5. Other Agreements. The Borrowers acknowledge and agree that as of the Second Amendment Closing Date, the aggregate principal amount of all Incremental Facilities and/or Incremental Equivalent Debt incurred or issued in reliance on the Incremental Amount is \$0.

SECTION 6. Representations and Warranties. To induce the other parties hereto to enter into this Agreement, Holdings and the Borrowers hereby jointly and severally represent and warrant to the Administrative Agent and each Lender that, as of the Second Amendment Closing Date:

(a) Holdings and each Borrower have the organizational power and authority, and the legal right, to enter into this Agreement and to carry out the transactions contemplated by, and perform its obligations under, this Agreement, the Credit Agreement and the other Loan Documents;

(b) Holdings and each Borrower have taken all necessary organizational action to authorize the execution, delivery and performance of this Agreement;

(c) This Agreement has been duly executed and delivered on behalf of Holdings and each Borrower and constitutes the legal, valid and binding obligation of Holdings and each Borrower, enforceable against Holdings and each Borrower in accordance with its terms, except as enforceability may be limited by any applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the enforcement of creditor's rights generally, by general equitable principles (whether enforcement is sought by proceedings in equity or at law) and by general principles of good faith and fair dealing; and

(d) Each of the representations and warranties made by any Loan Party in or pursuant to the Loan Documents are true and correct in all material respects on and as of the Second Amendment Closing Date as if made on and as of such date, except for representations and warranties expressly stated to relate to a specified date, in which case such representations and warranties are true and correct in all material respects as of such earlier date (it being understood and agreed that the reference in Section 3.12 of the Credit Agreement to "the Closing Date, immediately after the consummation of the Transactions to occur on the Closing Date" shall be deemed to refer instead to "the Second Amendment Closing Date, immediately after giving effect to the transactions to be consummated on the Second Amendment Closing Date").

SECTION 7. Conditions Precedent to Effectiveness of this Agreement. This Agreement shall become effective on the first date (the “**Second Amendment Closing Date**”) on which the following conditions precedent are satisfied or waived:

(a) (i) the aggregate principal amount of the Replacement Term Loans shall be equal to the aggregate principal amount of the Existing Term Loans outstanding on the Second Amendment Closing Date and (ii) the Borrowers shall have, concurrently with the making of the Replacement Term Loans, paid all accrued and unpaid interest and other amounts due and payable on the Second Amendment Closing Date in respect of the aggregate principal amount of the Existing Term Loans;

(b) the Administrative Agent (or its counsel) shall have received counterparts of this Agreement that, when taken together, bear the signatures of (1) each Borrower, (2) Holdings, (3) the Reaffirming Loan Parties (as defined in Section 10 hereof), (4) the Administrative Agent, (5) the Replacement Term Loan Lender and (6) the Incremental Term Loan Lender;

(c) all fees and expenses in connection with this Agreement or under any other Loan Document or other agreement with any Borrower relating to the transactions contemplated hereby (including reasonable and documented out-of-pocket legal fees and expenses required to be paid by the Parent Borrower pursuant to Section 9.03(a) of the Credit Agreement) payable by the Parent Borrower on or before the Second Amendment Closing Date shall have been paid to the extent then due; provided that any such expenses shall be required to be paid, as a condition precedent to the Second Amendment Closing Date, only to the extent invoiced at least two (2) Business Days prior to the Second Amendment Closing Date;

(d) the Administrative Agent shall have received a duly executed officer’s certificate of the Parent Borrower certifying, as of the Second Amendment Closing Date, that (A) each of the representations and warranties set forth in Section 6 above are true and correct on and as of the Second Amendment Closing Date and (B) no Default or Event of Default has occurred and is continuing both before and immediately after giving effect to this Agreement and the transactions contemplated hereby;

(e) the Administrative Agent shall have received the following:

(i) a copy of a short form certificate of the Secretary of State or other applicable Governmental Authority of the jurisdiction in which each Loan Party is organized, dated reasonably near the Second Amendment Closing Date, certifying that such Loan Party is duly organized and in good standing or full force and effect under the laws of such jurisdiction; and

(ii) a certificate of the Secretary, Assistant Secretary or other appropriate Responsible Officer of each Loan Party, dated the Second Amendment Closing Date and certifying (1) (x) that attached thereto is a true and complete copy of the by-laws, limited liability company agreement or limited partnership agreement, as applicable, of such Loan Party as in effect on the Second Amendment Closing Date and at all times since a date prior to the date of the resolutions described in clause (2) below or (y) that the by-laws, limited liability company agreement or limited partnership agreement, as applicable, of such Loan Party provided in the certificate delivered on the Closing Date are still in effect, (2) (x) that attached thereto is a true and complete copy of resolutions duly adopted by the board of directors, board of managers, members or other governing body, as applicable, of such Loan Party authorizing the execution, delivery and performance of this Agreement and the borrowings hereunder, in the case of the Borrowers, and any Loan Documents to which each such Loan Party is a party, and that such resolutions have not been modified, rescinded or amended and are in full force and effect or (y) that the resolutions adopted by the board of directors, board of managers, members or other governing body, as applicable, of such Loan Party in connection with the entry into the Credit Agreement on the Closing Date have not been modified, rescinded or amended and are in full force and effect, and (3) (x) as to the incumbency and specimen signature of each officer executing this Agreement or any other Loan Document or any other document delivered in connection herewith on behalf of such Loan Party or (y) that the incumbency and specimen signature of each officer executing this Agreement provided on the Closing Date have not changed;

(f) the Administrative Agent shall have received, on behalf of itself and the Lenders and each Issuing Bank, an opinion of Simpson Thacher & Bartlett LLP, in its capacity as New York counsel to the Loan Parties, dated the Second Amendment Closing Date and addressed to the Administrative Agent and each Lender and Issuing Bank and in form and substance consistent with the opinions delivered by such counsel on the Closing Date, taking into account the nature of this Agreement and the transactions contemplated hereby;

(g) the Administrative Agent shall have received a certificate in substantially the form of Exhibit M to the Credit Agreement from a senior authorized financial executive (or other officer with equivalent duties) of the Parent Borrower dated as of the Second Amendment Closing Date and certifying as to the matters set forth therein;

(h) delivery of a Borrowing Request pursuant to Section 2.03 of the Credit Agreement; and

(i) no later than three Business Days in advance of the Second Amendment Closing Date, the Administrative Agent shall have received all documentation and other information reasonably requested with respect to any Loan Party (including any entities that will become Loan Parties in connection with the transactions contemplated by this Agreement) in writing by the Administrative Agent (including on behalf of the Lenders) at least ten Business Days in advance of the Second Amendment Closing Date, which documentation or other information is required by regulatory authorities under applicable “know your customer” and anti-money laundering rules and regulations, including the USA PATRIOT Act.

SECTION 8. Reserved.

SECTION 9. Effect of this Agreement. Except as expressly set forth herein, this Agreement shall not by implication or otherwise limit, impair, constitute a waiver of, or otherwise affect the rights and remedies of the Lenders or the Agents under, the Credit Agreement or any other Loan Document, and shall not alter, modify, amend or in any way affect any of the terms, conditions, obligations, covenants or agreements contained in the Credit Agreement or any other Loan Document, all of which are ratified and affirmed in all respects and shall continue in full force and effect. Nothing herein shall be deemed to entitle any Loan Party to a consent to, or a waiver, amendment, modification or other change of, any of the terms, conditions, obligations, covenants or agreements contained in the Credit Agreement or any other Loan Document in similar or different circumstances. Nothing herein can or may be construed as a novation of the Credit Agreement or any other Loan Document. This Agreement shall apply and be effective only with respect to the provisions of the Credit Agreement specifically referred to herein. After the Second Amendment Closing Date, any reference to the Credit Agreement shall mean the Credit Agreement as modified hereby.

SECTION 10. Reaffirmation. Each of Holdings, each Borrower and each Guarantor identified on the signature pages hereto (collectively, Holdings, the Borrowers and such Guarantors, the “**Reaffirming Loan Parties**”) hereby acknowledges that it expects to receive substantial direct and indirect benefits as a result of this Agreement and the transactions contemplated hereby. Each Reaffirming Loan Party hereby confirms its respective guarantees (including in respect of the Replacement Term Loans and the Incremental Term Loans), pledges and grants of security interests, as applicable, under each of the Loan Documents to which it is party, and agrees that, notwithstanding the effectiveness of this Agreement and the transactions contemplated hereby, such guarantees, pledges and grants of security interests shall continue to be in full force and effect and shall accrue to the benefit of the Secured Parties (including in respect of the Replacement Term Loan Lender and the Incremental Term Loan Lender). Each of the Reaffirming Loan Parties hereby reaffirms its obligations under each provision of each Loan Document to which it is party.

SECTION 11. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery by telecopier (or other electronic transmission) of an executed counterpart of a signature page to this Agreement shall be effective as delivery of an original executed counterpart of this Agreement.

SECTION 12. Headings. Section headings used herein are for convenience of reference only, are not part of this Agreement and are not to affect the construction of, or to be taken into consideration in interpreting, this Agreement.

SECTION 13. Governing Law; Jurisdiction, etc. This Agreement shall be construed in accordance with and governed by the laws of the State of New York. The provisions of Sections 9.10 and 9.11 of the Credit Agreement shall apply to this Agreement, *mutatis mutandis*.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed by their respective authorized officers as of the day and year first above written.

EQT AVATAR INTERMEDIATE, INC., as Holdings

By: /s/ Peter Veldman

Name: Peter Veldman

Title: President

By: /s/ Robert Bradburn

Name: Robert Bradburn

Title: Vice President and Secretary

EQT AVATAR HOLDINGS, INC., as a Loan Guarantor

By: /s/ Peter Veldman

Name: Peter Veldman

Title: President

By: /s/ Robert Bradburn

Name: Robert Bradburn

Title: Vice President and Secretary

CERTARA HOLDCO, INC., as the Parent Borrower

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

CERTARA USA, INC., as the Co-Borrower

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

[Certara – Signature Page to the Second Amendment]

SUBSIDIARY GUARANTORS

CERTARA HOLDING, INC.

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

MBDD US, LLC

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

TRIPOS INVESTMENTS, L.L.C.

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

SYNCHROGENIX INFORMATION STRATEGIES, LLC

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

CERTARA, L.P.

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: Chief Financial Officer and Treasurer

[Certara – Signature Page to the Second Amendment]

JEFFERIES FINANCE LLC, as Administrative Agent, Replacement Term
Loan Lender and Incremental Term Loan Lender

by

/s/ J. Paul McDonnell

Name: J. Paul McDonnell

Title: Managing Director

[Certara – Signature Page to the Second Amendment]

[Lender Signature Pages On File With Administrative Agent]

[Certara – Signature Page to the Second Amendment]

Replacement Term Loans

Replacement Term Loan Lender	Replacement Term Commitment
Jefferies Finance LLC	\$ 273,687,343.36
Total	\$ 273,687,343.36

Incremental Term Commitments

Incremental Term Loan Lender	Incremental Term Commitment
Jefferies Finance LLC	\$ 40,000,000
Total	\$ 40,000,000

LOAN GUARANTY

THIS LOAN GUARANTY (as it may be amended, restated, amended and restated, supplemented or otherwise modified from time to time, this "Loan Guaranty") is entered into as of August 15, 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation ("Holdings"), EQT Avatar Holdings, Inc., a Delaware corporation ("Buyer" or the "Initial Borrower"), Certara Holdco, Inc., a Delaware corporation (the "Parent Borrower"), Certara USA, Inc., a Delaware corporation (the "Co-Borrower" and, together with the Initial Borrower (prior to the consummation of the Closing Date Assumption (as defined in the Credit Agreement referred to below)) and the Parent Borrower, each a "Borrower" and collectively the "Borrowers"), the Subsidiary Parties (as defined below) from time to time party hereto (the foregoing, collectively, the "Loan Guarantors") and Jefferies Finance LLC, in its capacity as administrative agent and collateral agent for the lenders party to the Credit Agreement referred to below (in such capacity, the "Administrative Agent").

PRELIMINARY STATEMENT

Reference is hereby made to that certain Credit Agreement dated as of August 15, 2017 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the "Credit Agreement"), by and among, *inter alios*, Holdings, the Borrowers, the lenders and issuing banks party thereto from time to time (the "Lenders") and the Administrative Agent.

The Loan Guarantors are entering into this Loan Guaranty in order to induce the Lenders to enter into and extend credit to the Borrowers under the Credit Agreement and to guarantee the Guaranteed Obligations (as defined below).

Each Loan Guarantor will obtain benefits from the incurrence of Loans by the Borrowers and the issuance of, and participation in, Letters of Credit for the account of the Borrowers and their respective subsidiaries and the incurrence by the Loan Parties of Secured Hedging Obligations and Banking Services Obligations.

ACCORDINGLY, the parties hereto agree as follows:

ARTICLE 1
DEFINITIONS

Section 1.01. Definitions of Certain Terms Used Herein. As used in this Loan Guaranty, in addition to the terms defined in the preamble and Preliminary Statement above, the following terms shall have the following meanings:

"Accommodation Payments" has the meaning assigned to such term in Section 2.08.

"Administrative Agent" has the meaning assigned to such term in the preamble.

"Article" means a numbered article of this Loan Guaranty, unless another document is specifically referenced.

"Borrower" and "Borrowers" have the meanings assigned to such terms in the preamble.

"Credit Agreement" has the meaning assigned to such term in the preliminary statement.

“Exhibit” refers to a specific exhibit to this Loan Guaranty, unless another document is specifically referenced.

“Guaranteed Obligations” means (a) the Secured Obligations of the Borrowers and (b) any Other Secured Obligation, including any amount that would become due but for the automatic stay under Section 362(a) of the Bankruptcy Code, 11 U.S.C. §362(a) (excluding, for the avoidance of doubt, any Excluded Swap Obligation), together with any and all expenses which may be incurred by the Administrative Agent and the other Secured Parties in collecting any such Secured Obligation and/or Other Secured Obligation that are reimbursable in accordance with Section 9.03 of the Credit Agreement.

“Guarantor Percentage” has the meaning assigned to such term in Section 2.09.

“Guaranty Supplement” has the meaning assigned to such term in Section 3.04.

“Holdings” has the meaning assigned to such term in the preamble.

“Lenders” has the meaning assigned to such term in the preliminary statement.

“Loan Guarantors” has the meaning assigned to such term in the preamble.

“Loan Guaranty” has the meaning assigned to such term in the preamble.

“Maximum Liability” has the meaning assigned to such term in Section 2.08.

“Merger Sub” has the meaning assigned to such term in the preamble.

“Non-Paying Guarantor” has the meaning assigned to such term in Section 2.08.

“Obligated Party” means each Borrower, each Loan Guarantor, each other guarantor or each other Person obligated for all or any part of the Guaranteed Obligations.

“Other Secured Obligation” means, with respect to the Loan Guaranty provided by any Loan Party, any Secured Hedging Obligation and/or Banking Services Obligation of any other Loan Party (other than any Borrower).

“Paying Guarantor” has the meaning assigned to such term in Section 2.08.

“Section” means a numbered section of this Loan Guaranty, unless another document is specifically referenced.

“Subsidiary Parties” means (a) the Restricted Subsidiaries of the Borrowers identified on Exhibit A hereto and (b) each other Restricted Subsidiary that becomes a party to this Loan Guaranty as a Subsidiary Party after the date hereof, in accordance with Section 3.04 herein and Section 5.12 of the Credit Agreement.

“UFCA” has the meaning assigned to such term in Section 2.08(a).

“UFTA” has the meaning assigned to such term in Section 2.08(a).

The foregoing definitions shall be equally applicable to both the singular and plural forms of the defined terms. Capitalized terms used in this Loan Guaranty and not otherwise defined herein shall have the meanings set forth in the Credit Agreement.

It is understood and agreed for the avoidance of doubt that any reference herein to “the Guaranteed Obligations” shall, with respect to any Loan Guarantor, be deemed to apply only to the Guaranteed Obligations applicable to such Loan Guarantor under the definition of “Guaranteed Obligations”.

ARTICLE 2 LOAN GUARANTY

Section 2.01. Guaranty. Except as otherwise provided for herein (including under Section 3.14), each Loan Guarantor hereby agrees that it is jointly and severally liable for, and, as primary obligor and not merely as surety, absolutely and unconditionally and irrevocably guarantees to the Administrative Agent (acting as agent for the Secured Parties, pursuant to Article 8 of the Credit Agreement) for the benefit of the Secured Parties, the full and prompt payment, when and as the same become due, whether at stated maturity, upon acceleration or otherwise, and at all times thereafter, of the Guaranteed Obligations. Each Loan Guarantor further agrees that the Guaranteed Obligations may be increased, extended or renewed in whole or in part without notice to or further assent from it, and that it remains bound upon its guarantee notwithstanding any such extension or renewal. In addition, if any or all of the Guaranteed Obligations become due and payable hereunder, each Loan Guarantor, unconditionally and irrevocably, promises to pay such Guaranteed Obligations to the Administrative Agent for the benefit of the Secured Parties, on demand. This Loan Guaranty is a continuing one and shall remain in full force and effect until the Termination Date, and all liabilities to which it applies or may apply under the terms hereof shall be conclusively presumed to have been created in reliance hereon.

Section 2.02. Guaranty of Payment. This Loan Guaranty is a guaranty of payment and not of collection. Each Loan Guarantor understands and agrees that the Administrative Agent on behalf of the Secured Parties may enforce this Loan Guaranty up to the full amount of the Guaranteed Obligations against any Loan Guarantor. The Administrative Agent may enforce this Loan Guaranty at any time when an Event of Default exists.

Section 2.03. No Discharge or Diminishment of Loan Guaranty.

(a) Except as otherwise provided for herein (including under Section 3.14), the obligations of each Loan Guarantor hereunder are unconditional, irrevocable and absolute and independent of the Guaranteed Obligations or other obligations of any other Loan Guarantor and not subject to any reduction, limitation, impairment or termination for any reason, including: (i) any claim of waiver, release, extension, renewal, settlement, surrender, alteration, compromise, invalidity, rescission, irregularity or unenforceability of all or any part of the Guaranteed Obligations or of any security therefor or proceeds thereof, by operation of law or otherwise; (ii) any change in the corporate existence, structure or ownership of any Obligated Party; (iii) any insolvency, bankruptcy, reorganization or other similar proceeding affecting any other Obligated Party, or their assets or any resulting release or discharge of any obligation of any Obligated Party; (iv) the existence of any claim, setoff or other right which any Loan Guarantor may have at any time against any Obligated Party, the Administrative Agent, any Lender or any other Person, whether in connection herewith or in any unrelated transactions; (v) any direction as to application of payments by the Borrowers or by any other party; (vi) any other continuing or other guaranty, undertaking or maximum liability of a guarantor or of any other party as to the Guaranteed Obligations; (vii) any payment on or in reduction of any such other guaranty or undertaking; (viii) any dissolution, termination or increase, decrease or change in personnel by any Borrower; (ix) any payment made to any Secured Party on the Guaranteed Obligations which any such Secured Party repays to any Borrower pursuant to court order in any bankruptcy, reorganization, arrangement, moratorium or other debtor relief proceeding, and each Loan Guarantor waives any right to the deferral or modification of its obligations hereunder by reason of any such proceeding; (x) the failure of any Loan Guarantor to receive any benefit from or as a result of its execution, delivery and performance of this Loan Guaranty; or (xi) any other circumstance (including any statute of limitations), any act or omission, or any existence of or reliance on any representation by any Secured Party that might otherwise constitute a defense available to, or a discharge of, any Loan Party or any other guarantor or surety.

(b) Except for termination of a Loan Guarantor's obligations hereunder or as expressly permitted by Section 3.14, the obligations of each Loan Guarantor hereunder are not subject to any defense or setoff, counterclaim, recoupment, or termination whatsoever by reason of the invalidity, illegality, or unenforceability of any of the Guaranteed Obligations or otherwise, or any Requirements of Law purporting to prohibit payment by any Obligated Party, of the Guaranteed Obligations or any part thereof.

(c) Further, the obligations of any Loan Guarantor hereunder are not discharged or impaired or otherwise affected by: (i) the failure of the Administrative Agent to assert any claim or demand or to enforce any remedy with respect to all or any part of the Guaranteed Obligations; (ii) any waiver or modification of or supplement to any provision of any agreement relating to the Guaranteed Obligations; (iii) any release, non-perfection or invalidity of any indirect or direct security for the obligations of the Borrowers for all or any part of the Guaranteed Obligations or any obligations of any other guarantor or of other Person liable for any of the Guaranteed Obligations; (iv) any action, failure or delay to act by the Administrative Agent with respect to any Collateral securing any part of the Guaranteed Obligations; or (v) any default, failure or delay, willful or otherwise, in the payment or performance of any of the Guaranteed Obligations, or any other circumstance, act, omission or delay that might in any manner or to any extent vary the risk of such Loan Guarantor or that would otherwise operate as a discharge of any Loan Guarantor as a matter of law or equity, in each case other than as set forth in Section 3.14.

Section 2.04. Defenses Waived. To the fullest extent permitted by applicable Requirements of Law, and except for termination of a Loan Guarantor's obligations hereunder or as otherwise provided for herein (including under Section 3.14), each Loan Guarantor hereby waives any defense based on or arising out of any defense of any Obligated Party or arising out of the disability of any Obligated Party or the unenforceability of all or any part of the Guaranteed Obligations or any part thereof from any cause, or the cessation from any cause of the liability of any Obligated Party. Without limiting the generality of the foregoing, each Loan Guarantor irrevocably waives acceptance hereof, presentment, demand, protest and, to the fullest extent permitted by applicable Requirements of Law, any notice not provided for herein or in any other Loan Document, including any notice of nonperformance, notice of protest, notice of dishonor, notice of acceptance of this Loan Guaranty, and any notice of the existence, creation or incurring of new or additional Guaranteed Obligations, as well as any requirement that at any time any action be taken by any Person against any Obligated Party, or any other Person, including any right (except as may be required by applicable Requirements of Law and to the extent the relevant requirement cannot be waived) to require the Administrative Agent to (i) proceed against any other guarantor or any other party, (ii) proceed against or exhaust any security held from any other party or (iii) pursue any other remedy in the Administrative Agent's power whatsoever. The Administrative Agent may, at its election and in accordance with the terms of the applicable Loan Documents, foreclose on any Collateral held by it by one or more judicial or nonjudicial sales, accept an assignment of any such Collateral in lieu of foreclosure or otherwise act or fail to act with respect to any Collateral securing all or a part of the Guaranteed Obligations, and the Administrative Agent may, at its election, compromise or adjust any part of the Guaranteed Obligations, make any other accommodation with any Obligated Party or exercise any other right or remedy available to it against any Obligated Party, or any security, without affecting or impairing in any way the liability of such Loan Guarantor under this Loan Guaranty, except as otherwise provided in Section 3.14. To the fullest extent permitted by applicable Requirements of Law, each Loan Guarantor waives any defense arising out of any such election even though such election may operate, pursuant to applicable Requirements of Law, to impair or extinguish any right of reimbursement, contribution, indemnification or subrogation or other right or remedy of any Loan Guarantor against any Obligated Party or any security.

Section 2.05. Authorization. Each Loan Guarantor authorizes the Administrative Agent without notice or demand or, except as may be required by any Loan Document, consent by any Loan Guarantor (except as may be required by applicable Requirements of Law and to the extent the relevant requirement cannot be waived), and without affecting or impairing its liability hereunder (except as set forth in Section 3.14), from time to time, subject to the terms of the referenced Loan Documents, to:

(a) change the manner, place or terms of payment of, and/or change or extend the time of payment of, renew, increase, accelerate or alter, any of the Guaranteed Obligations (including any increase or decrease in the principal amount thereof or the rate of interest or fees thereon), any security therefor, or any liability incurred directly or indirectly in respect thereof, and this Loan Guaranty shall apply to the Guaranteed Obligations as so changed, extended, renewed or altered;

(b) take and hold security for the payment of the Guaranteed Obligations and sell, exchange, release, impair, surrender, realize upon or otherwise deal with in any manner and in any order any property by whomsoever at any time pledged or mortgaged to secure, or howsoever securing, the Guaranteed Obligations or any liabilities (including any of those hereunder) incurred directly or indirectly in respect thereof or hereof, and/or any offset there against;

(c) exercise or refrain from exercising any rights against any Obligated Party or others or otherwise act or refrain from acting;

(d) release or substitute any endorser, any guarantor, any Borrower, any other Loan Party and/or any other obligor;

(e) settle or compromise any of the Guaranteed Obligations, any security therefor or any liability (including any of those hereunder) incurred directly or indirectly in respect thereof or hereof, and/or subordinate the payment of all or any part thereof to the payment of any liability (whether due or not) of any Obligated Party to its creditors other than the Secured Parties;

(f) apply any sums by whomsoever paid or howsoever realized to any liability or liabilities of any Obligated Party to the Secured Parties regardless of what liability or liabilities of such Obligated Party remain unpaid;

(g) consent to or waive any breach of, or any act, omission or default under, this Loan Guaranty, the Credit Agreement, any other Loan Document, any Hedge Agreement with respect to any Secured Hedging Obligation or any of the instruments or agreements referred to herein or therein, or otherwise amend, modify or supplement this Loan Guaranty, the Credit Agreement, any other Loan Document, any Hedge Agreement with respect to any Secured Hedging Obligation or any of such other instruments or agreements; and/or

(h) take any other action which would, under otherwise applicable principles of common law, give rise to a legal or equitable discharge of the Loan Guarantors from their respective liabilities under this Loan Guaranty (including any action or omission whatsoever that might otherwise vary the risk of such Loan Guarantor or constitute a legal or equitable defense to or discharge of the liabilities of a guarantor or surety or that might otherwise limit recourse against such Loan Guarantor).

Section 2.06. Rights of Subrogation. Each Loan Guarantor hereby subordinates to the payment in full in cash of the Guaranteed Obligations all rights, claims or causes of action, including any claim of subrogation, contribution, exoneration or indemnification, that it has against any Loan Party or any Collateral in respect of this Loan Guaranty (whether contractual, under Section 509 of the Bankruptcy Code or otherwise), whether or not such right, claim or cause of action arises in equity or under contract, statute or common law, including the right to take or receive from any Borrower or Loan Party, directly or indirectly, in cash or other property or by set-off or in any other manner, payment or security on account of such claim, remedy or right, unless and until the occurrence of the Termination Date; provided that if any amount is paid to such Loan Guarantor on account of such subrogation rights at any time prior to the Termination Date, then unless such Loan Guarantor has already discharged its liabilities under this Loan Guaranty in an amount equal to such Loan Guarantor's Maximum Liability as of such date, such amount shall be held by the recipient Loan Guarantor in trust for the benefit of the Secured Parties and shall forthwith be paid by the recipient Loan Guarantor to the Administrative Agent (for the benefit of the Secured Parties) to be credited and applied to the Guaranteed Obligations, whether matured or unmatured, in accordance with Section 2.18(b) of the Credit Agreement

Section 2.07. Reinstatement; Stay of Acceleration. If at any time any payment of any portion of the Guaranteed Obligations is rescinded or must otherwise be restored or returned upon the insolvency, bankruptcy or reorganization of any Borrower or otherwise, each Loan Guarantor's obligations under this Loan Guaranty with respect to such payment shall be reinstated at such time as though the payment had not been made. If acceleration of the time for payment of any of the Guaranteed Obligations is stayed upon the insolvency, bankruptcy or reorganization of any Borrower, all such amounts otherwise subject to acceleration under the terms of any agreement relating to the Guaranteed Obligations shall nonetheless be payable by the other Loan Guarantors forthwith on demand by the Administrative Agent. For the avoidance of doubt this paragraph shall survive the Termination Date and/or release of this Loan Guaranty.

Section 2.08. Information. Each Loan Guarantor assumes all responsibility for being and keeping itself informed of each Borrower's financial condition, affairs and assets, and of all other circumstances bearing upon the risk of nonpayment of the Guaranteed Obligations and the nature, scope and extent of the risks that each Loan Guarantor assumes and incurs under this Loan Guaranty, and agrees that none of the Administrative Agent, any Lender or any other Secured Party shall have any obligation to investigate the financial condition or affairs of the Obligated Parties for the benefit of such Loan Guarantor or to advise any Loan Guarantor of information known to it regarding those circumstances or risks or any fact respecting, or any change in, the financial condition, assets or affairs of any Obligated Party that might become known to any Secured Party at any time, whether or not such Secured Party knows or believes or has reason to know or believe that any such fact or change is unknown to such Loan Guarantor, or might (or does) increase the risk of such Loan Guarantor as guarantor hereunder, or might (or would) affect the willingness of such Loan Guarantor to continue as a guarantor of the Guaranteed Obligations hereunder.

Section 2.09. Contribution; Subordination; Maximum Liability.

(a) In the event that any Loan Guarantor (a “Paying Guarantor”) makes any payment or payments under this Loan Guaranty or suffers any loss as a result of any realization upon any Collateral granted by it to secure its Guaranteed Obligations (each such payment or loss, an “Accommodation Payment”), each other Loan Guarantor that has provided a Loan Guaranty in respect of such Guaranteed Obligations (each a “Non-Paying Guarantor”) shall contribute to such Paying Guarantor an amount equal to such Non-Paying Guarantor’s “Guarantor Percentage” of such Accommodation Payment by such Paying Guarantor. For purposes of this Article 2, each Non-Paying Guarantor’s “Guarantor Percentage” with respect to any Accommodation Payment by a Paying Guarantor shall be determined as of the date on which such Accommodation Payment was made by reference to the ratio of (a) such Non-Paying Guarantor’s Maximum Liability (as defined below) as of the date hereof (or with respect to any Person that becomes a Guarantor after the date hereof, as of the date such person became a Guarantor) to (b) the aggregate Maximum Liability of all Loan Guarantors in respect of such Guaranteed Obligations hereunder (including such Paying Guarantor) as of the date hereof (or with respect to any Person that becomes a Guarantor after the date hereof, as of the date such person became a Guarantor). As of any date of determination, the “Maximum Liability” of each Loan Guarantor shall be equal to the maximum amount of liability, after giving effect to the right to contribution under this Section 2.09(a), which could be asserted against such Loan Guarantor hereunder and under the Credit Agreement without (i) rendering such Loan Guarantor “insolvent” within the meaning of Section 101(32) of the Bankruptcy Code, Section 2 of the Uniform Fraudulent Transfer Act (“UFTA”) or Section 2 of the Uniform Fraud Conveyance Act (“UFCA”), (ii) leaving such Loan Guarantor with unreasonably small capital or assets, within the meaning of Section 548 of the Bankruptcy Code, Section 4 of the UFTA or Section 5 of the UFCA, or (iii) leaving such Loan Guarantor unable to pay its debts as they become due within the meaning of Section 548 of the Bankruptcy Code, Section 4 of the UFTA or Section 5 of the UFCA. Nothing in this provision shall affect any Loan Guarantor’s several liability for the entire amount of the Guaranteed Obligations (up to such Loan Guarantor’s Maximum Liability). Each of the Loan Guarantors covenants and agrees that its right to receive any contribution under this Loan Guaranty from a Non-Paying Guarantor shall be subordinate and junior in right of payment to the Secured Obligations until the Termination Date. If, prior to the Termination Date, any such contribution payment is received by a Paying Guarantor at any time when an Event of Default exists, such contribution payment shall be collected, enforced and received by such Loan Guarantor as trustee for the Secured Parties and be paid over to the Administrative Agent on account of the Secured Obligations, but without affecting or impairing in any manner the liability of such Loan Guarantor under the other provisions of this Loan Guaranty. This provision is for the benefit of the Administrative Agent, the Lenders and the other Secured Parties.

(b) It is the desire and intent of the Loan Guarantors and the Secured Parties that this Loan Guaranty shall be enforced against the Loan Guarantors to the fullest extent permissible under the Requirements of Law and public policies applied in each jurisdiction in which enforcement is sought. The provisions of this Loan Guaranty are severable, and in any action or proceeding involving any state corporate law, or any state, territorial, federal or foreign bankruptcy, insolvency, reorganization or other Requirements of Law affecting the rights of creditors generally, if the obligations of any Loan Guarantor under this Loan Guaranty would otherwise be held or determined to be avoidable, invalid or unenforceable on account of the amount of such Loan Guarantor’s liability under this Loan Guaranty, then, notwithstanding any other provision of this Loan Guaranty to the contrary, the amount of such liability shall, without any further action by the Loan Guarantors or the Secured Parties, be automatically limited and reduced to such Loan Guarantor’s Maximum Liability. Each Loan Guarantor agrees that the Guaranteed Obligations may at any time and from time to time exceed the Maximum Liability of such Loan Guarantor without impairing this Loan Guaranty or affecting the rights and remedies of the Administrative Agent hereunder; provided that nothing in this sentence shall be construed to increase any Loan Guarantor’s obligations hereunder beyond its Maximum Liability.

Section 2.10. Representations and Warranties. As, when (including on the date hereof) and to the extent required in accordance with the terms of the Credit Agreement, each Loan Guarantor hereby makes each applicable representation and warranty made in the Loan Documents by the Borrowers with respect to such Loan Guarantor and each Loan Guarantor hereby further acknowledges and agrees that such Loan Guarantor has, independently and without reliance upon any Secured Party and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Loan Guaranty and each other Loan Document to which it is or is to be a party, and such Loan Guarantor has established adequate means of obtaining from each other Loan Guarantor on a continuing basis information pertaining to the business, condition (financial or otherwise), operations, performance, properties and prospects of each other Loan Guarantor.

Section 2.11. Covenants. Each Loan Guarantor covenants and agrees that, until the Termination Date, such Loan Guarantor will perform and observe, and cause each of its subsidiaries that constitutes a Restricted Subsidiary to perform and observe, all of the terms, covenants and agreements set forth in the Loan Documents that the Borrowers have agreed to cause such Loan Guarantor or such subsidiary to perform or observe.

ARTICLE 3
GENERAL PROVISIONS

Section 3.01. Liability Cumulative. The liability of each Loan Guarantor under this Loan Guaranty is in addition to and shall be cumulative with all liabilities of such Loan Guarantor to the Administrative Agent and the Lenders under the Credit Agreement and the other Loan Documents to which such Loan Guarantor is a party or in respect of any obligations or liabilities of the other Loan Guarantors, without any limitation as to amount, unless the instrument or agreement evidencing or creating such other liability specifically provides to the contrary.

Section 3.02. No Waiver; Amendments. No delay or omission of the Administrative Agent in exercising any right or remedy granted under this Loan Guaranty shall impair such right or remedy or be construed to be a waiver of any Default or Event of Default or an acquiescence therein, and any single or partial exercise of any such right or remedy shall not preclude any other or further exercise thereof or the exercise of any other right or remedy. No waiver, amendment or other variation of the terms, conditions or provisions of this Loan Guaranty whatsoever shall be valid unless in writing signed by the Loan Guarantors and the Administrative Agent in accordance with Section 9.02 of the Credit Agreement and then only to the extent specifically set forth in such writing.

Section 3.03. Severability of Provisions. To the extent permitted by applicable Requirements of Law, any provision of this Loan Guaranty that is held to be invalid, illegal or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity, illegality or unenforceability without affecting the validity, legality and enforceability of the remaining provisions of this Loan Guaranty; and the invalidity of a particular provision in a particular jurisdiction shall not invalidate such provision in any other jurisdiction.

Section 3.04. Additional Subsidiaries. Restricted Subsidiaries of the Borrowers may be required or may elect to enter into this Loan Guaranty as Subsidiary Parties pursuant to and in accordance with Section 5.12 of the Credit Agreement. Upon execution and delivery by any such Restricted Subsidiary of an instrument in substantially the form of Exhibit B hereto (each, a "Guaranty Supplement"), such Restricted Subsidiary shall become a Subsidiary Party hereunder with the same force and effect as if originally named as a Subsidiary Party herein. The execution and delivery of any such instrument shall not require the consent of any other Loan Guarantor hereunder or any other Person. The rights and obligations of each Loan Guarantor hereunder shall remain in full force and effect notwithstanding the addition of any new Loan Guarantor as a party to this Loan Guaranty.

Section 3.05. Headings. The titles of and section headings in this Loan Guaranty are for convenience of reference only, and shall not govern the interpretation of any of the terms and provisions of this Loan Guaranty.

Section 3.06. Entire Agreement. This Loan Guaranty and the other Loan Documents constitute the entire agreement among the parties relating to the subject matter hereof and supersede any and all previous agreements and understandings, oral or written, relating to the subject matter hereof.

Section 3.07. CHOICE OF LAW. THIS LOAN GUARANTY AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS LOAN GUARANTY, WHETHER IN TORT, CONTRACT (AT LAW OR IN EQUITY) OR OTHERWISE, SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

Section 3.08. CONSENT TO JURISDICTION; CONSENT TO SERVICE OF PROCESS.

(a) EACH PARTY HERETO HEREBY IRREVOCABLY AND UNCONDITIONALLY SUBMITS, FOR ITSELF AND ITS PROPERTY, TO THE EXCLUSIVE JURISDICTION OF ANY US FEDERAL OR NEW YORK STATE COURT SITTING IN THE BOROUGH OF MANHATTAN, IN THE CITY OF NEW YORK (OR ANY APPELLATE COURT THEREFROM) OVER ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS LOAN GUARANTY AND AGREES THAT ALL CLAIMS IN RESPECT OF ANY SUCH ACTION OR PROCEEDING SHALL (EXCEPT AS PERMITTED BELOW) BE HEARD AND DETERMINED IN SUCH NEW YORK STATE OR, TO THE EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, FEDERAL COURT. EACH PARTY HERETO AGREES THAT SERVICE OF ANY PROCESS, SUMMONS, NOTICE OR DOCUMENT BY REGISTERED MAIL ADDRESSED TO SUCH PERSON SHALL BE EFFECTIVE SERVICE OF PROCESS AGAINST SUCH PERSON FOR ANY SUIT, ACTION OR PROCEEDING BROUGHT IN ANY SUCH COURT. EACH PARTY HERETO AGREES THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON SUCH JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY APPLICABLE REQUIREMENTS OF LAW.

(b) EACH PARTY HERETO HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT IT MAY LEGALLY AND EFFECTIVELY DO SO, ANY OBJECTION WHICH IT MAY NOW OR HEREAFTER HAVE TO THE LAYING OF VENUE OF ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS LOAN GUARANTY AND BROUGHT IN ANY COURT REFERRED TO IN PARAGRAPH (a) OF THIS SECTION. EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, ANY CLAIM OR DEFENSE OF AN INCONVENIENT FORUM TO THE MAINTENANCE OF SUCH ACTION, SUIT OR PROCEEDING IN ANY SUCH COURT.

(c) TO THE EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF ANY AND ALL PROCESS UPON IT AND AGREES THAT ALL SUCH SERVICE OF PROCESS MAY BE MADE BY REGISTERED MAIL (OR ANY SUBSTANTIALLY SIMILAR FORM OF MAIL) DIRECTED TO IT AT ITS ADDRESS FOR NOTICES PROVIDED IN SECTION 9.01 OF THE CREDIT AGREEMENT. EACH PARTY HERETO HEREBY WAIVES ANY OBJECTION TO SUCH SERVICE OF PROCESS AND FURTHER IRREVOCABLY WAIVES AND AGREES NOT TO PLEAD OR CLAIM IN ANY ACTION OR PROCEEDING COMMENCED HEREUNDER THAT SERVICE OF PROCESS WAS INVALID AND INEFFECTIVE. NOTHING IN THIS LOAN GUARANTY WILL AFFECT THE RIGHT OF ANY PARTY TO THIS LOAN GUARANTY TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY LAW.

Section 3.09. WAIVER OF JURY TRIAL. EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY SUIT, ACTION, PROCEEDING OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY) DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS LOAN GUARANTY OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY. EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS LOAN GUARANTY BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION.

Section 3.10. Indemnity. Each Loan Guarantor hereby agrees to indemnify the Administrative Agent and the other Indemnitees, as set forth in Section 9.03 of the Credit Agreement.

Section 3.11. Counterparts. This Loan Guaranty may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page of this Loan Guaranty by facsimile or by email as a “.pdf” or “.tif” attachment shall be effective as delivery of a manually executed counterpart of this Loan Guaranty.

Section 3.12. Successors and Assigns. Whenever in this Loan Guaranty any party hereto is referred to, such reference shall be deemed to include the successors and permitted assigns of such party; and all covenants, promises and agreements by or on behalf of any Loan Guarantor or the Administrative Agent that are contained in this Loan Guaranty shall bind and inure to the benefit of their respective successors and permitted assigns. Except in a transaction permitted (or not restricted) under the Credit Agreement, no Loan Guarantor may assign any of its rights or obligations hereunder without the written consent of the Administrative Agent.

Section 3.13. Survival of Agreement. Without limitation of any provision of the Credit Agreement or Section 3.10 hereof, all covenants, agreements, indemnities, representations and warranties made by the Loan Guarantors in the Loan Documents and in the certificates or other instruments delivered in connection with or pursuant to this Loan Guaranty or any other Loan Document shall be considered to have been relied upon by the Lenders and shall survive the execution and delivery of the Loan Documents and the making of any Loans, regardless of any investigation made by any such Lender or on its behalf and notwithstanding that the Administrative Agent or any Lender may have had notice or knowledge of any Default or Event of Default or incorrect representation or warranty at the time any credit is extended under the Credit Agreement, and shall continue in full force and effect until the Termination Date, or with respect to any individual Loan Guarantor until such Loan Guarantor is otherwise released from its obligations under this Loan Guaranty in accordance with Section 3.14.

Section 3.14. Release of Loan Guarantors. Subject to Section 2.07, a Subsidiary Party shall automatically be released from its obligations hereunder and its Loan Guaranty shall be automatically released in the circumstances described in Article 8 and Section 9.18 of the Credit Agreement. In connection with any such release, the Administrative Agent shall promptly execute and deliver to any Loan Guarantor, at such Loan Guarantor’s expense, all documents that such Loan Guarantor shall reasonably request to evidence such termination or release. Any execution and delivery of documents pursuant to the preceding sentence of this Section 3.14 shall be without recourse to or warranty by the Administrative Agent (other than as to the Administrative Agent’s authority to execute and deliver such documents).

Section 3.15. Payments. All payments made by any Loan Guarantor hereunder will be made without setoff, counterclaim or other defense and on the same basis as payments are made by the Borrowers under Sections 2.17 and 2.18 of the Credit Agreement.

Section 3.16. Notice, etc. All notices and other communications provided for hereunder shall be in writing and shall be delivered by hand or overnight courier service, mailed by certified or registered mail or sent by facsimile or email, as follows:

- (a) if to any Loan Guarantor, addressed to it in care of the Borrowers at their respective addresses specified in Section 9.01 of the Credit Agreement;
- (b) if to the Administrative Agent or any Lender, at its address specified in Section 9.01 of the Credit Agreement;
- (c) if to any Secured Party in respect of any Secured Hedging Obligation, at its address specified in the Hedge Agreement to which it is a party; or
- (d) if to any Secured Party in respect of any Banking Services Obligation, at its address specified in the relevant documentation to which it is a party.

Section 3.17. Set Off. In addition to any rights now or hereafter granted under applicable Requirements of Law and not by way of limitation of any such rights, while an Event of Default exists, the Administrative Agent, each Lender and each Issuing Bank shall be entitled to rights of setoff to the extent provided in Section 9.09 of the Credit Agreement.

Section 3.18. Waiver of Consequential Damages, Etc. To the extent permitted by applicable Requirements of Law, none of the Loan Guarantors nor the Secured Parties shall assert, and each hereby waives, any claim against each other or any Related Party thereof, on any theory of liability, for special, indirect, consequential or punitive damages (as opposed to direct or actual damages) arising out of, in connection with, or as a result of, this Loan Guaranty or any agreement or instrument contemplated hereby, except, in the case of any claim by any Indemnitee against any of the Loan Guarantors, to the extent such damages would otherwise be subject to indemnification pursuant to the terms of Section 3.10.

Section 3.19. Allocation of Proceeds. All monies collected by the Administrative Agent hereunder pursuant to the enforcement of remedies by the Administrative Agent hereunder shall be applied, to the extent, and in the manner, provided in Section 2.18 of the Credit Agreement.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, each Loan Guarantor and the Administrative Agent have executed this Loan Guaranty as of the date first above written.

Holdings:

EQT AVATAR INTERMEDIATE, INC.,

By: /s/ Jason Howard

Name: Jason Howard

Title: President

By: /s/ Robert Bradburn

Name: Robert Bradburn

Title: Vice President and Secretary

Borrowers:

EQT AVATAR HOLDINGS, INC.,

By: /s/ Jason Howard

Name: Jason Howard

Title: President

By: /s/ Robert Bradburn

Name: Robert Bradburn

Title: Vice President and Secretary

Signature Page to Loan Guaranty

Borrowers:

CERTARA HOLDCO, INC.,

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: CFO and Treasurer

CERTARA USA, INC.,

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: CFO and Treasurer

Signature Page to Loan Guaranty

Subsidiary Parties:

CERTARA HOLDING, INC.,

By: /s/ Andrew Schemick
Name: Andrew Schemick
Title: CFO and Treasurer

MBDD US, LLC,

By: /s/ Andrew Schemick
Name: Andrew Schemick
Title: CFO and Treasurer

TRIPOS INVESTMENTS, L.L.C.,

By: /s/ Andrew Schemick
Name: Andrew Schemick
Title: CFO and Treasurer

SYNCHROGENIX INFORMATION STRATEGIES, LLC,

By: /s/ Andrew Schemick
Name: Andrew Schemick
Title: CFO and Treasurer

CERTARA, L.P.

By: /s/ Andrew Schemick
Name: Andrew Schemick
Title: CFO and Treasurer

Signature Page to Loan Guaranty

JEFFERIES FINANCE LLC,
as Administrative Agent

By: /s/ Jason Kennedy
Name: Jason Kennedy
Title: Managing Director

Signature Page to Loan Guaranty

EXHIBIT A
SUBSIDIARY PARTIES

No.	Entity	Jurisdiction
1.	Certara Holding, Inc.	Delaware
2.	MBDD US, LLC	Delaware
3.	Tripos Investments, L.L.C.	Delaware
4.	Synchrogenix Information Strategies, LLC	Delaware
5.	Certara, L.P.	Delaware

EXHIBIT B
JOINDER AGREEMENT

THIS JOINDER AGREEMENT (this “Agreement”), dated as of [●] [●], 20[●], is entered into by [●], a [●] (**[each, a] [the]** “New Subsidiary”), in favor of Jefferies Finance LLC, as administrative agent (in such capacity, the “Administrative Agent”), pursuant to that certain Loan Guaranty, dated as of August 15, 2017 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Loan Guaranty”), by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), EQT Avatar Holdings, Inc., a Delaware corporation (“Buyer” or the “Initial Borrower”), Certara Holdco, Inc., a Delaware corporation (the “Parent Borrower”), Certara USA, Inc., a Delaware corporation (the “Co-Borrower” and, together with the Initial Borrower (prior to the consummation of the Closing Date Assumption (as defined in the Credit Agreement referred to below)) and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the Subsidiary Parties (as defined below) from time to time party hereto (the foregoing, collectively, the “Loan Guarantors”) and the Administrative Agent. All capitalized terms used herein and not otherwise defined shall have the meanings set forth in the Loan Guaranty.

[Each] [The] New Subsidiary, for the benefit of the Secured Parties, hereby agrees as follows:

1. **[Each] [The]** New Subsidiary hereby acknowledges, agrees and confirms that, by its execution of this Agreement, **[each] [the]** New Subsidiary will be deemed to be a Loan Guarantor under the Loan Guaranty and a Loan Guarantor for all purposes of the Credit Agreement and shall have all of the rights, benefits, duties and obligations of a Loan Guarantor thereunder as if it had executed the Loan Guaranty. **[Each] [The]** New Subsidiary hereby ratifies, as of the date hereof, and agrees to be bound by, all of the terms, provisions and conditions contained in the Loan Guaranty. Without limiting the generality of the foregoing terms of this paragraph 1, **[each] [the]** New Subsidiary hereby absolutely and unconditionally and irrevocably guarantees, jointly and severally with the other Loan Guarantors, to the Administrative Agent and the Secured Parties, the prompt payment of the Guaranteed Obligations in full when and as the same become due (whether at stated maturity, upon acceleration or otherwise), and at all times thereafter, to the extent of and in accordance with the Loan Guaranty.

2. **[Each] [The]** New Subsidiary hereby waives acceptance by the Administrative Agent and the Secured Parties of the guaranty by the New Subsidiary upon the execution of this Agreement by **[each] [the]** New Subsidiary.

3. **[Each] [The]** New Subsidiary hereby (x) makes, as of the date hereof, the representation and warranty set forth in Section 2.10 of the Loan Guaranty, **except as set forth on Schedule A hereto,** and (y) agrees to perform and observe, and to cause each of its Restricted Subsidiaries to perform and observe, the covenants set forth in Section 2.11 of the Loan Guaranty.

4. From and after the execution and delivery hereof by the parties hereto, this Agreement shall constitute a “Loan Document” for all purposes of the Credit Agreement and the other Loan Documents.

5. This Agreement may be executed in any number of counterparts, each of which when so executed and delivered shall be an original, but all of which shall constitute one and the same instrument. Delivery of an executed counterpart of a signature page of this Agreement by facsimile or by email as a “.pdf” or “.tif” attachment shall be effective as delivery of a manually executed counterpart of this Agreement.

6. THIS AGREEMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK.

7. The provisions of this Agreement shall be deemed automatically incorporated by reference into the Loan Guaranty.

[Signature Page Follows]

IN WITNESS WHEREOF, [each] [the] New Subsidiary has caused this Agreement to be duly executed by its authorized officer, as of the day and year first above written.

[NEW SUBSIDIARY]

By:

Name:
Title:

B-3

[SCHEDULE A
CERTAIN EXCEPTIONS]

PLEDGE AND SECURITY AGREEMENT

THIS PLEDGE AND SECURITY AGREEMENT (as it may be amended, restated, amended and restated, supplemented or otherwise modified from time to time, this "Security Agreement") is entered into as of August 15, 2017, by and among EQT Avatar Intermediate, Inc., a Delaware corporation ("Holdings"), EQT Avatar Holdings, Inc., a Delaware corporation ("Buyer" or the "Initial Borrower"), Certara Holdco, Inc., a Delaware corporation (the "Parent Borrower"), Certara USA, Inc., a Delaware corporation (the "Co-Borrower" and, together with the Initial Borrower (prior to the consummation of the Closing Date Assumption (as defined in the Credit Agreement referred to below)) and the Parent Borrower, each a "Borrower" and collectively the "Borrowers"), the Subsidiary Parties (as defined below) from time to time party hereto (the foregoing, collectively, the "Grantors") and Jefferies Finance LLC ("Jefferies"), in its capacity as administrative agent and collateral agent for the Secured Parties (as defined in the Credit Agreement) (in such capacities, the "Agent").

PRELIMINARY STATEMENT

Holdings, the Borrower, the Lenders, the Agent and others entered into that certain Credit Agreement dated as of August 15, 2017 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the "Credit Agreement"). The Grantors are entering into this Security Agreement in order to induce the Lenders to enter into and extend credit to the Borrowers under the Credit Agreement and to secure the Secured Obligations, including their obligations under the Loan Guaranty, each Hedge Agreement the obligations under which constitute Secured Hedging Obligations and each agreement relating to Banking Services the obligations under which constitute Banking Services Obligations.

ACCORDINGLY, the parties hereto agree as follows:

ARTICLE 1
DEFINITIONS

Section 1.01. *Terms Defined in Credit Agreement.* All capitalized terms used herein and not otherwise defined shall have the meanings assigned to such terms in the Credit Agreement.

Section 1.02. *Terms Defined in UCC.* Terms defined in the UCC that are not otherwise defined in this Security Agreement or the Credit Agreement are used herein as defined in Articles 8 or 9 of the UCC, as the context may require (including as if such terms were capitalized in Article 8 or 9 of the UCC, as the context may require, the following terms: "Account," "Chattel Paper," "Commercial Tort Claim," "Commodities Account," "Deposit Accounts," "Document," "Electronic Chattel Paper," "Equipment," "Fixture," "General Intangible," "Goods," "Instruments," "Inventory," "Investment Property," "Letter-of-Credit Right," "Securities Account," "Securities Entitlement," "Supporting Obligation" and "Tangible Chattel Paper").

Section 1.03. *Definitions of Certain Terms Used Herein.* As used in this Security Agreement, in addition to the terms defined in the preamble and Preliminary Statement above, the following terms shall have the following meanings:

"Agent" has the meaning set forth in the preamble.

"Article" means a numbered article of this Security Agreement, unless another document is specifically referenced.

“Borrower” and “Borrowers” have the meanings specified in the preamble.

“Collateral” has the meaning set forth in Article 2.

“Contract Rights” means all rights of any Grantor under any Contract, including (a) any and all rights to receive and demand payments under such Contract, (b) any and all rights to receive and compel performance under such Contract and (c) any and all other rights, interests and claims now existing or in the future arising in connection with such Contract.

“Contracts” means all contracts between any Grantor and one or more additional parties (including any Hedge Agreement, any licensing agreement and any partnership agreement, joint venture agreement and/or limited liability company agreement).

“Control” has the meaning set forth in Article 8 of the UCC or, if applicable, in Section 9-104, 9-105, 9-106 or 9-107 of Article 9 of the UCC.

“Credit Agreement” has the meaning set forth in the Preliminary Statement.

“Cumulative Perfection Certificate” means the Perfection Certificate delivered pursuant to Section 4.01(j) of the Credit Agreement and any Perfection Certificate delivered pursuant to Section 5.12(a) of the Credit Agreement, in each case, as supplemented from time to time as a result of the delivery of any Perfection Certificate Supplement pursuant to Section 5.01(i) of the Credit Agreement.

“Exhibit” refers to a specific exhibit to this Security Agreement, unless another document is specifically referenced.

“Grantors” has the meaning set forth in the preamble.

“Holdings” has the meaning set forth in the preamble.

“Intellectual Property Collateral” means, collectively, all Copyrights, Patents, Trademarks, Trade Secrets, Domain Names, Licenses and Software.

“Intellectual Property Security Agreement” means an Intellectual Property Security Agreement substantially in the form of Exhibit B to this Security Agreement.

“Jefferies” has the meaning set forth in the preamble.

“Licenses” means, with respect to any Grantor, all of such Grantor’s right, title, and interest in and to (a) any and all licensing agreements or similar arrangements, whether as licensor or licensee, in (i) Patents, (ii) Copyrights, (iii) Trademarks, (iv) Trade Secrets or (v) Software, (b) all income, royalties, damages, claims, and payments now or hereafter due or payable under and with respect thereto, including damages and payments for past and future breaches thereof and (c) all rights to sue for past, present, and future breaches thereof.

“Money” has the meaning set forth in Article 1 of the UCC.

“Permits” means all licenses, permits, rights, orders, variances, franchises or authorizations of or from any Governmental Authority or agency.

“Pledged Collateral” means all Pledged Stock, including all stock (or equivalent) certificates, options or rights of any nature whatsoever in respect of the Pledged Stock that may be issued or granted to, or held by, any Grantor, and all Instruments, Securities and other Investment Property owned by any Grantor, whether or not physically delivered to the Agent pursuant to this Security Agreement, in each case whether now owned or hereafter acquired by such Grantor and any and all Proceeds thereof.

“Pledged Stock” means, with respect to any Grantor, the shares of Capital Stock described in Schedule 3 to the Cumulative Perfection Certificate as held by such Grantor, together with any other shares of Capital Stock as are hereafter acquired by such Grantor.

“Proceeds” has the meaning assigned in Article 9 of the UCC and, in any event, shall also include but not be limited to (a) any and all proceeds of any insurance, indemnity, warranty or guaranty payable to the Agent or any Grantor from time to time with respect to any of the Collateral, (b) any and all payments (in any form whatsoever) made or due and payable to any Grantor from time to time in connection with any requisition, confiscation, condemnation, seizure or forfeiture of all or any part of the Collateral by any Governmental Authority (or any Person acting under color of governmental authority), (c) any and all Stock Rights and (d) any and all other amounts from time to time paid or payable under or in connection with any of the Collateral.

“Receivables” means any Account, Chattel Paper, Document, Investment Property, Instrument and/or General Intangible, in each case, that is a right or claim to receive money and is included as Collateral (whether or not earned by performance).

“Section” means a numbered section of this Security Agreement, unless another document is specifically referenced.

“Security Agreement” has the meaning set forth in the preamble.

“Software” means computer programs, source code, object code and supporting documentation, including “software” as such term is defined in Article 9 of the UCC, as well as computer programs that may be construed as included in the definition of Goods.

“Stock Rights” means all dividends, cash, options, warrants, instruments or other distributions and any other right or property which any Grantor shall receive or shall become entitled to receive for any reason whatsoever with respect to, in substitution for or in exchange for any Capital Stock constituting Collateral, any right to receive any Capital Stock constituting Collateral and any right to receive earnings, in which such Grantor now has or hereafter acquires any right, issued by an issuer of such Capital Stock.

“Subsidiary Parties” means (a) the subsidiaries of any Borrower party hereto on the Closing Date and (b) each Subsidiary that becomes a party to this Security Agreement after the date hereof in accordance with Section 7.10 hereof and Section 5.12 of the Credit Agreement.

“Trade Secrets” means, with respect to any Grantor, all of such Grantor’s right, title and interest in and to the following: (a) confidential and proprietary information, including unpatented inventions, invention disclosures, engineering or other data, information, production procedures, know-how, financial data, customer lists, supplier lists, business and marketing plans, processes, schematics, algorithms, techniques, analyses, proposals, source code, data, databases and data collections; (b) all income, royalties, damages, and payments now or hereafter due or payable with respect thereto, including, without limitation, damages, claims and payments for past and future misappropriations or infringements thereof; (c) all rights to sue for past, present and future infringements of the foregoing, including the right to settle suits involving claims and demands for royalties owing; and (d) all rights corresponding to any of the foregoing.

Applicable provisions in Section 1.03 of the Credit Agreement are incorporated by reference herein as if such Section was set forth herein in its entirety, *mutatis mutandis*.

ARTICLE 2
GRANT OF SECURITY INTEREST

Section 2.01. *Grant of Security Interest.* (a) As security for the prompt and complete payment or performance, as the case may be, in full of the Secured Obligations, each Grantor hereby pledges, collaterally assigns, mortgages, transfers and grants to the Agent, its successors and permitted assigns, on behalf of and for the benefit of the Secured Parties, a continuing security interest in all of its right in, and title and interest to and under, all of the following personal property and other assets, whether now owned by or owing to, or hereafter acquired by or arising in favor of, such Grantor, and regardless of where located (all of which are collectively referred to as the “Collateral”):

- (i) all Accounts;
- (ii) all Chattel Paper (including all Tangible Chattel Paper and all Electronic Chattel Paper);
- (iii) all Intellectual Property Collateral;
- (iv) all Documents;
- (v) all Equipment;
- (vi) all Fixtures;
- (vii) all General Intangibles;
- (viii) all Goods;
- (ix) all Instruments;
- (x) all Inventory;
- (xi) all Investment Property, Pledged Stock and other Pledged Collateral;
- (xii) all Money, cash and cash equivalents;
- (xiii) all letters of credit and Letter-of-Credit Rights;
- (xiv) all Deposit Accounts, Securities Accounts, Commodities Accounts and all other demand, deposit, time, savings, cash management, passbook and similar accounts maintained by such Grantor with any bank or other financial institution and all monies, securities, Instruments and other investments deposited or required to be deposited in any of the foregoing;
- (xv) all Securities Entitlements in any or all of the foregoing;
- (xvi) all Commercial Tort Claims described on Schedule 6 to the Cumulative Perfection Certificate (including any supplements to such Schedule 6 delivered pursuant to Section 4.04);
- (xvii) all Permits;

(xviii) all Software and all recorded data of any kind or nature, regardless of the medium of recording;

(xix) all Contracts, together with all Contract Rights arising thereunder;

(xx) all Supporting Obligations; and

(xxi) all accessions to, substitutions and replacements for and Proceeds and products of the foregoing, together with all books and records, customer lists, credit files, computer files, programs, printouts and other computer materials and records related thereto and any General Intangibles at any time evidencing or relating to any of the foregoing and all collateral security and guarantees given by any Person with respect to any of the foregoing.

(b) Notwithstanding the foregoing, for the avoidance of doubt, the term “Collateral” (and any component definition thereof) shall not include any Excluded Asset and shall be subject in all respects to the exceptions and exclusions set forth in Section 5.12 of the Credit Agreement. Notwithstanding anything to the contrary contained herein, immediately upon the ineffectiveness, lapse or termination of any restriction or condition set forth in the definition of “Excluded Assets” in the Credit Agreement, the Collateral shall include, and the relevant Grantor shall be deemed to have automatically granted a security interest in, all relevant previously restricted or conditioned rights, interests or other assets, as the case may be, as if such restriction or condition had never been in effect. For the avoidance of doubt, “Excluded Assets” shall not include any proceeds, products, substitutions or replacements of Excluded Assets (unless such proceeds, products, substitutions or replacements would otherwise constitute Excluded Assets).

ARTICLE 3 REPRESENTATIONS AND WARRANTIES

The Grantors, jointly and severally, represent and warrant to the Agent on and as of the Closing Date and on and as of the date of each Credit Extension (to the extent required by Sections 4.01 or 4.02, as applicable, of the Credit Agreement), for the benefit of the Secured Parties, that:

Section 3.01. *Title, Perfection and Priority; Filing Collateral.*

(a) Subject to the terms of the last paragraph of Section 4.01 of the Credit Agreement and the Legal Reservations, this Security Agreement creates a legal, valid and enforceable Lien on all of the Collateral in favor of the Agent for the benefit of itself and the other Secured Parties and, upon the satisfaction of the applicable Perfection Requirements, such Liens constitute perfected First Priority Liens (subject to Permitted Liens) on the Collateral (except to the extent Liens are not required to be perfected under the terms of the Loan Documents and limited to the actions described in the Perfection Requirements) securing the Secured Obligations, in each case as and to the extent set forth therein.

(b) Each Grantor (i) is the owner of all of its Collateral free and clear from any Lien or other right, title or interest of any Person (other than a Permitted Lien and/or any such other right, title or interest that is permitted or not prohibited by the terms of the Credit Agreement) or (ii) has the power to transfer rights in the Collateral to the Agent.

Section 3.02. *Intellectual Property.*

(a) Upon (i) filing of appropriate financing statements with the Secretary of State (or equivalent office) of the state of organization of such Grantor and the filing of the Intellectual Property Security Agreement with the United States Patent and Trademark Office and (ii) filing of the Intellectual Property Security Agreement with the United States Copyright Office, as applicable, the Agent shall have a fully perfected First Priority Lien on the Collateral constituting of United States issued, registered or applied for Patents, Trademarks and Copyrights and exclusive Copyright Licenses, as applicable, under the UCC and the laws of the United States for the ratable benefit of the Secured Parties, and such perfected security interests shall be enforceable as such as against any and all creditors of and purchasers from the Grantors, subject to the Legal Reservations. No Grantor shall be required to complete any filings or take any other action with respect to the perfection of the security interests created hereby in any jurisdiction outside of the United States.

(b) No Grantor is aware of (i) any third-party claim (A) that any of its owned Patent, Trademark or Copyright registrations or applications is invalid or unenforceable, or (B) challenging such Grantor's rights to such registrations and applications or (ii) any basis for such claims, other than, in each case, to the extent any such third-party claim would not reasonably be expected to have a Material Adverse Effect.

Section 3.03. *Pledged Collateral.* (i) All Pledged Stock has been duly authorized and validly issued (to the extent such concepts are relevant with respect to such Pledged Collateral) by the issuer thereof and is fully paid and non-assessable, (ii) as of the date of the most recently delivered Cumulative Perfection Certificate, each Grantor is the direct owner, beneficially and of record, of the Pledged Stock described in Schedule 3 to the Cumulative Perfection Certificate as held by such Grantor and (iii) as of the date of the most recently delivered Cumulative Perfection Certificate, each Grantor holds the Pledged Stock described in Schedule 3 to the Cumulative Perfection Certificate as held by such Grantor free and clear of all Liens (other than Permitted Liens).

Section 3.04. *Perfection Certificate.* The Cumulative Perfection Certificate has been duly prepared, completed and executed and the certifications set forth therein are true and correct in all material respects as of the date thereof.

ARTICLE 4
COVENANTS

From the date hereof, and thereafter until the Termination Date:

Section 4.01. *General.*

(a) *Authorization to File Financing Statements; Ratification.* Each Grantor hereby (i) authorizes the Agent to file (A) all financing statements and amendments thereto with respect to the Collateral naming such Grantor as debtor and the Agent as secured party, in form appropriate for filing under the UCC of the relevant jurisdiction and (B) filings with the United States Patent and Trademark Office and the United States Copyright Office (including any Intellectual Property Security Agreement executed by the relevant Grantor) for the purpose of perfecting, enforcing, maintaining or protecting the Lien of the Agent in United States issued, registered and applied for Patents, Trademarks and Copyrights and exclusive Copyright Licenses contained in the Collateral and naming such Grantor as debtor and the Agent as secured party and, (ii) subject to the terms of the Loan Documents (including the limitations set forth in Section 5.12 of the Credit Agreement) agrees to take such other actions, in each case described under clauses (i) and (ii) above, as may from time to time be necessary and reasonably requested by the Agent (and authorizes the Agent to take any such other actions, consistent with and limited to the Perfection Requirements, which it has no obligation to take) in order to establish and maintain a First Priority, valid, enforceable (subject to the Legal Reservations) and perfected security interest in and subject, in the case of Pledged Collateral, to Section 4.02 hereof, Control of, the Collateral. Each Grantor shall pay any applicable filing fees, recordation fees and related reasonable expenses relating to its Collateral in accordance with Section 9.03(a) of the Credit Agreement. Any financing statement filed by the Agent may be filed in any filing office in any applicable UCC jurisdiction and may (i) indicate the Collateral (A) as all assets of the applicable Grantor or words of similar effect, regardless of whether any particular asset comprised in the Collateral falls within the scope of Article 9 of the UCC of such jurisdiction, or (B) by any other description which reasonably approximates the description contained in this Security Agreement and (ii) contain any other information required by part 5 of Article 9 of the UCC for the sufficiency or filing office acceptance of any financing statement or amendment. Each Grantor agrees to furnish any such information to the Agent promptly upon request.

(b) *Further Assurances.* Each Grantor agrees, at its own expense, to take any and all actions reasonably necessary to defend title to the Collateral against all Persons (other than Persons holding Permitted Liens on such Collateral that have priority over the Agent's Lien) and to defend the security interest of the Agent in the Collateral and the priority thereof against any Lien that is not a Permitted Lien. Notwithstanding the foregoing, Grantor may, as part of its ordinary course of business substantially consistent with past practice, grant licenses to third parties to use Intellectual Property Collateral owned, licensed or developed by a Grantor; for the purposes of this Security Agreement such licensing activity shall not constitute a Lien on such Intellectual Property Collateral.

Section 4.02. *Pledged Collateral.*

(a) *Delivery of Certificated Securities, Tangible Chattel Paper, Instruments and Documents.* Each Grantor will, after the Closing Date, hold in trust for the Agent upon receipt and (x) if the event giving rise to the obligation under this Section 4.02(a) occurs during the first three Fiscal Quarters of any Fiscal Year, on or before the date on which financial statements are required to be delivered pursuant to Section 5.01(a) of the Credit Agreement for the Fiscal Quarter in which the relevant event occurred or (y) if the event giving rise to the obligation under this Section 4.02(a) occurs during the fourth Fiscal Quarter of any Fiscal Year, on or before the date that is 60 days after the end of such Fiscal Quarter (or, in each of the cases of clauses (x) and (y), such longer period as the Agent may reasonably agree) deliver to the Agent for the benefit of the Secured Parties any (1) certificated Securities representing or evidencing Pledged Collateral and (2) Tangible Chattel Paper and Instruments (A) in each case under this clause (2), having an outstanding balance in excess of \$5,000,000 and (B) in each case under clauses (1) and (2), constituting Collateral received after the date hereof, accompanied by undated instruments of transfer or assignment duly executed in blank.

(b) *Uncertificated Securities and Pledged Collateral.* With respect to any partnership interest or limited liability company interest owned by any Grantor which is required to be pledged to the Agent pursuant to the terms hereof (other than a partnership interest or limited liability company interest held by a Clearing Corporation, Securities Intermediary or other financial intermediary of any kind) which is not represented by a certificate and which is not a Security for purposes of the UCC, such Grantor shall not permit any issuer of such partnership interest or limited liability company interest to (i) enter into any agreement with any Person, other than the Agent or any holder of a Permitted Lien to the extent such Permitted Lien has priority over the Agent's Lien, whereby such issuer effectively delivers "control" of such partnership interest or limited liability company interest (as applicable) under the UCC to such Person, or (ii) allow such partnership interest or limited liability company interest (as applicable) to become a Security unless such Grantor complies with the procedures set forth in Section 4.02(a) within the time period prescribed therein. Each Grantor which is an issuer of any uncertificated Pledged Collateral described in this Section 4.02(b) hereby agrees to comply with all instructions from the Agent without such Grantor's further consent, in each case subject to the notice requirements set forth in Section 5.01(a)(iv) hereof.

(c) *Registration in Nominee Name; Denominations.* The Agent, on behalf of the Secured Parties, shall hold certificated Pledged Collateral required to be delivered to the Agent under clause (a) above in the name of the applicable Grantor, endorsed or assigned in blank or in favor of the Agent, but at any time when an Event of Default exists and is continuing and upon at least one Business Day's prior written notice to the Parent Borrower, the Agent shall have the right (in its sole and absolute discretion) to hold the Pledged Collateral in its own name as pledgee, or in the name of its nominee (as pledgee or as sub-agent). At any time when an Event of Default exists, the Agent shall have the right to exchange the certificates representing Pledged Collateral for certificates of smaller or larger denominations for any purpose consistent with this Security Agreement.

(d) *Exercise of Rights in Pledged Collateral.* It is agreed that:

(i) without in any way limiting the foregoing and subject to clause (ii) below, each Grantor shall have the right to exercise all voting rights or other rights relating to the Pledged Collateral for any purpose that does not violate this Security Agreement, the Credit Agreement or any other Loan Document;

(ii) each Grantor will permit the Agent or its nominee at any time when an Event of Default exists and is continuing to exercise the rights and remedies provided under Section 5.01(a)(iv) (subject to the notice requirements set forth therein and applicable Requirements of Law); and

(iii) subject to Section 5.01(a)(iv), each Grantor shall be entitled to receive and retain any and all dividends, interest, principal and other distributions paid on or distributed in respect of the Pledged Collateral; *provided* that any non-cash dividends or other distributions that would constitute Pledged Collateral, whether resulting from a subdivision, combination or reclassification of the outstanding Capital Stock of the issuer of any Pledged Collateral or received in exchange for Pledged Collateral or any part thereof, or in redemption thereof, or as a result of any merger, consolidation, acquisition or other exchange of assets to which such issuer may be a party or otherwise, shall, to the extent constituting Collateral, be and become part of the Pledged Collateral, and, if received by any Grantor, shall be delivered to the Agent as and to the extent required by clause (a) above.

(e) *Return of Pledged Collateral.* So long as no Event of Default then exists, the Agent shall promptly deliver to the applicable Grantor (without recourse and without any representation or warranty) any Pledged Collateral in its possession if requested to be delivered to the issuer or holder thereof in connection with any action or transaction that is permitted or not restricted by the Credit Agreement in accordance with Article 8 and Section 9.18 of the Credit Agreement.

Section 4.03. *Intellectual Property.* (a) At any time when an Event of Default exists and is continuing and upon the written request of the Agent, each Grantor will (i) use its commercially reasonable efforts to obtain all consents and approvals necessary or appropriate for the assignment to or for the benefit of the Agent of any License held by such Grantor in the US to enable the Agent to enforce the security interests granted hereunder and (ii) to the extent required pursuant to any material License in the US under which such Grantor is the licensee, deliver to the licensor thereunder any notice of the grant of security interest hereunder or such other notices required to be delivered thereunder in order to permit the security interest created or permitted to be created hereunder pursuant to the terms of such License.

(b) Each Grantor shall notify the Agent promptly if it knows or reasonably expects that any application for or registration of any Patent, Trademark, Domain Name, or Copyright (now or hereafter existing) may become abandoned or dedicated to the public, or of any determination or development (including the institution of, or any such determination or development in, any proceeding in the United States Patent and Trademark Office, the United States Copyright Office or any court, except for routine office actions issued in the normal course of prosecution) abandoning such Grantor's ownership of any such Patent, Trademark or Copyright, its right to register the same, or to keep and maintain the same, except, in each case, to the extent the same is permitted or not restricted by the Credit Agreement or where the same, individually or in the aggregate, could not reasonably be expected to result in a Material Adverse Effect.

(c) In the event that any Grantor files an application for the registration of any Patent, Trademark (for the avoidance of doubt, excluding any “intent to use” trademark applications) or Copyright with the United States Patent and Trademark Office or the United States Copyright Office, acquires any such application or registration by purchase or assignment or acquires an exclusive Copyright License, in each case, after the Closing Date (and other than as a result of an application that is then subject to an Intellectual Property Security Agreement becoming registered), it shall (x) if the event giving rise to the obligation under this Section 4.03(c) occurs during the first three Fiscal Quarters of any Fiscal Year, on or before the date on which financial statements are required to be delivered pursuant to Section 5.01(a) of the Credit Agreement for the Fiscal Quarter in which the relevant event occurred or (y) if the event giving rise to the obligation under this Section 4.03(c) occurs during the fourth Fiscal Quarter of any Fiscal Year, on or before the date that is 60 days after the end of such Fiscal Quarter (or, in each of the cases of clauses (x) and (y), such longer period as the Agent may reasonably agree) notify the Agent and, promptly upon the Agent’s request, execute and deliver to the Agent, at such Grantor’s sole cost and expense, any Intellectual Property Security Agreement, as applicable, or other instrument as the Agent may reasonably request and require to evidence the Agent’s security interest in such applied for or registered Patent, Trademark or Copyright (or application therefor) or exclusive Copyright License, and the General Intangibles of such Grantor relating thereto or represented thereby.

(d) Each Grantor shall take all actions necessary or reasonably requested by the Agent to (i) maintain and pursue each application and to obtain and maintain the registration of each Patent, Trademark, Domain Name and Copyright included in the Collateral (now or hereafter existing), including by filing applications for renewal, affidavits of use, affidavits of incontestability and, if consistent with good business judgment, by initiating opposition and interference and cancellation proceedings against third parties, (ii) maintain and protect the secrecy or confidentiality of its Trade Secrets and (iii) otherwise protect and preserve such Grantor’s rights in, and the validity or enforceability of, its Intellectual Property Collateral, in each case except where failure to do so (A) could not reasonably be expected to result in a Material Adverse Effect, or (B) is otherwise permitted under the Credit Agreement.

(e) Each Grantor shall promptly notify the Agent of any material infringement or misappropriation of such Grantor’s Patents, Trademarks, Copyrights or Trade Secrets of which it becomes aware and shall take such actions as are commercially reasonable and appropriate under the circumstances to protect such Patent, Trademark, Copyright or Trade Secret, except where such infringement, misappropriation or dilution could not reasonably be expected to cause a Material Adverse Effect.

Section 4.04. *Commercial Tort Claims.* After the Closing Date, (x) if the event giving rise to the obligation under this Section 4.04 occurs during the first three Fiscal Quarters of any Fiscal Year, on or before the date on which financial statements are required to be delivered pursuant to Section 5.01(a) of the Credit Agreement for the Fiscal Quarter in which the relevant event occurred or (y) if the event giving rise to the obligation under this Section 4.04 occurs during the fourth Fiscal Quarter of any Fiscal Year, on or before the date that is 60 days after the end of such Fiscal Quarter (or, in each of the cases of clauses (x) and (y), such longer period as the Agent may reasonably agree) each relevant Grantor shall notify the Agent of any Commercial Tort Claim with an individual value (as reasonably estimated by the Borrower) in excess of \$5,000,000 acquired by it, together with an update to Schedule 6 to the Cumulative Perfection Certificate containing a summary description thereof, and such Commercial Tort Claim (and the Proceeds thereof) shall constitute Collateral, all upon the terms of this Security Agreement.

Section 4.05. *Insurance.* Except to the extent otherwise permitted to be retained by any Grantor or applied by any Grantor pursuant to the terms of the Loan Documents, the Agent shall, at the time when an Event of Default exists and is continuing and any proceeds of any insurance are distributed to the Secured Parties, apply such proceeds in accordance with Section 5.04 hereof.

Section 4.06. *Grantors Remain Liable.* (a) Each Grantor (rather than the Agent or any Secured Party) shall remain liable (as between itself and any relevant counterparty) to observe and perform all the conditions and obligations to be observed and performed by it under any Contract relating to the Collateral, all in accordance with the terms and conditions thereof. Neither the Agent nor any other Secured Party shall have any obligation or liability under any Contract by reason of or arising out of this Security Agreement or the receipt by the Agent or any other Secured Party of any payment relating to such Contract pursuant hereto, nor shall the Agent or any other Secured Party be obligated in any manner to perform any of the obligations of any Grantor under or pursuant to any Contract, to make any payment, to make any inquiry as to the nature or sufficiency of any performance or to collect the payment of any amounts which may have been assigned to them or to which they may be entitled at any time or times.

(b) Each Grantor assumes all liability and responsibility in connection with the Collateral acquired by it, and the liability of such Grantor to pay the Secured Obligations shall in no way be affected or diminished by reason of the fact that such Collateral may be lost, destroyed, stolen, damaged or for any reason whatsoever unavailable to such Grantor.

(c) Notwithstanding anything herein to the contrary, each Grantor (rather than the Agent or any Secured Party) shall remain liable under each of the Accounts to observe and perform all of the conditions and obligations to be observed and performed by it thereunder, all in accordance with the terms of any agreement giving rise to such Accounts. Neither the Agent nor any other Secured Party shall have any obligation or liability under any Account (or any agreement giving rise thereto) by reason of or arising out of this Security Agreement or the receipt by the Agent or any other Secured Party of any payment relating to such Account pursuant hereto, nor shall the Agent or any other Secured Party be obligated in any manner to perform any of the obligations of any Grantor under or pursuant to any Account (or any agreement giving rise thereto), to make any payment, to make any inquiry as to the nature or the sufficiency of any payment received by them or as to the sufficiency of any performance by any party under any Account (or any agreement giving rise thereto), to present or file any claim, to take any action to enforce any performance or to collect the payment of any amounts which may have been assigned to them or to which they may be entitled at any time or times.

ARTICLE 5 REMEDIES

Section 5.01. *Remedies.* (a) Each Grantor agrees that, at any time when an Event of Default exists and is continuing and upon at least three Business Days' prior written notice to the Parent Borrower, the Agent may exercise any or all of the following rights and remedies (in addition to the rights and remedies existing under applicable Requirements of Law):

(i) the rights and remedies provided in this Security Agreement, the Credit Agreement, or any other Loan Document; *provided that* this Section 5.01(a) shall not limit any rights available to the Agent prior to an Event of Default;

(ii) the rights and remedies available to a secured party under the UCC or under any other applicable Requirements of Law (including, without limitation, any law governing the exercise of a bank's right of setoff or bankers' Lien) when a debtor is in default under a security agreement;

(iii) enter the premises of any Grantor where any Collateral is located (through self-help and without judicial process) to collect, receive, assemble, process, appropriate, sell, lease, assign, grant an option or options to purchase or otherwise dispose of, deliver, or realize upon, the Collateral or any part thereof in one or more parcels at one or more public or private sales (which sales may be adjourned or continued from time to time with or without notice and may take place at such Grantor's premises or elsewhere), for cash, on credit or for future delivery without assumption of any credit risk, and upon such other terms as the Agent may deem commercially reasonable;

(iv) transfer and register in its name or in the name of its nominee the whole or any part of the Pledged Collateral, to exercise the voting and all other rights as a holder with respect thereto (whereupon the voting and other rights of such Grantor described in Section 4.02(d) (i) above shall immediately cease such that the Agent shall have the sole right to exercise such voting and other rights while the relevant Event of Default exists and is continuing), to collect and receive all cash dividends, interest, principal and other distributions made thereon (it being understood that all Stock Rights received by any Grantor while the relevant Event of Default exists and is continuing shall be received in trust for the benefit of the Agent and forthwith paid over to the Agent in the same form as so received (with any necessary endorsements)) and to otherwise act with respect to the Pledged Collateral as though the Agent was the outright owner thereof; and

(v) take possession of the Collateral or any part thereof, by directing such Grantor in writing to deliver the same to the Agent at any reasonable place or places designated by the Agent, in which event such Grantor shall at its own expense:

(1) forthwith cause the same to be moved to the place or places so designated by the Agent and there delivered to the Agent;

(2) store and keep any Collateral so delivered to the Agent at such place or places pending further action by the Agent; and

(3) while the Collateral shall be so stored and kept, provide such security and maintenance services as shall be reasonably necessary to protect the same and to preserve and maintain it in good condition.

(b) Each Grantor acknowledges and agrees that compliance by the Agent, on behalf of the Secured Parties, with any applicable state or federal Requirements of Law in connection with a disposition of the Collateral will not be considered to adversely affect the commercial reasonableness of any sale of the Collateral.

(c) The Agent shall have the right in any public sale and, to the extent permitted by applicable Requirements of Law, in any private sale, to purchase for the benefit of the Agent and the Secured Parties, all or any part of the Collateral so sold, free of any right of equity redemption, which equity redemption each Grantor hereby expressly releases.

(d) Until the Agent is able to effect a sale, lease, transfer or other disposition of any Collateral under this Section 5.01, the Agent shall have the right to hold or use such Collateral, or any part thereof, to the extent that it deems appropriate for the purpose of preserving such Collateral or the value of such Collateral, or for any other purpose deemed reasonably appropriate by the Agent. At any time when an Event of Default exists and is continuing, the Agent may, if it so elects, seek the appointment of a receiver or keeper to take possession of any Collateral and to enforce any of the Agent's remedies (for the benefit of the Agent and Secured Parties), with respect to such appointment without prior notice or hearing as to such appointment.

(e) Notwithstanding the foregoing, the Agent shall not be required to (i) make any demand upon, or pursue or exhaust any of their rights or remedies against, the Grantors, any other obligor, guarantor, pledgor or any other Person with respect to the payment of the Secured Obligations or to pursue or exhaust any of their rights or remedies with respect to any Collateral therefor or any direct or indirect guarantee thereof, (ii) marshal the Collateral or any guarantee of the Secured Obligations or to resort to the Collateral or any such guarantee in any particular order, or (iii) effect a public sale of any Collateral.

(f) Each Grantor recognizes that the Agent may be unable to effect a public sale of any or all the Pledged Collateral and may be compelled to resort to one or more private sales thereof. Each Grantor also acknowledges that any private sale may result in prices and other terms less favorable to the seller than if such sale were a public sale and, notwithstanding such circumstances, agrees that no such private sale shall be deemed to have been made in a commercially unreasonable manner solely by virtue of such sale being private. The Agent shall be under no obligation to delay a sale of any of the Pledged Collateral for the period of time necessary to permit any Grantor or the issuer of any Pledged Collateral to register such securities for public sale under the Securities Act of 1933, as amended, or under applicable state securities Requirements of Law, even if any Grantor and the issuer would agree to do so.

(g) Notwithstanding the foregoing, any rights and remedies provided in this Section 5.01 shall be subject to any Acceptable Intercreditor Agreement.

Section 5.02. *Grantors' Obligations Upon Default.* Upon the request of the Agent at any time when an Event of Default exists and is continuing, each Grantor will:

(a) at its own cost and expense (i) assemble and make available to the Agent, the Collateral and all books and records relating thereto at any place or places reasonably specified by the Agent, whether at such Grantor's premises or elsewhere, (ii) deliver all tangible evidence of its Accounts and Contract Rights (including, without limitation, all documents evidencing the Accounts and all Contracts) and such books and records to the Agent or to its representatives (copies of which evidence and books and records may be retained by such Grantor) and (iii) if the Agent so directs, legend in a form and manner reasonably satisfactory to the Agent, the Accounts and the Contracts, as well as books, records and documents (if any) of such Grantor evidencing or pertaining to such Accounts and Contracts with an appropriate reference to the fact that such Accounts and Contracts have been assigned to the Agent and that the Agent has a security interest therein; and

(b) permit the Agent and/or its representatives and/or agents, to enter, occupy and use any premises where all or any part of the Collateral, or the books and records relating thereto, or both, are located, to take possession of all or any part of the Collateral or the books and records relating thereto, or both, to remove all or any part of the Collateral or the books and records relating thereto, or both, and to conduct sales of the Collateral, without any obligation to pay any Grantor for such use and occupancy.

Section 5.03. *Intellectual Property Remedies.* (a) For the purpose of enabling the Agent to exercise the rights and remedies under this Article 5 at any time when an Event of Default exists and is continuing and at such time as the Agent shall be lawfully entitled to exercise such rights and remedies, each Grantor hereby grants to the Agent a power of attorney to sign any document which may be required by the United States Patent and Trademark Office, the United States Copyright Office, domain name registrar or similar registrar in order to effect an absolute assignment of all right, title and interest in each registered Patent, Trademark, Domain Name and Copyright and exclusive Copyright License included in the Collateral and each application for any such registration, and record the same. At any time when an Event of Default exists and is continuing, the Agent may (i) declare the entire right, title and interest of such Grantor in and to each item of Intellectual Property Collateral to be vested in the Agent for the benefit of the Secured Parties, in which event such right, title and interest shall immediately vest in the Agent for the benefit of the Secured Parties, and the Agent shall be entitled to exercise the power of attorney referred to in this Section 5.03 to execute, cause to be acknowledged and notarized and record such absolute assignment with the applicable agency or registrar; (ii) sell any Grantor's Inventory directly to any Person, including without limitation Persons who have previously purchased any Grantor's Inventory from such Grantor and in connection with any such sale or other enforcement of the Agent's rights under this Security Agreement and subject to any restrictions contained in applicable third party licenses entered into by such Grantor, sell Inventory which bears any Trademark owned by or licensed to any Grantor and any Inventory that is covered by any Intellectual Property Collateral owned by or licensed to any Grantor, and the Agent may finish any work in process and affix any relevant Trademark owned by or licensed to such Grantor and sell such Inventory as provided herein; (iii) direct such Grantor to refrain, in which event such Grantor shall refrain, from using any Intellectual Property Collateral in any manner whatsoever, directly or indirectly; and (iv) assign or sell any Patent, Trademark, Copyright, Domain Name, and/or Trade Secret included in the Collateral, as well as the goodwill of such Grantor's business symbolized by any such Trademark and the right to carry on the business and use the assets of such Grantor in connection with which any such Trademark or Domain Name has been used.

(b) Each Grantor hereby grants to the Agent an irrevocable (until the Termination Date), nonexclusive, royalty-free, worldwide license to its right to use, license or sublicense any Intellectual Property Collateral now owned or hereafter acquired by such Grantor, wherever the same may be located, and including in such license access to all media in which any of the licensed items may be recorded or stored and (to the extent not prohibited by any applicable license and subject to any Grantor's security policies and obligations of confidentiality) to all computer software and programs used for compilation or printout thereof; provided, however, that nothing in this Section 5.03(b) shall require a Grantor to grant any license that (i) is prohibited by any rule of law, statute or regulation or (ii) is prohibited by, or constitutes a breach or default under or results in the termination of or gives rise to any right of acceleration, modification or cancellation under, any license or similar agreement giving rise to a right to use or theretofore granted with respect to such property, which, in the case of this clause (ii), (w) exists on the Closing Date, (x) if such agreement was entered into by a Grantor acquired after the Closing Date, exists at the time such Grantor is acquired and which agreement was not entered into in contemplation of such acquisition or (y) if such agreement was entered into by any Grantor after the Closing Date, is entered into as part of the Grantor's ordinary course of business substantially consistent with past practice, and natural evolutions thereof; provided, further, that such licenses to be granted hereunder with respect to Trademarks shall be subject to the maintenance of quality standards with respect to the goods and services on which such Trademarks are used sufficient to preserve the validity of such Trademarks. The use of the license granted to the Agent pursuant to the preceding sentence may be exercised, at the option of the Agent, only when an Event of Default exists and is continuing; provided that any license, sublicense or other transaction entered into by the Agent in accordance with this clause (b) shall be binding upon each Grantor notwithstanding any subsequent cure of the relevant Event of Default.

Section 5.04. *Application of Proceeds.* (a) Subject to any Acceptable Intercreditor Agreement, the Agent shall apply the proceeds of any collection, sale, foreclosure or other realization of any Collateral, as well as any Collateral consisting of Cash, as set forth in Section 2.18(b) of the Credit Agreement.

(b) Except as otherwise provided herein or in any other Loan Document, the Agent shall have absolute discretion as to the time of application of any such proceeds, money or balance in accordance with this Security Agreement. Upon any sale of Collateral by the Agent (including pursuant to a power of sale granted by statute or under a judicial proceeding), a receipt by the Agent or of the officer making the sale of such proceeds, moneys or balances shall be a sufficient discharge to the purchaser or purchasers of the Collateral so sold and such purchaser or purchasers shall not be obligated to see to the application of any part of the purchase money paid over to the Agent or such officer or be answerable in any way for the misapplication thereof. It is understood that the Grantors shall remain jointly and severally liable to the extent of any deficiency between the amount of the proceeds of the Collateral and the aggregate amount of the Secured Obligations.

ARTICLE 6

ACCOUNT VERIFICATION; ATTORNEY IN FACT; PROXY

Section 6.01. *Account Verification.* The Agent may at any time and from time to time when an Event of Default exists and is continuing and upon at least one Business Day's prior written notice to the Parent Borrower, in the Agent's own name, in the name of a nominee of the Agent, or in the name of any Grantor, communicate (by mail, telephone, facsimile or otherwise) with the Account Debtors of such Grantor, parties to Contracts with such Grantor and obligors in respect of Instruments of such Grantor to verify with such Persons, to the Agent's reasonable satisfaction, the existence, amount, terms of, and any other matter relating to, Accounts, Contracts, Instruments, Chattel Paper, payment intangibles and/or other Receivables that constitute Collateral.

Section 6.02. *Authorization for the Agent to Take Certain Action.* (a) Each Grantor hereby irrevocably authorizes the Agent and appoints the Agent (and all officers, employees or agents designated by the Agent) as its true and lawful attorney in fact (i) at any time and from time to time in its sole discretion (A) to execute (to the extent necessary under the Requirements of Law of the applicable jurisdiction) on behalf of such Grantor as debtor and to file financing statements necessary or desirable in the Agent's reasonable discretion to perfect and to maintain the perfection and priority of the Agent's security interest in the Collateral and (B) with the consent of the Borrowers (other than when an Event of Default exists and is continuing and upon at least one Business Day's prior written notice to the Parent Borrower), to contact and enter into one or more agreements with the issuers of uncertificated securities that constitute Pledged Collateral or with securities intermediaries holding Pledged Collateral as may be necessary or advisable to give the Agent Control over such Pledged Collateral in accordance with the terms hereof; (ii) at any time when an Event of Default exists and is continuing in the sole discretion of the Agent (in the name of such Grantor or otherwise) and upon at least one Business Day's prior written notice to the Parent Borrower (A) to endorse and collect any cash proceeds of the Collateral and to apply the proceeds of any Collateral received by the Agent to the Secured Obligations as provided herein or in the Credit Agreement or any other Loan Document, subject to the terms of any Acceptable Intercreditor Agreement, (B) to demand payment or enforce payment of any Receivable constituting Collateral in the name of the Agent or such Grantor and to endorse any check, draft and/or any other instrument for the payment of money relating to any such Receivable, (C) to sign such Grantor's name on any invoice or bill of lading relating to any Receivable constituting Collateral, any draft against any Account Debtor of such Grantor, and/or any assignment and/or verification of any such Receivable, (D) to exercise all of any Grantor's rights and remedies with respect to the collection of any Receivable constituting Collateral and any other Collateral, (E) to settle, adjust, compromise, extend or renew any Receivable constituting Collateral, (F) to settle, adjust or compromise any legal proceedings brought to collect any Receivable constituting Collateral, (G) to prepare, file and sign such Grantor's name on a proof of claim in bankruptcy or similar document against any Account Debtor of such Grantor, (H) to prepare, file and sign such Grantor's name on any notice of Lien, assignment or satisfaction of Lien or similar document in connection with any Receivable constituting Collateral, (I) to discharge past due taxes, assessments, charges, fees or Liens on the Collateral (except for Permitted Liens), (J) to make, settle and adjust claims in respect of Collateral under policies of insurance and endorse the name of such Grantor on any check, draft, instrument or other item of payment for the proceeds of such policies of insurance, (K) to make all reasonable determinations and decisions with respect thereto and (L) to obtain or maintain the policies of insurance of the types referred to in Section 5.05 of the Credit Agreement or to pay any premium in whole or in part relating thereto; and (iii) to do all other acts and things or institute any proceedings which the Agent may reasonably deem to be necessary or advisable (pursuant to this Security Agreement and the other Loan Documents and in accordance with applicable law) to carry out the terms of this Security Agreement and to protect the interests of the Secured Parties; and, when and to the extent required pursuant to Section 9.03(a) of the Credit Agreement, such Grantor agrees to reimburse the Agent for any payment made in connection with this paragraph or any expense (including attorneys' fees, court costs and expenses) and other changes related thereto incurred by the Agent in connection with any of the foregoing (it being understood that any such sums shall constitute additional Secured Obligations); provided that, this authorization shall not relieve such Grantor of any of its obligations under this Security Agreement or under the Credit Agreement.

(b) All acts of such attorney or designee are hereby ratified and approved by each Grantor. The powers conferred on the Agent, for the benefit of the Agent and Secured Parties, under this Section 6.02 are solely to protect the Agent's interests in the Collateral and shall not impose any duty upon the Agent or any Secured Party to exercise any such powers.

Section 6.03. *PROXY.* EACH GRANTOR HEREBY IRREVOCABLY (UNTIL THE TERMINATION DATE) CONSTITUTES AND APPOINTS THE AGENT AS ITS PROXY AND ATTORNEY-IN-FACT (SUBJECT TO AND AS SET FORTH IN SECTION 6.02 ABOVE) WITH RESPECT TO THE PLEDGED COLLATERAL, INCLUDING THE RIGHT TO VOTE SUCH PLEDGED COLLATERAL, WITH FULL POWER OF SUBSTITUTION TO DO SO. IN ADDITION TO THE RIGHT TO VOTE ANY SUCH PLEDGED COLLATERAL, THE APPOINTMENT OF THE AGENT AS PROXY AND ATTORNEY-IN-FACT SHALL INCLUDE THE RIGHT TO EXERCISE ALL OTHER RIGHTS, POWERS, PRIVILEGES AND REMEDIES TO WHICH A HOLDER OF SUCH PLEDGED COLLATERAL WOULD BE ENTITLED (INCLUDING GIVING OR WITHHOLDING WRITTEN CONSENTS OF SHAREHOLDERS, CALLING SPECIAL MEETINGS OF SHAREHOLDERS AND VOTING AT SUCH MEETINGS). SUCH PROXY SHALL BE EFFECTIVE, AUTOMATICALLY AND WITHOUT THE NECESSITY OF ANY ACTION (INCLUDING ANY TRANSFER OF ANY SUCH PLEDGED COLLATERAL ON THE RECORD BOOKS OF THE ISSUER THEREOF) BY ANY PERSON (INCLUDING THE ISSUER OF SUCH PLEDGED COLLATERAL OR ANY OFFICER OR AGENT THEREOF), IN EACH CASE ONLY WHEN AN EVENT OF DEFAULT EXISTS AND IS CONTINUING AND UPON AT LEAST ONE BUSINESS DAY'S PRIOR WRITTEN NOTICE TO THE PARENT BORROWER.

Section 6.04. *NATURE OF APPOINTMENT; LIMITATION OF DUTY.* THE APPOINTMENT OF THE AGENT AS PROXY AND ATTORNEY-IN-FACT IN THIS ARTICLE 6 IS COUPLED WITH AN INTEREST AND SHALL BE IRREVOCABLE UNTIL THE TERMINATION DATE. NOTWITHSTANDING ANYTHING CONTAINED HEREIN, NEITHER THE AGENT, NOR ANY SECURED PARTY, NOR ANY OF THEIR RESPECTIVE AFFILIATES, OFFICERS, DIRECTORS, EMPLOYEES, AGENTS OR REPRESENTATIVES SHALL HAVE ANY DUTY TO EXERCISE ANY RIGHT OR POWER GRANTED HEREUNDER OR OTHERWISE OR TO PRESERVE THE SAME AND SHALL NOT BE LIABLE FOR ANY FAILURE TO DO SO OR FOR ANY DELAY IN DOING SO, EXCEPT TO THE EXTENT SUCH DAMAGES ARE ATTRIBUTABLE TO THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF SUCH PERSON AS FINALLY DETERMINED BY A COURT OF COMPETENT JURISDICTION IN A FINAL AND NON-APPEALABLE DECISION SUBJECT TO SECTION 7.20 HEREOF; PROVIDED, THAT THE FOREGOING EXCEPTION SHALL NOT BE CONSTRUED TO OBLIGATE THE AGENT TO TAKE OR REFRAIN FROM TAKING ANY ACTION WITH RESPECT TO THE COLLATERAL.

ARTICLE 7
GENERAL PROVISIONS

Section 7.01. *Waivers.* To the maximum extent permitted by applicable Requirements of Law, each Grantor hereby waives notice of the time and place of any judicial hearing in connection with the Agent's taking possession of the Collateral or of any public sale or the time after which any private sale or other disposition of all or any part of the Collateral may be made, including without limitation, any and all prior notice and hearing for any prejudgment remedy or remedies. To the extent such notice may not be waived under applicable Requirements of Law, any notice made shall be deemed reasonable if sent to any Grantor, addressed as set forth in Article 8, at least 10 days prior to (a) the date of any such public sale or (b) the time after which any such private disposition may be made. To the maximum extent permitted by applicable Requirements of Law, each Grantor waives all claims, damages, and demands against the Agent arising out of the repossession, retention or sale of the Collateral, except those arising out of the gross negligence or willful misconduct of the Agent as determined by a court of competent jurisdiction in a final and non-appealable judgment. To the extent it may lawfully do so, each Grantor absolutely and irrevocably waives and relinquishes the benefit and advantage of, and covenants not to assert against the Agent, any valuation, stay (other than an automatic stay under any applicable Debtor Relief Law), appraisal, extension, moratorium, redemption or similar law and any and all rights or defenses it may have as a surety now or hereafter existing which, but for this provision, might be applicable to the sale of any Collateral made under the judgment, order or decree of any court, or privately under the power of sale conferred by this Security Agreement, or otherwise. Except as otherwise specifically provided herein, each Grantor hereby waives presentment, demand, protest, any notice (to the maximum extent permitted by applicable Requirements of Law) of any kind or all other requirements as to the time, place and terms of sale in connection with this Security Agreement or any Collateral.

Section 7.02. *Limitation on Agent's Duty with Respect to the Collateral.* The Agent shall not have any obligation to clean or otherwise prepare the Collateral for sale. The Agent shall use reasonable care with respect to the Collateral in its possession; provided that the Agent shall be deemed to have exercised reasonable care in the custody and preservation of any Collateral in its possession if such Collateral is accorded treatment substantially equal to which it accords its own property. The Agent shall not have any other duty as to any Collateral in its possession or control or in the possession or control of any agent or nominee of the Agent, or any income thereon or as to the preservation of rights against prior parties or any other rights pertaining thereto. To the extent that applicable Requirements of Law impose duties on the Agent to exercise remedies in a commercially reasonable manner, each Grantor acknowledges and agrees that it would be commercially reasonable for the Agent (a) to elect not to incur expenses to prepare Collateral for disposition or otherwise to transform raw material or work in process into finished goods or other finished products for disposition, (b) to elect not to obtain third party consents for access to Collateral to be disposed of, or to obtain or, if not required by other law, to fail to obtain governmental or third party consents for the collection or disposition of Collateral to be collected or disposed of, (c) to elect not to exercise collection remedies against Account Debtors or other Persons obligated on Collateral or to remove Liens on or any adverse claims against Collateral, (d) to exercise collection remedies against Account Debtors and other Persons obligated on Collateral directly or through the use of collection agencies and other collection specialists, (e) to advertise dispositions of Collateral through publications or media of general circulation, whether or not the Collateral is of a specialized nature, (f) to contact other Persons, whether or not in the same business as any Grantor, for expressions of interest in acquiring all or any portion of such Collateral, (g) to hire one or more professional auctioneers to assist in the disposition of Collateral, whether or not the Collateral is of a specialized nature, (h) to dispose of Collateral by utilizing internet sites that provide for the auction of assets of the types included in the Collateral or that have the reasonable capacity of doing so, or that match buyers and sellers of assets, (i) to dispose of assets in wholesale rather than retail markets, (j) to disclaim disposition warranties, such as title, possession or quiet enjoyment, (k) to purchase insurance or credit enhancements to insure the Agent against risks of loss in connection with any collection or disposition of Collateral or to provide to the Agent a guaranteed return from the collection or disposition of Collateral or (l) to the extent deemed appropriate by the Agent, to obtain the services of other brokers, investment bankers, consultants and other professionals to assist the Agent in the collection or disposition of any of the Collateral. Each Grantor acknowledges that the purpose of this Section 7.02 is to provide non-exhaustive indications of what actions or omissions by the Agent would be commercially reasonable in the Agent's exercise of remedies with respect to the Collateral and that other actions or omissions by the Agent shall not be deemed commercially unreasonable solely on account of not being indicated in this Section 7.02. Without limitation upon the foregoing, nothing contained in this Section 7.02 shall be construed to grant any rights to any Grantor or to impose any duties on the Agent that would not have been granted or imposed by this Security Agreement or by applicable law in the absence of this Section 7.02.

Section 7.03. *Compromises and Collection of Collateral.* Each Grantor and the Agent recognize that setoffs, counterclaims, defenses and other claims may be asserted by obligors with respect to certain of the Receivables, that certain of the Receivables may be or become uncollectible in whole or in part and that the expense and probability of success in litigating a disputed Receivable may exceed the amount that reasonably may be expected to be recovered with respect to any Receivable. In view of the foregoing, each Grantor agrees that the Agent may at any time and from time to time, if an Event of Default exists and is continuing, compromise with the obligor on any Receivable, accept in full payment of any Receivable such amount as the Agent in its sole discretion shall determine or abandon any Receivable, and any such action by the Agent shall be commercially reasonable so long as the Agent acts in good faith based on information known to it at the time it takes any such action.

Section 7.04. *Agent Performance of Debtor Obligations.* Without having any obligation to do so, the Agent may, at any time when an Event of Default exists and is continuing and upon prior written notice to the Borrower, perform or pay any obligation which any Grantor has agreed to perform or pay under this Security Agreement and which obligation is due and unpaid and not being contested by such Grantor in good faith, and such Grantor shall reimburse the Agent for any amounts paid by the Agent pursuant to this Section 7.04 as a Secured Obligation payable in accordance with Section 9.03(a) of the Credit Agreement.

Section 7.05. *No Waiver; Amendments; Cumulative Remedies.* No delay or omission of the Agent (subject to the provisions of Article 8 and Section 9.18 of the Credit Agreement) to exercise any right or remedy granted under this Security Agreement shall impair such right or remedy or be construed to be a waiver of any Default or an acquiescence therein, and no single or partial exercise of any such right or remedy shall preclude any other or further exercise thereof or the exercise of any other right or remedy. No waiver, amendment or other variation of the terms, conditions or provisions of this Security Agreement whatsoever shall be valid unless in writing signed by the Grantors and the Agent with the concurrence or at the direction of the Lenders to the extent required under Section 9.02 of the Credit Agreement and then only to the extent in such writing specifically set forth. All rights and remedies contained in this Security Agreement or afforded by law shall be cumulative and all shall be available to the Agent until the Termination Date.

Section 7.06. *Limitation by Law; Severability of Provisions.* All rights, remedies and powers provided in this Security Agreement may be exercised only to the extent that the exercise thereof does not violate any applicable Requirements of Law, and all of the provisions of this Security Agreement are intended to be subject to all applicable mandatory Requirements of Law that may be controlling and to be limited to the extent necessary so that such provisions do not render this Security Agreement invalid, unenforceable or not entitled to be recorded or registered, in whole or in part. To the extent permitted by applicable Requirements of Law, any provision of this Security Agreement held to be invalid, illegal or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity, illegality or unenforceability without affecting the validity, legality and enforceability of the remaining provisions of this Security Agreement; and the invalidity of a particular provision in a particular jurisdiction shall not invalidate such provision in any other jurisdiction.

Section 7.07. *Security Interest Absolute.* All rights of the Agent hereunder, the security interests granted hereunder and all obligations of each Grantor hereunder shall be absolute and unconditional irrespective of (a) any lack of validity or enforceability of the Credit Agreement, any other Loan Document, any agreement with respect to any of the Secured Obligations or any other agreement or instrument relating to any of the foregoing, (b) any change in the time, manner or place of payment of, or in any other term of, all or any of the Secured Obligations, or any other amendment or waiver of or any consent to any departure from the Credit Agreement, any other Loan Document or any other agreement or instrument relating to the foregoing, (c) any exchange, release or nonperfection of any Lien on any Collateral, or any release or amendment or waiver of or consent under or departure from any guaranty, securing or guaranteeing all or any of the Secured Obligations, (d) any bankruptcy, insolvency, reorganization, arrangement, readjustment, composition, liquidation or the like of any Grantor, (e) any exercise or non-exercise, or any waiver of, any right, remedy, power or privilege under or in respect of this Security Agreement or any other Loan Document or (f) any other circumstance that might otherwise constitute a defense available to, or a discharge of, any Grantor in respect of the Secured Obligations or this Security Agreement (other than a termination of any Lien contemplated by [Section 7.12](#) or the occurrence of the Termination Date).

Section 7.08. *Benefit of Security Agreement.* The terms and provisions of this Security Agreement shall be binding upon and inure to the benefit of each Grantor, the Agent and the Secured Parties and their respective successors and permitted assigns (including all Persons who become bound as a debtor to this Security Agreement). No sale of participations, assignments, transfers, or other dispositions of any agreement governing the Secured Obligations or any portion thereof or interest therein shall in any manner impair the Lien granted to the Agent hereunder for the benefit of the Agent and the Secured Parties.

Section 7.09. *Survival of Representations.* All representations and warranties of each Grantor contained in this Security Agreement shall survive the execution and delivery of this Security Agreement until the Termination Date.

Section 7.10. *Additional Subsidiaries.* Upon the execution and delivery by any Subsidiary of an instrument in the form of [Exhibit A](#) in accordance with [Section 5.12\(a\)](#) or [Section 5.12\(b\)](#) of the Credit Agreement, such Subsidiary shall become a Subsidiary Party hereunder with the same force and effect as if such Subsidiary was originally named as a Subsidiary Party herein. The execution and delivery of any such instrument shall not require the consent of any other Grantor or any other Person. The rights and obligations of each Grantor hereunder shall remain in full force and effect notwithstanding the addition of any new Grantor as a party to this Security Agreement.

Section 7.11. *Headings.* The titles of and section headings in this Security Agreement are for convenience of reference only, and shall not govern the interpretation of any of the terms and provisions of this Security Agreement.

Section 7.12. *Termination or Release.* (a) This Security Agreement shall continue in effect until the Termination Date, and the Liens granted hereunder shall automatically be released in the circumstances described in [Article 8](#) and [Section 9.18](#) of the Credit Agreement.

(b) In connection with any termination or release pursuant to paragraph (a) above, the Agent shall promptly execute (if applicable) and deliver to any Grantor, at such Grantor's expense, all UCC termination statements and similar documents that such Grantor shall reasonably request to evidence and/or effectuate such termination or release. Any execution and delivery of documents pursuant to this Section 7.12 shall be without recourse to or representation or warranty by the Agent or any Secured Party. The Borrowers shall reimburse the Agent for all costs and expenses, including any fees and expenses of counsel, incurred by it in connection with any action contemplated by this Section 7.12 pursuant to and to the extent required by Section 9.03(a) of the Credit Agreement.

(c) The Agent shall have no liability whatsoever to any other Secured Party as the result of any release of Collateral by it in accordance with (or which the Agent in good faith believes to be in accordance with) the terms of this Section 7.12.

(d) At any time that a Grantor desires that the Agent take any action to acknowledge or give effect to any release of Collateral pursuant to the foregoing Section 7.12(a), such Grantor shall deliver to the Agent a certificate signed by a Responsible Officer of such Grantor (or the Borrowers on behalf of such Grantor) stating that the release of the respective Collateral is permitted pursuant to such Section 7.12(a) and the terms of the Credit Agreement. At any time that any Grantor desires that a Restricted Subsidiary of such Grantor be released hereunder, it shall deliver to the Agent a certificate signed by a Responsible Officer of such Grantor (or the Borrowers on behalf of such Grantor) stating that the release of the respective Grantor (and its Collateral) is permitted pursuant to such Section 7.12(a) and the terms of the Credit Agreement.

Section 7.13. *Entire Agreement.* This Security Agreement, together with the other Loan Documents and any Acceptable Intercreditor Agreement, embodies the entire agreement and understanding between each Grantor and the Agent relating to the Collateral and supersedes all prior agreements and understandings between any Grantor and the Agent relating to the Collateral.

Section 7.14. *CHOICE OF LAW. THIS SECURITY AGREEMENT AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS SECURITY AGREEMENT, WHETHER IN TORT, CONTRACT (AT LAW OR IN EQUITY) OR OTHERWISE, SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.*

Section 7.15. *CONSENT TO JURISDICTION; CONSENT TO SERVICE OF PROCESS.*

(a) EACH PARTY HERETO HEREBY IRREVOCABLY AND UNCONDITIONALLY SUBMITS, FOR ITSELF AND ITS PROPERTY, TO THE EXCLUSIVE JURISDICTION OF ANY US FEDERAL OR NEW YORK STATE COURT SITTING IN THE BOROUGH OF MANHATTAN, IN THE CITY OF NEW YORK (OR ANY APPELLATE COURT THEREFROM) OVER ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS SECURITY AGREEMENT AND AGREES THAT ALL CLAIMS, CONTROVERSIES OR DISPUTES IN RESPECT OF ANY SUCH ACTION OR PROCEEDING SHALL (EXCEPT AS PERMITTED BELOW) BE HEARD AND DETERMINED IN SUCH NEW YORK STATE OR, TO THE EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, FEDERAL COURT. EACH OF THE PARTIES HERETO AGREES THAT SERVICE OF ANY PROCESS, SUMMONS, NOTICE OR DOCUMENTS BY REGISTERED MAIL ADDRESSED TO SUCH PERSON SHALL BE EFFECTIVE SERVICE OF PROCESS AGAINST SUCH PERSON FOR ANY SUIT, ACTION OR PROCEEDING BROUGHT IN ANY SUCH COURT. EACH OF THE PARTIES HERETO AGREES THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY APPLICABLE REQUIREMENTS OF LAW. EACH PARTY HERETO HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT IT MAY LEGALLY AND EFFECTIVELY DO SO, ANY OBJECTION WHICH IT MAY NOW OR HEREAFTER HAVE TO THE LAYING OF VENUE OF ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS SECURITY AGREEMENT IN ANY SUCH COURT. EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, ANY CLAIM OR DEFENSE OF AN INCONVENIENT FORUM TO THE MAINTENANCE OF SUCH ACTION, SUIT OR PROCEEDING IN ANY SUCH COURT. EACH PARTY HERETO AGREES THAT THE AGENT AND LENDERS RETAIN THE RIGHT TO BRING PROCEEDINGS AGAINST ANY GRANTOR IN THE COURTS OF ANY OTHER JURISDICTION SOLELY IN CONNECTION WITH THE EXERCISE OF ANY RIGHTS IN RESPECT OF THE COLLATERAL UNDER THIS SECURITY AGREEMENT.

(b) TO THE EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, EACH PARTY TO THIS SECURITY AGREEMENT HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF ANY AND ALL PROCESS UPON IT AND AGREES THAT ALL SUCH SERVICE OF PROCESS MAY BE MADE BY REGISTERED MAIL (OR ANY SUBSTANTIALLY SIMILAR FORM OF MAIL) DIRECTED TO IT AT ITS ADDRESS FOR NOTICES AS PROVIDED FOR IN SECTION 9.01 OF THE CREDIT AGREEMENT. EACH PARTY TO THIS SECURITY AGREEMENT HEREBY WAIVES ANY OBJECTION TO SUCH SERVICE OF PROCESS AND FURTHER IRREVOCABLY WAIVES AND AGREES NOT TO PLEAD OR CLAIM IN ANY ACTION OR PROCEEDING COMMENCED HEREUNDER THAT SERVICE OF PROCESS WAS INVALID AND INEFFECTIVE. NOTHING IN THIS SECURITY AGREEMENT WILL AFFECT THE RIGHT OF ANY PARTY TO THIS SECURITY AGREEMENT TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY APPLICABLE REQUIREMENTS OF LAW.

Section 7.16. *WAIVER OF JURY TRIAL.* EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE REQUIREMENTS OF LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY SUIT, ACTION, LEGAL PROCEEDING OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY) DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS SECURITY AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY. EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS SECURITY AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION.

Section 7.17. *Indemnity.* Each Grantor hereby agrees to indemnify the Indemnitees, as, and to the extent, set forth in Section 9.03 of the Credit Agreement.

Section 7.18. *Counterparts.* This Security Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page of this Security Agreement by facsimile or by email as a “.pdf” or “.tif” attachment or other electronic transmission shall be effective as delivery of a manually executed counterpart of this Security Agreement.

Section 7.19. *INTERCREDITOR AGREEMENT GOVERNS.* NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY, THE LIENS AND SECURITY INTERESTS GRANTED TO THE AGENT FOR THE BENEFIT OF THE SECURED PARTIES PURSUANT TO THIS SECURITY AGREEMENT AND THE EXERCISE OF ANY RIGHT OR REMEDY BY THE AGENT WITH RESPECT TO ANY COLLATERAL HEREUNDER ARE SUBJECT TO THE PROVISIONS OF ANY ACCEPTABLE INTERCREDITOR AGREEMENT. IN THE EVENT OF ANY CONFLICT BETWEEN THE PROVISIONS OF ANY ACCEPTABLE INTERCREDITOR AGREEMENT AND THIS SECURITY AGREEMENT, THE PROVISIONS OF ANY ACCEPTABLE INTERCREDITOR AGREEMENT SHALL GOVERN AND CONTROL.

Section 7.20. *Waiver of Consequential Damages, Etc.* To the extent permitted by applicable law, none of the Grantors or Secured Parties shall assert, and each hereby waives, any claim against each other or any Related Party thereof, on any theory of liability, for special, indirect, consequential or punitive damages (as opposed to direct or actual damages) arising out of, in connection with, or as a result of, this Security Agreement or any agreement or instrument contemplated hereby, except, in the case of any claim by any Indemnitee against any of the Grantors, to the extent such damages would otherwise be subject to indemnification pursuant to the terms of Section 7.17.

Section 7.21. *Mortgages.* In the case of a conflict between this Security Agreement and any Mortgage with respect to any Material Real Estate Asset that is also subject to a valid and enforceable Lien under the terms of such Mortgage (including Fixtures), the terms of such Mortgage shall govern.

Section 7.22. *Successors and Assigns.* Whenever in this Security Agreement any party hereto is referred to, such reference shall be deemed to include the successors and permitted assigns of such party; and all covenants, promises and agreements by or on behalf of any Grantor or the Agent in this Security Agreement shall bind and inure to the benefit of their respective successors and permitted assigns. Except in a transaction expressly permitted under the Credit Agreement, no Grantor may assign any of its rights or obligations hereunder without the written consent of the Agent.

Section 7.23. *Survival of Agreement.* Without limiting any provision of the Credit Agreement or Section 7.17 hereof, all covenants, agreements, indemnities, representations and warranties made by the Grantors in the Loan Documents and in the certificates or other instruments delivered in connection with or pursuant to this Security Agreement or any other Loan Document shall be considered to have been relied upon by the Lenders and shall survive the execution and delivery of the Loan Documents and the making of any Loans, regardless of any investigation made by any such Lender or on its behalf and notwithstanding that the Agent or any Lender may have had notice or knowledge of any Default or Event of Default or incorrect representation or warranty at the time any credit is extended under the Credit Agreement, and shall continue in full force and effect until the Termination Date, or with respect to any individual Grantor until such Grantor is otherwise released from its obligations under this Security Agreement in accordance with the terms hereof.

Section 7.24. *Effectiveness of the Acquisition.* The Parent Borrower and the Co-Borrower shall have no rights or obligations hereunder until the consummation of the Acquisition, and any representations and warranties of the Parent Borrower or the Co-Borrower hereunder shall not become effective until such time. Upon consummation of the Acquisition, the Parent Borrower and the Co-Borrower shall succeed to all the rights and obligations of the Initial Borrower under this Agreement and the other Loan Documents to which it is a party and all representations and warranties of the Parent Borrower and the Co-Borrower shall become effective as of the date hereof, without any further action by any Person.

ARTICLE 8 NOTICES

Section 8.01. *Sending Notices.* Any notice required or permitted to be given under this Security Agreement shall be delivered in accordance with Section 9.01 of the Credit Agreement (it being understood and agreed that references in such Section to “herein”, “hereunder” and other similar terms shall be deemed to be references to this Security Agreement).

Section 8.02. *Change in Address for Notices.* Each of the Grantors, the Agent and the Lenders may change the address or facsimile number for service of notice upon it by a notice in writing to the other parties.

ARTICLE 9
THE AGENT

Jefferies has been appointed Agent for the Lenders hereunder pursuant to Article 8 of the Credit Agreement. It is expressly understood and agreed by the parties to this Security Agreement that any authority conferred upon the Agent hereunder is subject to the terms of the delegation of authority made by the Lenders to the Agent pursuant to the Credit Agreement, and that the Agent has agreed to act (and any successor Agent shall act) as such hereunder only on the express conditions contained in such Article 8. Any successor Agent appointed pursuant to Article 8 of the Credit Agreement shall be entitled to all the rights, interests and benefits of the Agent hereunder.

By accepting the benefits of this Security Agreement and any other Loan Document, each Secured Party expressly acknowledges and agrees that this Security Agreement and each other Loan Document may be enforced only by the action of the Agent, and that such Secured Party shall not have any right individually to seek to enforce or to enforce this Security Agreement or to realize upon the security to be granted hereby, it being understood and agreed that such rights and remedies may be exercised by the Agent for the benefit of the Secured Parties upon the terms of this Security Agreement and the other Loan Documents.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, each Grantor and the Agent have executed this Security Agreement as of the date first above written.

EQT AVATAR INTERMEDIATE, INC.,

By: /s/ Jason Howard

Name: Jason Howard

Title: President

By: /s/ Robert Bradburn

Name: Robert Bradburn

Title: Vice President and Secretary

EQT AVATAR HOLDINGS, INC.,

By: /s/ Jason Howard

Name: Jason Howard

Title: President

By: /s/ Robert Bradburn

Name: Robert Bradburn

Title: Vice President and Secretary

Signature Page to Pledge and Security Agreement

CERTARA HOLDCO, INC.,

By: /s/ Andrew Schemick
Name: Andrew Schemick
Title: CFO and Treasurer

CERTARA USA, INC.,

By: /s/ Andrew Schemick
Name: Andrew Schemick
Title: CFO and Treasurer

CERTARA HOLDING, INC.,

By: /s/ Andrew Schemick
Name: Andrew Schemick
Title: CFO and Treasurer

MBDD US, LLC,

By: /s/ Andrew Schemick
Name: Andrew Schemick
Title: CFO and Treasurer

TRIPOS INVESTMENTS, L.L.C.,

By: /s/ Andrew Schemick
Name: Andrew Schemick
Title: CFO and Treasurer

SYNCHROGENIX INFORMATION STRATEGIES, LLC,

By: /s/ Andrew Schemick
Name: Andrew Schemick
Title: CFO and Treasurer

Signature Page to Pledge and Security Agreement

CERTARA, L.P.,

By: /s/ Andrew Schemick

Name: Andrew Schemick

Title: CFO and Treasurer

Signature Page to Pledge and Security Agreement

JEFFERIES FINANCE LLC,
as the Agent

By: /s/ Jason Kennedy
Name: Jason Kennedy
Title: Managing Director

Signature Page to Pledge and Security Agreement

EXHIBIT A

[FORM OF] SECURITY AGREEMENT JOINDER

A. SUPPLEMENT NO. [●] dated as of [●] (this “Supplement”), to the Pledge and Security Agreement dated as of August 15, 2017 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Security Agreement”), by and among the Borrowers and the Subsidiary Parties from time to time party thereto (the foregoing, collectively, the “Grantors”) and Jefferies Finance LLC in its capacity as administrative agent and collateral agent for the Secured Parties (in such capacities, the “Agent”).

B. Reference is made to the Credit Agreement dated as of August 15, 2017, (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Credit Agreement”), by and among EQT Avatar Intermediate, Inc., a Delaware corporation (“Holdings”), EQT Avatar Holdings, Inc., a Delaware corporation (“Buyer” or the “Initial Borrower”), Certara Holdco, Inc., a Delaware corporation (the “Parent Borrower”), Certara USA, Inc., a Delaware corporation (the “Co-Borrower” and, together with the Initial Borrower (prior to the consummation of the Closing Date Assumption (as defined in the Credit Agreement referred to below)) and the Parent Borrower, each a “Borrower” and collectively the “Borrowers”), the lenders and issuing banks from time to time party thereto and the Agent.

C. Capitalized terms used herein and not otherwise defined herein shall have the meanings assigned to such terms in the Credit Agreement or the Security Agreement, as applicable.

D. The Grantors have entered into the Security Agreement in order to induce the Lenders to make Loans. Section 7.10 of the Security Agreement and Section 5.12 of the Credit Agreement provide that additional Subsidiaries of the Borrowers may become Subsidiary Parties under the Security Agreement by executing and delivering an instrument in the form of this Supplement. [The] [Each] undersigned Subsidiary ([each a] [the] “New Subsidiary”) is executing this Supplement in accordance with the requirements of the Credit Agreement to become a Subsidiary Party under the Security Agreement in order to induce the Lenders to make additional Loans and as consideration for Loans previously made and to secure the Secured Obligations, including [its] [their] obligations under the Loan Guaranty, each Hedge Agreement the obligations under which constitute Secured Hedging Obligations and agreements relating to Banking Services the obligations under which constitute Banking Services Obligations.

Accordingly, the Agent and [the] [each] New Subsidiary agree as follows:

SECTION 1. In accordance with Section 7.10 of the Security Agreement, [the] [each] New Subsidiary by its signature below becomes a Subsidiary Party and a Grantor under the Security Agreement with the same force and effect as if originally named therein as a Subsidiary Party, and [the] [each] New Subsidiary hereby (a) agrees to all the terms and provisions of the Security Agreement applicable to it as a Subsidiary Party and Grantor thereunder and (b) makes the representations and warranties applicable to it as a Grantor under the Security Agreement[, subject to Schedule A hereto,] on and as of the date hereof; it being understood and agreed that any representation or warranty that expressly relates to an earlier date shall be deemed to refer to the date hereof. In furtherance of the foregoing, [the] [each] New Subsidiary, as security for the payment and performance in full of the Secured Obligations, does hereby create and grant to the Agent, its successors and permitted assigns, for the benefit of the Secured Parties, their successors and permitted assigns, a security interest in and Lien on all of [the] [each] New Subsidiary’s right, title and interest in and to the Collateral of [the] [each] New Subsidiary. Each reference to a “Grantor” and “Subsidiary Party” in the Security Agreement shall be deemed to include [the] [each] New Subsidiary. The Security Agreement is hereby incorporated herein by reference.

SECTION 2. [The] [Each] New Subsidiary represents and warrants to the Agent and the other Secured Parties that this Supplement has been duly authorized, executed and delivered by it and constitutes its legal, valid and binding obligation, enforceable against it in accordance with its terms, subject to the Legal Reservations.

SECTION 3. This Supplement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. This Supplement shall become effective when the Agent shall have received a counterpart of this Supplement that bears the signature of [the] [each] New Subsidiary and the Agent has executed a counterpart hereof. Delivery of an executed signature page to this Supplement by facsimile transmission or by email as a “.pdf” or “.tif” attachment shall be as effective as delivery of a manually signed counterpart of this Supplement.

SECTION 4. Attached hereto is a duly prepared, completed and executed Perfection Certificate with respect to [the] [each] New Subsidiary, and [the] [each] New Subsidiary hereby represents and warrants that the information set forth therein is correct and complete in all material respects as of the date hereof.

SECTION 5. Except as expressly supplemented hereby, the Security Agreement shall remain in full force and effect.

SECTION 6. **THIS SUPPLEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.**

SECTION 7. In case any one or more of the provisions contained in this Supplement is invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein and in the Security Agreement shall not in any way be affected or impaired thereby (it being understood that the invalidity of a particular provision in a particular jurisdiction shall not in and of itself affect the validity of such provision in any other jurisdiction). Each of the Borrowers and the Agent shall endeavor in good-faith negotiations to replace the invalid, illegal or unenforceable provisions with valid provisions the economic effect of which comes as close as possible to that of the invalid, illegal or unenforceable provisions.

SECTION 8. All communications and notices hereunder shall be in writing and given as provided in Section 8.01 of the Security Agreement.

SECTION 9. [The] [Each] New Subsidiary agrees to reimburse the Agent for its expenses in connection with this Supplement, including the fees, other charges and disbursements of counsel in accordance with Section 9.03(a) of the Credit Agreement.

SECTION 10. This Supplement shall constitute a Loan Document, under and as defined in, the Credit Agreement.

[Signature pages follow]

IN WITNESS WHEREOF, **[each]** **[the]** New Subsidiary has duly executed this Supplement to the Security Agreement as of the day and year first above written.

[NAME OF NEW SUBSIDIARY]

By: _____

Name:

Title:

[SCHEDULE A
CERTAIN EXCEPTIONS]

EXHIBIT B¹

[FORM OF] INTELLECTUAL PROPERTY SECURITY AGREEMENT

[PATENT/TRADEMARK/COPYRIGHT] SECURITY AGREEMENT dated as of [●] (this "Agreement"), among [●] (each a "Grantor") and Jefferies Finance LLC (in such capacity, the "Administrative Agent").

WHEREAS, reference is made to (a) the Credit Agreement dated as of August 15, 2017, (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the "Credit Agreement"), by and among EQT Avatar Intermediate, Inc., a Delaware corporation ("Holdings"), EQT Avatar Holdings, Inc., a Delaware corporation ("Buyer" or the "Initial Borrower"), Certara Holdco, Inc., a Delaware corporation (the "Parent Borrower"), Certara USA, Inc., a Delaware corporation (the "Co-Borrower" and, together with the Initial Borrower (prior to the consummation of the Closing Date Assumption (as defined in the Credit Agreement referred to below)) and the Parent Borrower, each a "Borrower" and collectively the "Borrowers"), the lenders and issuing banks from time to time party thereto and the Administrative Agent and (b) the Pledge and Security Agreement dated as of August 15, 2017 (the "Security Agreement"), by and among the Borrower, Holdings, the Subsidiary Parties from time to time party thereto and the Administrative Agent;

WHEREAS, the Lenders have agreed to extend credit to the Borrowers subject to the terms and conditions set forth in the Credit Agreement; and

WHEREAS, each Grantor is willing to execute and deliver this Agreement in as consideration for such extensions of credit.

NOW, THEREFORE, for good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

SECTION 1. Terms. Capitalized terms used in this Agreement and not otherwise defined herein have the meanings specified in the Security Agreement or the Credit Agreement, as applicable.

SECTION 2. Grant of Security Interest. As security for the payment or performance, as the case may be, in full of the Secured Obligations, each Grantor hereby grants to the Administrative Agent, its successors and assigns, for the benefit of the Secured Parties, a security interest (the "Security Interest") in all of such Grantor's right, title and interest in, to and under any [Patents/Trademarks/Copyrights and exclusive Copyright Licenses] now owned or at any time hereafter acquired by such Grantor, including those listed on Schedule I (the "Collateral").

SECTION 3. Security Agreement. The Security Interest granted to the Administrative Agent herein is granted in furtherance, and not in limitation, of the security interests granted to the Administrative Agent pursuant to the Security Agreement. Each Grantor hereby acknowledges and affirms that the rights and remedies of the Administrative Agent with respect to the Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the Security Agreement, the terms of the Security Agreement shall govern.

¹ Note: A separate Intellectual Property Security Agreement must be drafted for each of any Patents, Trademarks, or Copyrights/exclusive Copyright Licenses.

SECTION 4. Counterparts. This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original but all of which when taken together shall constitute a single contract. Delivery of an executed signature page to this Agreement by facsimile or other electronic transmission shall be effective as delivery of a manually signed counterpart of this Agreement.

SECTION 5. CHOICE OF LAW. THIS SECURITY AGREEMENT AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS SECURITY AGREEMENT, WHETHER IN TORT, CONTRACT (AT LAW OR IN EQUITY) OR OTHERWISE, SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

[●]

By: _____
Name:
Title:

SCHEDULE I

B-4

6 July 2017

Santo Holding (Deutschland) GmbH
(as Lender)

and

EQT Avatar Topco, Inc.
(as Borrower)

LOAN AGREEMENT

related to

the purchase of Certara Holdco, Inc. (f/k/a Arsenal MBDD Holdco, Inc.)

TABLE OF CONTENTS

Clause		Page
1.	DEFINITIONS AND INTERPRETATION	1
2.	THE FACILITY	3
3.	CONDITIONS PRECEDENT	3
4.	PURPOSE	4
5.	REPAYMENT	4
6.	VOLUNTARY PREPAYMENT	4
7.	CHANGE OF CONTROL	4
8.	INTEREST	4
9.	OID FEE	5
10.	REPRESENTATIONS	5
11.	EVENTS OF DEFAULT	5
12.	COSTS AND EXPENSES	6
13.	PAYMENTS	7
14.	FURTHER ASSURANCE	7
15.	ENTIRE AGREEMENT AND REMEDIES	7
16.	WAIVER AND VARIATION	8
17.	INVALIDITY	8
18.	ASSIGNMENT	8
19.	NOTICES	8
20.	COUNTERPARTS	9
21.	GOVERNING LAW AND JURISDICTION	9
22.	TAX FORMS	9

THIS AGREEMENT is made on July 6, 2017

BETWEEN

- (1) **SANTO HOLDING (DEUTSCHLAND) GMBH**, a company incorporated in Germany with registered number [] and having its registered office at Bergfeldstrasse 9, 83607 Holzkirchen, Germany (the "**Lender**"); and
- (2) **EQT AVATAR TOPCO, INC.**, a corporation organized under the laws of Delaware (the "**Borrower**").

WHEREAS

- (A) This Agreement is being entered into in connection with the Securities Purchase Agreement to be entered into between, EQT Avatar Holdings, Inc., Arsenal MBDD Holding, L.P. and Certara Holdco, Inc. (f/k/a Arsenal MBDD Holdco, Inc.) relating to the acquisition of, directly or indirectly, the capital stock and other equity interests of Certara Holdco, Inc. (f/k/a Arsenal MBDD Holdco, Inc.), a corporation organized under the laws of Delaware, from the existing equity holders thereof (the "**Acquisition Agreement**").
- (B) In accordance with the terms of this Agreement, the Lender wishes to make a loan in an aggregate initial principal amount equal to up to \$110,000,000 (or such lesser amount as the Borrower may request by written notice to the Lender at least two (2) Business Days prior to the Utilisation Date) (the "**Facility Amount**") available to the Borrower.

IT IS AGREED THAT

1. DEFINITIONS AND INTERPRETATION

1.1 In this Agreement:

- (a) "**Business Day**" means a day (other than a Saturday or Sunday) on which banks are open for general business in New York, London and Munich.
- (b) "**Change of Control**" means and shall be deemed to have occurred if EQT, the Lender and the Related Parties individually or taken as a whole cease to beneficially own and control (directly or indirectly) the majority of the votes attaching to the shares of the Borrower.
- (c) "**Code**" means the Internal Revenue Code of 1986, as amended.
- (d) "**EQT**" means any fund, investment vehicle or managed account arrangement operated and/or managed and/or advised by any one or more of EQT Services (UK) Limited, EQT Fund Management S.à r.l., CBTJ Financial Services B.V., EQT Holdings AB, SEP Holdings B.V. or any of their respective Affiliates (each an "**EQT member**") and including, for the avoidance of doubt, the fund known as "EQT VII" (being comprised of EQT VII (No.1) Limited Partnership, EQT VII (No. 2) Limited Partnership (in each case acting by its manager, EQT Services (UK) Limited (or any successor or replacement thereof)) and each co-investment scheme, additional or alternative investment vehicle or managed account arrangement established by any EQT member to invest alongside any of the foregoing in any one or more investments which in each case is operated and/or managed and/or advised by any EQT member.
- (e) "**Event of Default**" means any event or circumstance specified as such in Clause 11 (*Events of Default*).

- (f) "**Facility**" means the term loan facility made available under this Agreement as described in Clause 2 (*The Facility*).
- (g) "**Final Maturity Date**" means the eighth anniversary of the Utilisation Date.
- (h) "**Interest Payment Date**" means:
 - (i) each 15 January and 15 July after the Utilisation Date, or
 - (ii) any other date agreed between the Borrower and the Lender,
 provided that the first Interest Payment Date shall be 15 January 2018 and the final Interest Payment Date shall be the Final Maturity Date.
- (i) "**Interest Period**" means, in relation to the Loan, each period from (and including) the previous Interest Payment Date to (but excluding) the next Interest Payment Date, provided that:
 - (i) the first Interest Period shall begin on (and include) the Utilisation Date and shall end on (but exclude) the first Interest Payment Date; and
 - (ii) the final Interest Period shall end on (but exclude) the Final Maturity Date.
- (j) "**Loan**" means the loan made or to be made under the Facility or the principal amount outstanding for the time being of that loan.
- (k) "**Related Party**" means, in respect of each of Dr. Andreas Strüngmann and Dr. Thomas Strüngmann:
 - (i) such individual, his parents or spouse and/or any of such individual's, his spouse's, or his parents' respective direct descendants; and
 - (ii) any trust, corporation, partnership, limited liability company or other entity, the beneficiaries, shareholders, partners, members, owners or persons beneficially holding a 50.1% or more controlling interest of which consists of any one or more of such individual and/or any such other persons referred to in paragraph (i) above.
- (l) "**Utilisation Date**" means the date on which the Loan is advanced in accordance with Clause 2.2 (*The Facility*).

1.2 In this Agreement, unless the context otherwise requires:

- (a) references to the singular shall include the plural and vice versa;
- (b) references to a "**party**" means a party to this Agreement and includes its permitted successors in title, personal representatives and permitted assigns;
- (c) references to a "**person**" includes any individual, partnership, body corporate, corporation sole or aggregate, state or agency of a state, and any unincorporated association or organisation, in each case whether or not having separate legal personality;
- (d) references to "**Dollars**", "dollars" or "\$" mean the lawful money of the United States of America;

- (e) references to writing shall include any modes of reproducing words in a legible and non-transitory form;
- (f) words introduced by the word "**other**" shall not be given a restrictive meaning because they are preceded by words referring to a particular class of acts, matters or things;
- (g) general words shall not be given a restrictive meaning because they are followed by words which are particular examples of the acts, matters or things covered by the general words and the words "**includes**" and "**including**" shall be construed without limitation; and
- (h) an Event of Default is "continuing" if it has not been remedied or waived.

1.3 The headings and sub-headings in this Agreement are inserted for convenience only and shall not affect the construction of this Agreement.

1.4 References to this Agreement include this Agreement as amended or varied in accordance with its terms.

1.5 Where any natural person gives a certificate or other document or otherwise gives a representation or statement on behalf of any of the parties to this Agreement pursuant to any provision thereof and such certificate or other document, representation or statement proves to be incorrect, the individual shall incur no personal liability in consequence of such certificate, other document, representation or statement being incorrect save where such individual acted fraudulently in giving such certificate, other document, representation or statement (in which case any liability of such individual shall be determined in accordance with applicable law).

2. THE FACILITY

2.1 Subject to the terms of this Agreement, the Lender makes available to the Borrower a Dollar term loan facility in an aggregate amount equal to the Facility Amount.

2.2 Subject only to Clause 3 (*Conditions Precedent*), the Lender shall advance the Facility Amount in full (less the OID Fee, as defined in Clause 9 (*OID Fee*) below) in immediately available funds to such bank account and on such date as the Borrower may specify on not less than 2 Business Days' notice to the Lender.

3. CONDITIONS PRECEDENT

3.1 The Lender shall only be obliged to comply with Clause 2.2 (*The Facility*) if, on or before the Utilisation Date, it has received:

- (a) a copy of the Acquisition Agreement duly executed by each of the parties thereto;
- (b) evidence that the Borrower (or a wholly-owned subsidiary thereof) has obtained, from such financial institutions as it may select, binding commitments in an aggregate amount equal to at least \$238,000,000, the net proceeds of which shall be made available directly or indirectly to the Borrower or a subsidiary or thereof and to be applied for the same purpose as the Loan; and
- (c) evidence that the shareholders of the Borrower have made cash contributions in respect of the consideration under the Acquisition Agreement in an aggregate amount equal to at least \$450,000,000.

4. PURPOSE

4.1 The Borrower shall apply the Loan for the payment of:

- (a) the consideration under the Acquisition Agreement; and
- (b) any costs and expenses reasonably incurred by the Borrower or any of its direct or indirect subsidiaries in connection with the negotiation, preparation, printing and execution of the Acquisition Agreement and this Agreement,

and the Borrower undertakes to the Lender that it will apply the Loan only towards such purposes.

4.2 The Lender shall not be bound to monitor or verify the application of the Loan.

5. REPAYMENT

5.1 The Borrower shall repay on the Final Maturity Date all remaining amounts then outstanding in relation to the Facility (for the avoidance of doubt, together with any interest payable in accordance with Clause 8 (*Interest*)).

5.2 The Borrower may not reborrow any part of the Loan which is repaid or prepaid.

5.3 A certificate of the Lender as to the amount at any time due from the Borrower to it under this Agreement shall, in the absence of manifest error, be conclusive.

6. VOLUNTARY PREPAYMENT

6.1 On any date following the date hereof, the Borrower may from time to time, upon not less than 14 days' prior written notice to the Lender, prepay the Loan in cash in dollars on any Business Day, in whole or in part, in an aggregate minimum amount of \$1,000,000 and multiples of \$1,000,000 in excess of such minimum amount (or, if less, the remaining amounts then outstanding in relation to the Facility).

6.2 In respect of any prepayment of the Loan pursuant to this Clause 6, the Borrower shall pay all accrued and unpaid interest on the principal amount being prepaid to the date of prepayment but without any premium or penalty.

7. CHANGE OF CONTROL

7.1 Upon the occurrence of:

- (a) a Change of Control; or
- (b) the sale of all or substantially all of the assets of the Borrower and its subsidiaries whether in a single transaction or a series of related transactions,

the Borrower shall promptly notify the Lender of that event and all outstanding amounts under or in connection with this Agreement will become immediately due and payable without any premium or penalty.

8. INTEREST

8.1 Interest on the Loan will accrue at the rate of 8.25% per annum.

8.2 Interest on the Loan shall accrue daily (calculated on the basis of the actual number of days elapsed and a year of 360 days) and be payable entirely in cash in arrears:

- (a) on each Interest Payment Date with respect to interest accrued on and to each such Interest Payment Date; and
- (b) on the Final Maturity Date.

9. OID FEE

- 9.1 The Borrower shall pay to the Lender an OID fee (the "**OID Fee**") in an amount equal to 1.00% of the Facility Amount.
- 9.2 The OID Fee shall be payable on the Utilisation Date and only becomes payable if utilisation of the Facility occurs.
- 9.3 The Borrower authorises the Lender to deduct an amount equal to the OID Fee from the proceeds of the Loan.

10. REPRESENTATIONS

The Borrower makes the representations set out in this Clause 10 to the Lender as at the date of this Agreement.

- 10.1 The Borrower is a corporation existing under the laws of Delaware.
- 10.2 The obligations expressed to be assumed by the Borrower in this Agreement are legal, valid, binding and enforceable obligations (subject to any mandatory provisions of applicable law), save to the extent not materially adverse to the interests of the Lender.
- 10.3 All authorisations, consents, approvals, resolutions, licences, exemptions, filings, notarisations or registrations required to enable the Borrower lawfully to enter into, exercise its rights and comply with its obligations in this Agreement and to make this Agreement admissible in evidence in its jurisdiction of incorporation have been obtained or effected and are in full force and effect, save to the extent not materially adverse to the interests of the Lender.

11. EVENTS OF DEFAULT

Each of the events or circumstances set out in Clauses 11.1 to 11.5 below is an Event of Default.

- 11.1 The Borrower does not pay on the due date any amount payable pursuant to this Agreement.
- 11.2 The Borrower:
- (a) declares, makes or pays any dividend, charge, fee or other distribution (or interest on any unpaid dividend, charge, fee or other distribution) (whether in cash or in kind) on or in respect of its share capital (or any class of its share capital);
 - (b) repays or distributes any dividend or share premium reserve; or
 - (c) redeems, repurchases, defeases, retires or repays any of its share capital or resolve to do so,

in each case, other than (i) payment of legal, accounting and other ordinary course corporate overhead or other operational expenses (including payments to any director, officer, employee, member of management, manager and/or consultant) of any parent thereof and for the payment of franchise or similar taxes, in each case, to the extent attributable to the ownership of the Borrower and its subsidiaries, (ii) payments to be applied to repurchase, redeem, retire or otherwise acquire or retire for value the capital stock or other ownership interests of the Borrower (or any parent company or any subsidiary thereof) held by any future, present or former employee, director, member of management, officer, manager or consultant (or any affiliate or family member thereof) of the Borrower (or any parent company or any subsidiary thereof) (or any options, warrants, restricted stock units or stock appreciation rights or other equity-linked interests issued with respect to any of such capital stock or other ownership interests) and/or (iii) any other such payment permitted pursuant to the terms of the limited partnership agreement (as amended, novated, supplemented, extended or restated from time to time) constituting the Co-Investment Entity (as defined in an equity commitment letter entered into on or about the date of this Agreement).

- 11.3 The Closing of the Acquisition Agreement shall have not occurred on or prior to the Outside Date (as defined in the Acquisition Agreement).
- 11.4 The Borrower is unable or admits inability to pay its debts as they fall due or is deemed to or declared to be unable to pay its debts (other than debts owed to any of its subsidiaries or solely by reason of balance sheet liabilities exceeding balance sheet assets) under applicable law, suspends or threatens to suspend making payments on any of its debts or, by reason of actual or anticipated financial difficulties, commences negotiations with one or more groups of its creditors (other than in connection with this Agreement) with a view to rescheduling any of its indebtedness, other than any solvent liquidation or reorganisation.
- 11.5 Any corporate action, legal proceedings or other formal procedure or formal step is taken in relation to:
- (a) the suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, judicial management, administration or reorganisation (by way of voluntary arrangement, scheme of arrangement, deed of company arrangement or otherwise) of the Borrower;
 - (b) (by reason of actual or anticipated financial difficulties) a composition, compromise, assignment or arrangement with any class of creditors of the Borrower; or
 - (c) the appointment of a liquidator, trustee in bankruptcy, receiver, administrative receiver, judicial manager, administrator, compulsory manager, voluntary administrator, receiver and manager or other similar officer in respect of the Borrower or any of its assets, or any analogous procedure or step is taken in any jurisdiction. This Clause 11.5 shall not apply to (i) any proceeding or step which is discharged, stayed or dismissed within 20 Business Days of commencement or, if earlier, the date on which it is advertised, or (ii) any step or procedure which is a solvent liquidation or reorganisation.
- 11.6 The Borrower shall notify the Lender of any Event of Default promptly upon becoming aware of its occurrence.
- 11.7 On and at any time after the occurrence of an Event of Default which is continuing, the Lender may by notice to the Borrower:
- (a) cancel its commitments with respect to the Facility at which time the Facility shall immediately be cancelled;
 - (b) declare that all or part of the Loan, together with accrued interest, and all other amounts accrued or outstanding under this Agreement be immediately due and payable, at which time they shall become immediately due and payable; and/or
 - (c) declare that all or part of the Loan be payable on demand, at which time they shall immediately become payable on demand by the Lender.

12. COSTS AND EXPENSES

The Borrower shall promptly and in any event within 10 Business Days of demand (provided that no such demand may be made prior to the Utilisation Date unless the Facility has been cancelled in full) pay the Lender the amount of all costs and expenses (including legal fees subject to any pre-agreed fee arrangements, and in each case as pre-approved by the Borrower) reasonably incurred by it in connection with the negotiation, preparation, printing and execution of this Agreement and any other documents referred to in this Agreement.

13. PAYMENTS

- 13.1 All payments made by any party under this Agreement shall be made free from any set-off, counterclaim or other deduction or withholding of any nature whatsoever, except for deductions or withholdings required to be made by law. So long as the Lender complies with Clause 22.1, if any deductions or withholdings are required by law to be made from any such payments, the amount of the payment shall be increased by such amount as will, after the deduction or withholding has been made, leave the recipient of the payment with the same amount as it would have been entitled to receive in the absence of any such requirement to make a deduction or withholding.
- 13.2 All payments to be made by the Borrower to the Lender pursuant to the terms of this Agreement shall be made in Dollars unless otherwise agreed by the Borrower and the Lender to the following bank account:

Bank: Südwestbank AG

IBAN: []

BIC: []

or to such other bank account(s) as the Lender shall notify to the Borrower by not less than 5 Business Days prior notice.

- 13.3 If any sums would otherwise become due for payment under this Agreement on a day which is not a Business Day that sum shall become due on the following Business Day of the same calendar month or, if none, on the immediately preceding Business Day and interest shall be adjusted accordingly.

14. FURTHER ASSURANCE

Each party shall, at its own cost, promptly execute and deliver all such documents, and do all such things, as the other party may from time to time reasonably require for the purpose of giving full effect to the provisions of this Agreement and to secure for the other party the full benefit of the rights, powers and remedies conferred upon it under this Agreement.

15. ENTIRE AGREEMENT AND REMEDIES

- 15.1 This Agreement sets out the entire agreement between the parties relating to the subject matter contained herein and, save to the extent expressly set out in this Agreement, supersedes and extinguishes any prior drafts, agreements, undertakings, representations, warranties, promises, assurances and arrangements of any nature whatsoever, whether or not in writing, relating thereto.
- 15.2 This Agreement is confidential and shall not be disclosed by any party other than (i) to its directors, officers, employees and advisers on a need to know basis and who are informed of its confidential nature, (ii) by the Borrower to (a) the parties to the Acquisition Agreement described in Clause 3.1(a) and (b) the financial institutions described in Clause 3.1(b) or (iii) as otherwise required by applicable law, regulation or court order.

16. WAIVER AND VARIATION

- 16.1 A failure or delay by a party to exercise any right or remedy provided under this Agreement or by law, whether by conduct or otherwise, shall not constitute a waiver of that or any other right or remedy, nor shall it preclude or restrict any further exercise of that or any other right or remedy. No single or partial exercise of any right or remedy provided under this Agreement or by law, whether by conduct or otherwise, shall preclude or restrict the further exercise of that or any other right or remedy.
- 16.2 A waiver of any right or remedy under this Agreement shall only be effective if given in writing and shall not be deemed a waiver of any subsequent breach or default.
- 16.3 No variation or amendment of this Agreement shall be valid unless it is in writing and duly executed by or on behalf of all of the parties to this Agreement. Unless expressly agreed, no variation or amendment shall constitute a general waiver of any provision of this Agreement, nor shall it affect any rights or obligations under or pursuant to this Agreement which have already accrued up to the date of variation or amendment and the rights and obligations under or pursuant to this Agreement shall remain in full force and effect except and only to the extent that they are varied or amended.

17. INVALIDITY

Where any provision of this Agreement is or becomes illegal, invalid or unenforceable in any respect under the laws of any jurisdiction then such provision shall be deemed to be severed from this Agreement and, if possible, replaced with a lawful provision which, as closely as possible, gives effect to the intention of the parties under this Agreement and, where permissible, that shall not affect or impair the legality, validity or enforceability in that, or any other, jurisdiction of any other provision of this Agreement.

18. ASSIGNMENT

Each party to this Agreement may assign, transfer, charge and/or otherwise deal with all or any of its rights under this Agreement and/or grant, declare, create and/or dispose of any right or interest in it, in each case, only with the consent of the other party hereto. The Borrower shall maintain a “**Register**” for the recordation of the names and addresses of the Lender and its assigns, and the principal amount of the Loan owing to each of the Lender and its assigns pursuant to the terms hereof from time to time. The entries in the Register shall be conclusive absent manifest error.

19. NOTICES

19.1 Any notice or other communication given under this Agreement or in connection with the matters contemplated herein shall, except where otherwise specifically provided, be in writing in the English language, addressed as provided in Clause 19.2 and served:

- (a) by leaving it at the relevant address in which case it shall be deemed to have been given upon delivery to that address;
- (b) by pre-paid airmail, in which case it shall be deemed to have been given five Business Days after the date of posting; or
- (c) by e-mail, in which case it shall be deemed to have been given when despatched subject to confirmation of delivery by a delivery receipt,

provided that in the case of sub-clause (c) above any notice despatched other than between the hours of 9:30 a.m. (CET) to 5:30 p.m. (CET) on a Business Day (“**Working Hours**”) shall be deemed given at the start of the next period of Working Hours.

19.2 Notices under this Agreement shall be sent for the attention of the person and to the address or e-mail address, subject to Clause 19.3, as set out below:

For the Lender:

Address: Bergfeldstrasse 9, 83607 Holzkirchen, Germany

Fax number: []

For the attention of: Helmut Jeggle and Sebastian Breyer

E-mail address: []

For the Borrower:

Address: c/o EQT Services (UK) Limited,
3rd Floor, 30 Broadwick Street, London, W1F 8JB

For the attention of: Jason Howard

E-mail address: []

19.3 Any party to this Agreement may notify the other party of any change to its address or other details specified in Clause 19.2 provided that such notification shall only be effective on the date specified in such notice or 5 Business Days after the notice is given, whichever is later.

20. COUNTERPARTS

This Agreement may be executed in any number of counterparts. Each counterpart shall constitute an original of this Agreement but all the counterparts together shall constitute but one and the same instrument.

21. GOVERNING LAW AND JURISDICTION

21.1 This Agreement shall be governed by and construed in accordance with the laws of Germany unless foreign mandatory law applies.

21.2 Any dispute, controversy or claim arising from or in connection with this Agreement or its validity shall be finally settled by three arbitrators in accordance with the Arbitration Rules of the German Institution of Arbitration e.V. (DIS) as applicable at the time of filing the claim, without recourse to the ordinary courts of law. The place of arbitration shall be Munich. The language of the arbitral proceedings shall be English, provided, however, that written evidence and other supporting documentation may also be submitted in the German language.

21.3 In the event that mandatory applicable law requires any matter arising out of or in connection with this Agreement and its execution to be decided upon by an ordinary court of law, the competent courts in Munich shall have the exclusive jurisdiction.

22. TAX FORMS

22.1 On the date of this Agreement, upon expiration of such forms, and at any times requested by the Borrower, the Lender shall promptly deliver to the Borrower an applicable Internal Revenue Service Form W-8, properly completed and duly executed, establishing (i) a complete exemption from withholding pursuant to Sections 1471 through 1474 of the Code, and (ii) full eligibility for the benefits of Article XI of the tax treaty applicable between the United States and Germany with respect to any payment of interest described herein. If any form the Lender previously delivers expires or becomes obsolete or inaccurate in any respect, the Lender shall update such form. If the Lender is unable to deliver or update any form required by this Clause 22.1, it shall be deemed to be not in compliance with this Clause 22.1.

This Agreement has been entered into on the date stated at the beginning of it.

The Borrower

For and on behalf of
EQT AVATAR TOPCO, INC.

/s/ Jason Howard

/s/ Robert Bradburn

By: Jason Howard

By: Robert Bradburn

Title: President

Title: Vice President and Secretary

The Lender

For and on behalf of
SANTO HOLDING (DEUTSCHLAND) GMBH

/s/ Helmut Jeggle

/s/ Sebastian Breyer

By: Helmut Jeggle

By: Sebastian Breyer

Title:

Title:

[Signature Page to Avatar Loan Agreement]

EMPLOYMENT AGREEMENT

This EMPLOYMENT AGREEMENT (this "Agreement") is made and entered into as of this 14th day of May, 2019, by and among EQT Avatar Parent L.P., a Delaware limited partnership (the "Parent"), Certara USA, Inc., a Delaware corporation (the "Company") and William Feehery (the "Executive").

WITNESSETH :

WHEREAS, the Company desires to employ Executive and to enter into this Agreement embodying the terms of such employment, and Executive desires to enter into this Agreement and to accept such employment, subject to the terms and provisions of this Agreement.

NOW, THEREFORE, in consideration of the promises and mutual covenants contained herein and for other good and valuable consideration, the receipt and sufficiency of which are mutually acknowledged, the Company and Executive hereby agree as follows:

Section 1. Definitions. Capitalized terms not otherwise defined elsewhere in this Agreement shall have the meaning set forth in this Section 1.

(a) "Accrued Obligations" shall mean (i) all accrued but unpaid Base Salary through the date of termination of Executive's employment, payable within thirty (30) days following the date of termination, (ii) any unpaid or unreimbursed business expenses incurred in accordance with Section 6 hereof, payable within thirty (30) days following the date of termination and (iii) any benefits provided under the Company's employee benefit plans upon a termination of employment, including rights with respect to equity participation or accelerated vesting under the Equity Documents, in accordance with the terms contained therein.

(b) "Board" shall mean the Board of Directors of the Parent.

(c) "Cause" shall mean (i) Executive's act(s) of gross negligence or willful misconduct in the course of Executive's employment hereunder, (ii) willful failure or refusal by Executive to perform in any material respect his duties or responsibilities, (iii) misappropriation (or attempted misappropriation) by Executive of any assets or business opportunities of the Company or any other member of the Company Group, (iv) embezzlement or fraud committed (or attempted) by Executive, or at his direction, (v) Executive's conviction of or pleading "guilty" or "no contest" to, (x) a felony or (y) any other criminal charge that has, or could be reasonably expected to have, an adverse impact on the performance of Executive's duties to the Company or any other member of the Company Group or otherwise result in material injury to the reputation or business of the Company or any other member of the Company Group, (vi) any material violation by Executive of the policies of the Company, including but not limited to those relating to sexual harassment or business conduct, to the extent that such violation has, or could be reasonably expected to have, an adverse impact on the performance of Executive's duties to the Company or any other member of the Company Group or otherwise result in material injury to the reputation or business of the Company or any other member of the Company Group or (vii) Executive's material breach of this Agreement.

(d) “Code” shall mean the Internal Revenue Code of 1986, as amended, and the rules and regulations promulgated thereunder.

(e) “Company Group” shall mean the Parent together with any of its direct or indirect subsidiaries, including the Company.

(f) “Compensation Committee” shall mean the committee of the Board designated to make compensation decisions relating to senior executive officers of the Company Group.

(g) “Confidential Information” has the meaning set forth in the Restrictive Covenants.

(h) “Disability” shall mean any physical or mental disability or infirmity of Executive that prevents the performance of Executive’s duties for a period of (i) ninety (90) consecutive days or (ii) one hundred twenty (120) non-consecutive days during any twelve (12) month period. Any question as to the existence, extent, or potentiality of Executive’s Disability upon which Executive and the Company cannot agree shall be determined by a qualified, independent physician selected by the Company and approved by Executive (which approval shall not be unreasonably withheld, delayed or conditioned). The determination of any such physician shall be final and conclusive for all purposes of this Agreement.

(i) “Good Reason” shall mean, without Executive’s consent, (i) a material demotion in Executive’s title, duties, or responsibilities as set forth in Section 3 hereof, (ii) a change in the geographic location of Executive’s principal place of employment that is more than fifty (50) miles from Executive’s principal place of employment on the date on which Executive commences employment with the Company, (iii) a material reduction in Base Salary set forth in Section 4(a) hereof or Target Annual Bonus opportunity set forth in Section 4(b) hereof, or (iv) any other material breach of a provision of this Agreement by the Company (other than a provision that is covered by clause (i), (ii) or (iii) above). Executive acknowledges and agrees that his exclusive remedy in the event of any breach of this Agreement shall be to assert Good Reason pursuant to the terms and conditions of Section 7(f) hereof. Notwithstanding the foregoing, during the Term of Employment, in the event that the Board reasonably believes that Executive may have engaged in conduct that could constitute Cause hereunder, the Board may, in its sole and absolute discretion, suspend Executive from performing his duties hereunder, and in no event shall any such suspension constitute an event pursuant to which Executive may terminate employment with Good Reason or otherwise constitute a breach hereunder; *provided*, that no such suspension shall alter the Company’s obligations under this Agreement during such period of suspension.

(j) “Person” shall mean any individual, corporation, partnership, limited liability company, joint venture, association, joint-stock company, trust (charitable or non-charitable), unincorporated organization, or other form of business entity.

(k) “Release of Claims” shall mean the Release of Claims in substantially the same form attached hereto as Exhibit A (as the same may be revised from time to time for changes in applicable law, as mutually agreed in writing by the Company and Executive).

(l) “Restrictive Covenants” shall mean the Restrictive Covenants attached as Appendix A to Executive’s Class B Profits Interest Unit Award Agreement (the “Award Agreement”), a copy of which is attached hereto as Exhibit B.

(m) “Severance Term” shall mean the twelve (12) month period following Executive’s termination by the Company without Cause (other than by reason of death or Disability) or by Executive with Good Reason.

Section 2. Acceptance and Term of Employment.

The Company agrees to employ Executive, and Executive agrees to serve the Company, on the terms and conditions set forth herein. Executive’s employment hereunder shall commence on June 3, 2019 and continue until terminated as provided in Section 7 hereof (“Term of Employment”).

Section 3. Position, Duties, and Responsibilities; Place of Performance.

(a) Position, Duties, and Responsibilities. During the Term of Employment, Executive shall be employed and serve as the Chief Executive Officer of the Company (together with such other position or positions consistent with Executive’s title as the Board shall specify from time to time) and shall have such duties and responsibilities commensurate with such title. All business unit Presidents of the Company and all functional unit heads of the Company shall report to Executive. During the Term of Employment, Executive shall serve as a member of the Board and also agrees to serve as an officer and/or director of any other member of the Company Group, in each case without additional compensation.

(b) Performance. Executive shall devote his full business time, attention, skill, and best efforts to the performance of his duties under this Agreement and shall not engage in any other business or occupation during the Term of Employment, including, without limitation, any activity that (y) conflicts with the interests of the Company or any other member of the Company Group or (z) interferes with the proper and efficient performance of Executive’s duties for the Company. Notwithstanding the foregoing, nothing herein shall preclude Executive from (i) serving, with the prior written consent of the Board, as a member of the board of directors or advisory board (or the equivalent in the case of a non-corporate entity) of a non-competing for-profit business and one or more charitable organizations, provided, however, that this Agreement shall serve as written consent of the Board for Executive to serve as a member of the board of directors of West Pharmaceutical Services, Inc., (ii) engaging in charitable activities and community affairs, and (iii) managing Executive’s personal investments and affairs; *provided, however*, that the activities set out in clauses (i), (ii), and (iii) shall be limited by Executive so as not to materially interfere, individually or in the aggregate, with the performance of his duties and responsibilities hereunder.

(c) Principal Place of Employment. Executive’s principal place of employment shall be in Pennsylvania, although Executive understands and agrees that he may be required to travel from time to time for business reasons including, without limitation, the Company’s headquarters in Princeton, New Jersey, and the Company’s other offices.

Section 4. Compensation.

During the Term of Employment, Executive shall be entitled to the following compensation:

(a) Base Salary. Executive shall be paid an annualized Base Salary (the “Base Salary”), payable in accordance with the regular payroll practices of the Company, of \$750,000, with increases, if any, as may be approved in writing by the Compensation Committee.

(b) Annual Bonus. Executive shall be eligible for an annual incentive bonus award determined by the Compensation Committee in respect of each fiscal year during the Term of Employment (the “Annual Bonus”). The target Annual Bonus for each fiscal year shall be 60% of Base Salary (the “Target Annual Bonus”), with the actual Annual Bonus, which may be higher than the Target Annual Bonus, payable being based upon the level of achievement of annual Company and individual performance objectives for such fiscal year, as determined by the Board (or Compensation Committee) in consultation with Executive. The Annual Bonus shall otherwise be subject to the terms and conditions of the annual bonus plan adopted by the Board or the Compensation Committee, if any, under which bonuses are generally payable to senior executives of the Company, as in effect from time to time. The Annual Bonus shall be paid in cash to Executive at the same time as annual bonuses are generally payable to other senior executives of the Company, but in no event later than April 15th of the year following the year to which such Annual bonus relates, subject to Executive’s continuous employment through the end of the fiscal year to which such Annual Bonus relates (subject to Section 7 below). The Annual Bonus for the 2019 shall be no less than the Target Annual Bonus, prorated based on Executive’s service in 2019; provided, that to the extent that actual performance exceeds the target performance objectives for 2019, Executive will be eligible to receive an Annual Bonus that exceeds the prorated Target Annual Bonus.

(c) Equity Participation. In connection with the commencement of Executive’s employment hereunder, Executive shall be entitled to participate in and, on the date on which Executive’s employment hereunder commences, shall receive a grant under the EQT Avatar Parent L.P. 2017 Class B Profits Interest Unit Incentive Plan, pursuant to the terms of such plan, the Amended and Restated Limited Partnership Agreement of the Parent, dated August 15, 2017, and the Award Agreement (the “Equity Documents”). Executive’s equity participation shall be exclusively governed by the terms of the Equity Documents.

Section 5. Employee Benefits.

During the Term of Employment, Executive shall be entitled to participate in health, insurance, retirement, and other benefits provided generally to senior executives of the Company. Executive shall also be entitled twenty-five (25) vacation days and to the same number of holidays and sick days, as well as any other benefits, in each case as are generally allowed to senior executives of the Company in accordance with the Company policy as in effect from time to time. Nothing contained herein shall be construed to limit the Company’s ability to amend, suspend, or terminate any employee benefit plan or policy at any time, and the right to do so is expressly reserved.

Section 6. Reimbursement of Expenses.

(a) Executive is authorized to incur reasonable business expenses in carrying out his duties and responsibilities under this Agreement, and the Company shall promptly reimburse him for all such reasonable business expenses, subject to documentation in accordance with the Company's policy, as in effect from time to time.

(b) The Company agrees to promptly reimburse Executive for all reasonable and documented legal fees incurred by Executive in connection with the review and negotiation of this Agreement and the Equity Documents as well as for all reasonable and documented costs, including legal fees, incurred by Executive in connection with the enforcement of his rights under this Agreement and the Equity Documents.

Section 7. Termination of Employment.

(a) General. The Term of Employment, and Executive's employment hereunder, shall terminate upon the earliest to occur of (i) Executive's death, (ii) a termination by reason of a Disability, (iii) a termination by the Company with or without Cause, and (iv) a termination by Executive with or without Good Reason. Except as otherwise expressly required by law (e.g., COBRA) or as specifically provided herein, all of Executive's rights to Base Salary, Annual Bonus, employee benefits and other compensatory amounts hereunder (if any) shall cease upon the termination of Executive's employment hereunder.

(b) Deemed Resignation. Upon any termination of Executive's employment for any reason, except as may otherwise be requested by the Company in writing and agreed upon in writing by Executive, Executive shall be deemed to have resigned from any and all directorships, committee memberships, and any other positions Executive holds with the Company or any other member of the Company Group.

(c) Termination Due to Death or Disability. Executive's employment shall terminate automatically upon his death. The Company may terminate Executive's employment immediately upon the occurrence of a Disability, such termination to be effective upon Executive's receipt of written notice of such termination. Upon Executive's death or in the event that Executive's employment is terminated due to his Disability, Executive or his estate or his beneficiaries, as the case may be, shall be entitled to:

(i) The Accrued Obligations;

(ii) Any unpaid Annual Bonus in respect of any completed fiscal year that has ended prior to the date of such termination, which amount shall be paid at such time annual bonuses are paid to other senior executives of the Company, but in no event later than the date that is 2½ months following the last day of the fiscal year in which such termination occurred (the "Prior Year Bonus Amount"); and

(iii) Subject to satisfaction of the applicable performance objectives applicable for the fiscal year in which such termination occurs, an amount equal to (A) the Annual Bonus otherwise payable to Executive for the fiscal year in which such termination occurred, assuming Executive had remained employed through the applicable payment date, multiplied by (B) a fraction, the numerator of which is the number of days elapsed from the commencement of such fiscal year through the date of such termination and the denominator of which is 365 (or 366, as applicable), which amount shall be paid at such time annual bonuses are paid to other senior executives of the Company, but in no event later than the date that is 2½ months following the last day of the fiscal year in which such termination occurred (the "Current Year Bonus Amount").

Following Executive's death or a termination of Executive's employment by reason of a Disability, except as set forth in this Section 7(c), Executive shall have no further rights to any compensation or any other benefits under this Agreement.

(d) Termination by the Company for Cause.

(i) The Company may terminate Executive's employment at any time for Cause, effective upon delivery to Executive of written notice of such termination; *provided, however*, that with respect to any Cause termination relying on clause (i), (ii), (vi), or (vii) of the definition of Cause, to the extent that such act or acts or failure or failures to act are curable, Executive shall be given not less than thirty (30) days' written notice by the Board of the Company's intention to terminate him for Cause, such notice to state in detail the particular act or acts or failure or failures to act that constitute the grounds on which the proposed termination for Cause is based, and such termination shall be effective at the expiration of such thirty (30)-day notice period unless Executive has fully cured such act or acts or failure or failures to act that give rise to Cause during such period.

(ii) In the event that the Company terminates Executive's employment for Cause, he shall be entitled only to the Accrued Obligations. Following such termination of Executive's employment for Cause, except as set forth in this Section 7(d)(ii), Executive shall have no further rights to any compensation or any other benefits under this Agreement.

(e) Termination by the Company without Cause. The Company may terminate Executive's employment without Cause by giving Executive thirty (30) days' written notice of such termination. In the event that Executive's employment is terminated by the Company without Cause (other than due to death or Disability), Executive shall be entitled to:

(i) The Accrued Obligations;

(ii) The Prior Year Bonus Amount;

(iii) The Current Year Bonus Amount;

(iv) An amount equal to the sum of (x) Base Salary, plus (y) the Target Annual Bonus, such amount to be paid in substantially equal payments during the Severance Term, and payable in accordance with the Company's regular payroll practices; and

(v) Subject to Executive's election of COBRA continuation coverage under the Company's group health plan, payment, on the first regularly scheduled payroll date of each month during the Severance Term, of an amount equal to the difference between the monthly COBRA premium cost and the monthly contribution paid by active employees for the same level of coverage; *provided*, that the payments described in this clause (iii) shall cease earlier than the expiration of the Severance Term in the event that Executive and his eligible dependents become eligible to receive any health benefits as a result of Executive's subsequent employment or service during the Severance Term.

Notwithstanding the foregoing, the payments and benefits described in clauses (ii), (iii), (iv) and (v) above shall immediately terminate, and the Company shall have no further obligations to Executive with respect thereto, in the event that Executive breaches the Restrictive Covenants. Following such termination of Executive's employment by the Company without Cause, except as set forth in this Section 7(e), Executive shall have no further rights to any compensation or any other benefits under this Agreement. For the avoidance of doubt, Executive's sole and exclusive remedy upon a termination of employment by the Company without Cause shall be receipt of the Severance Benefits.

(f) Termination by Executive with Good Reason. Executive may terminate his employment with Good Reason by providing the Company thirty (30) days' written notice setting forth in reasonable specificity the event that constitutes Good Reason, which written notice, to be effective, must be provided to the Company within thirty (30) days of the occurrence of such event (or the date Executive became aware of such event, if later). During such thirty (30)-day notice period, the Company shall have a cure right (if curable), and if not cured within such period, Executive must terminate his employment within thirty (30) days following the end of such cure period, and Executive shall be entitled to the same payments and benefits as provided in Section 7(e) hereof for a termination by the Company without Cause, subject to the same conditions on payment and benefits as described in Section 7(e) hereof. Following such termination of Executive's employment by Executive with Good Reason, except as set forth in this Section 7(f), Executive shall have no further rights to any compensation or any other benefits under this Agreement. For the avoidance of doubt, Executive's sole and exclusive remedy upon a termination of employment with Good Reason shall be receipt of the Severance Benefits.

(g) Termination by Executive without Good Reason. Executive may terminate his employment without Good Reason by providing the Company thirty (30) days' written notice of such termination. In the event of a termination of employment by Executive under this Section 7(g), Executive shall be entitled only to the Accrued Obligations. In the event of termination of Executive's employment under this Section 7(g), the Company may, in its sole and absolute discretion, by written notice accelerate such date of termination without changing the characterization of such termination as a termination by Executive without Good Reason. Following such termination of Executive's employment by Executive without Good Reason, except as set forth in this Section 7(g), Executive shall have no further rights to any compensation or any other benefits under this Agreement.

(h) Release. Notwithstanding any provision herein to the contrary, the payment of any amount or provision of any benefit pursuant to subsection (d) or (e) of this Section 7 (collectively, the “Severance Benefits”), other than the Accrued Obligations, shall be conditioned upon Executive’s execution, delivery to the Company, and non-revocation of the Release of Claims (and the expiration of any revocation period contained in such Release of Claims) within sixty (60) days following the date of Executive’s termination of employment hereunder (the “Release Execution Period”). If Executive fails to execute the Release of Claims in such a timely manner so as to permit any revocation period to expire prior to the end of such sixty (60) day period, or timely revokes his acceptance of such release following its execution, Executive shall not be entitled to any of the Severance Benefits. No portion of the Severance (other than Accrued Obligations) shall be paid until the Release has become effective and all such amounts shall commence to be paid on the first regular payroll date of the Company after the Release has become effective; *provided*, that, if the Release Execution Period overlaps two calendar years, the first payment shall not be made sooner than the first day of the second year, and shall include any missed payments.

Section 8. Certain Payments.

In the event that (i) Executive is entitled to receive any payment, benefit or distribution of any type to or for the benefit of Executive, whether paid or payable, provided or to be provided, or distributed or distributable, pursuant to the terms of this Agreement or otherwise (collectively, the “Payments”), and (ii) the net after-tax amount of such Payments, after Executive has paid all taxes due thereon (including, without limitation, taxes due under Section 4999 of the Code) is less than the net after-tax amount of all such Payments otherwise due to Executive in the aggregate, if such Payments were reduced to an amount equal to 2.99 times Executive’s “base amount” (as defined in Section 280G(b)(3) of the Code), then the aggregate amount of such Payments payable to Executive shall be reduced to an amount that will equal 2.99 times Executive’s base amount. To the extent such aggregate parachute payment amounts are required to be so reduced, the parachute payment amounts due to Executive (but no non-parachute payment amounts) shall be reduced in the following order: (i) the parachute payments that are payable in cash shall be reduced (if necessary, to zero) with amounts that are payable last reduced first; (ii) payments and benefits due in respect of any equity, valued at full value (rather than accelerated value), with the highest values reduced first (as such values are determined under Treasury Regulation Section 1.280G-1, Q&A 24); and (iii) all other non-cash benefits not otherwise described in clause (ii) of this Section 8 reduced last. Notwithstanding the foregoing, the Company will use its good faith best efforts to solicit shareholder approval of Executive’s “excess parachute payments” in accordance with Section 280G of the Code and the regulations promulgated thereunder if Q&A 7 of the 280G regulations is applicable and Executive first waives the right to receive excess parachute payments unless approved by shareholders.

Section 9. Restrictive Covenants

Executive acknowledges and recognizes the highly competitive nature of the business of the Company Group, that access to Confidential Information renders Executive special and unique within the industry of the Company Group, and that Executive will have the opportunity to develop substantial relationships with existing and prospective clients, accounts, customers, consultants, contractors, investors, and strategic partners of the Company Group during the course of and as a result of Executive’s employment with the Company. In light of the foregoing, as a condition of Executive’s employment by the Company, and in consideration of Executive’s employment hereunder and the compensation and benefits provided herein, Executive acknowledges and agrees to the Restrictive Covenants, the terms of which are incorporated herein by reference and made a part hereof. Executive further recognizes and acknowledges that the restrictions and limitations set forth in the Restrictive Covenants are reasonable and valid in geographical and temporal scope and in all other respects and are essential to protect the value of the business and assets of the Company Group.

Section 10. Representations and Warranties of Executive.

Executive represents and warrants to the Company that:

- (a) Executive is entering into this Agreement voluntarily and that his employment hereunder and compliance with the terms and conditions hereof will not conflict with or result in the breach by him of any agreement to which he is a party or by which he may be bound;
- (b) Executive has not violated, and in connection with his employment with the Company will not violate, any non-solicitation, non-competition, or other similar covenant or agreement with any Person by which he is or may be bound;
- (c) In connection with his employment with the Company, Executive will not use any confidential or proprietary information he may have obtained in connection with employment or service with any prior service recipient; and
- (d) Executive has not been terminated from any prior employer or service recipient, or otherwise disciplined in connection any such relationship, in connection with, or as a result of, any claim of workplace sexual harassment or sex or gender discrimination, and to Executive's knowledge, Executive has not been the subject of any investigation, formal allegation, civil or criminal complaint, charge, or settlement regarding workplace sexual harassment or sex or gender discrimination.

Section 11. Taxes.

The Company may withhold from any payments made under this Agreement all applicable taxes, including but not limited to income, employment, and social insurance taxes, as shall be required by law. Executive acknowledges and represents that the Company has not provided any tax advice to him in connection with this Agreement and that he has been advised by the Company to seek tax advice from his own tax advisors regarding this Agreement and payments that may be made to him pursuant to this Agreement, including specifically, the application of the provisions of Section 409A of the Code to such payments.

Section 12. Set Off; Mitigation.

The Company's obligation to pay Executive the amounts provided and to make the arrangements provided hereunder shall be subject to set-off, counterclaim, or recoupment of amounts owed by Executive to the Company or its affiliates; *provided, however*, that to the extent any amount so subject to set-off, counterclaim, or recoupment is payable in installments hereunder, such set-off, counterclaim, or recoupment shall not modify the applicable payment date of any installment, and to the extent an obligation cannot be satisfied by reduction of a single installment payment, any portion not satisfied shall remain an outstanding obligation of Executive and shall be applied to the next installment only at such time the installment is otherwise payable pursuant to the specified payment schedule. Executive shall not be required to mitigate the amount of any payment provided pursuant to this Agreement by seeking other employment or otherwise, and except as provided in Section 7(e)(v) hereof, the amount of any payment provided for pursuant to this Agreement shall not be reduced by any compensation earned as a result of Executive's other employment or otherwise.

Section 13. Key Man Insurance

Within thirty (30) days of the date Executive commences employment, the Company will procure one or more "key man" insurance policies that will provide Executive (or his beneficiaries or legal representatives, as the case may be) with a benefit not less than one times his Base Salary plus Target Annual Bonus in connection with a termination of his employment due to his death or Disability.

Section 14. Additional Section 409A Provisions.

Notwithstanding any provision in this Agreement to the contrary:

(a) Any payment otherwise required to be made hereunder to Executive at any date as a result of the termination of Executive's employment shall be delayed for such period of time as may be necessary to meet the requirements of Section 409A(a)(2)(B)(i) of the Code (the "Delay Period"). On the first business day following the expiration of the Delay Period, Executive shall be paid, in a single cash lump sum, an amount equal to the aggregate amount of all payments delayed pursuant to the preceding sentence, and any remaining payments not so delayed shall continue to be paid pursuant to the payment schedule set forth herein.

(b) Each payment in a series of payments hereunder shall be deemed to be a separate payment for purposes of Section 409A of the Code.

(c) Notwithstanding anything herein to the contrary, the payment (or commencement of a series of payments) hereunder of any nonqualified deferred compensation (within the meaning of Section 409A of the Code) upon a termination of employment shall be delayed until such time as Executive has also undergone a "separation from service" as defined in Treas. Reg. 1.409A-1(h), at which time such nonqualified deferred compensation (calculated as of the date of Executive's termination of employment hereunder) shall be paid (or commence to be paid) to Executive on the schedule set forth in this Section 7 as if Executive had undergone such termination of employment (under the same circumstances) on the date of his ultimate "separation from service."

(d) To the extent that any right to reimbursement of expenses or payment of any benefit in-kind under this Agreement constitutes nonqualified deferred compensation (within the meaning of Section 409A of the Code), (i) any such expense reimbursement shall be made by the Company no later than the last day of the taxable year following the taxable year in which such expense was incurred by Executive, (ii) the right to reimbursement or in-kind benefits shall not be subject to liquidation or exchange for another benefit, and (iii) the amount of expenses eligible for reimbursement or in-kind benefits provided during any taxable year shall not affect the expenses eligible for reimbursement or in-kind benefits to be provided in any other taxable year; *provided, however*, that the foregoing clause shall not be violated with regard to expenses reimbursed under any arrangement covered by Section 105(b) of the Code solely because such expenses are subject to a limit related to the period the arrangement is in effect.

(e) While the payments and benefits provided hereunder are intended to be structured in a manner to avoid the implication of any penalty taxes under Section 409A of the Code, in no event whatsoever shall any member of the Company Group be liable for any additional tax, interest, or penalties that may be imposed on Executive as a result of Section 409A of the Code or any damages for failing to comply with Section 409A of the Code (other than for withholding obligations or other obligations applicable to employers, if any, under Section 409A of the Code).

Section 15. Successors and Assigns; No Third-Party Beneficiaries.

(a) The Company. This Agreement shall inure to the benefit of the Company and its respective successors and assigns. Neither this Agreement nor any of the rights, obligations, or interests arising hereunder may be assigned by the Company to a Person (other than another member of the Company Group, or its or their respective successors) without Executive's prior written consent (which shall not be unreasonably withheld, delayed, or conditioned); *provided, however*, that in the event of a sale of all or substantially all of the assets of the Company or any direct or indirect division or subsidiary thereof to which Executive's employment primarily relates, the Company may provide that this Agreement will be assigned to, and assumed by, the acquiror of such assets, division or subsidiary, as applicable, without Executive's consent.

(b) Executive. Executive's rights and obligations under this Agreement shall not be transferable by Executive by assignment or otherwise, without the prior written consent of the Company; *provided, however*, that if Executive shall die, all amounts then payable to Executive hereunder shall be paid in accordance with the terms of this Agreement to Executive's devisee, legatee, or other designee, or if there be no such designee, to Executive's estate.

(c) No Third-Party Beneficiaries. Except as otherwise set forth in Section 7(c) or Section 15(b) hereof, nothing expressed or referred to in this Agreement will be construed to give any Person other than the Company, the other members of the Company Group, and Executive any legal or equitable right, remedy, or claim under or with respect to this Agreement or any provision of this Agreement.

Section 16. Waiver and Amendments.

Any waiver, alteration, amendment, or modification of any of the terms of this Agreement shall be valid only if made in writing and signed by each of the parties hereto; *provided, however*, that any such waiver, alteration, amendment, or modification must be consented to on the Company's behalf by the Board. No waiver by either of the parties hereto of their rights hereunder shall be deemed to constitute a waiver with respect to any subsequent occurrences or transactions hereunder unless such waiver specifically states that it is to be construed as a continuing waiver.

Section 17. Severability.

If any covenants or such other provisions of this Agreement are found to be invalid or unenforceable by a final determination of a court of competent jurisdiction, (a) the remaining terms and provisions hereof shall be unimpaired, and (b) the invalid or unenforceable term or provision hereof shall be deemed replaced by a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision hereof.

Section 18. Governing Law; Waiver of Jury Trial; Arbitration.

THIS AGREEMENT IS GOVERNED BY AND IS TO BE CONSTRUED UNDER THE LAWS OF THE STATE OF DELAWARE. EACH PARTY TO THIS AGREEMENT ALSO HEREBY WAIVES ANY RIGHT TO TRIAL BY JURY IN CONNECTION WITH ANY SUIT, ACTION, OR PROCEEDING UNDER OR IN CONNECTION WITH THIS AGREEMENT.

Section 19. Notices.

(a) Place of Delivery. Every notice or other communication relating to this Agreement shall be in writing, and shall be mailed to or delivered to the party for whom or which it is intended at such address as may from time to time be designated by it in a notice mailed or delivered to the other party as herein provided; *provided, however*, that unless and until some other address be so designated, all notices and communications by Executive to the Company shall be mailed or delivered to the Company at its principal executive office, and all notices and communications by the Company to Executive may be given to Executive personally or may be mailed to Executive at Executive's last known address, as reflected in the Company's records.

(b) Date of Delivery. Any notice so addressed shall be deemed to be given (i) if delivered by hand, on the date of such delivery, (ii) if mailed by courier or by overnight mail, on the first business day following the date of such mailing, and (iii) if mailed by registered or certified mail, on the third business day after the date of such mailing.

Section 20. Section Headings.

The headings of the sections and subsections of this Agreement are inserted for convenience only and shall not be deemed to constitute a part thereof or affect the meaning or interpretation of this Agreement or of any term or provision hereof.

Section 21. Entire Agreement.

This Agreement, together with any exhibits attached hereto and the Equity Documents, constitutes the entire understanding and agreement of the parties hereto regarding the employment of Executive. This Agreement supersedes all prior negotiations, discussions, correspondence, communications, understandings, and agreements between the parties relating to the subject matter of this Agreement.

Section 22. Survival of Operative Sections.

Upon any termination of Executive's employment, the provisions of Section 7 through Section 23 of this Agreement (together with any related definitions set forth on Appendix A) shall survive to the extent necessary to give effect to the provisions thereof.

Section 23. Counterparts.

This Agreement may be executed in two or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. The execution of this Agreement may be by actual or facsimile signature.

* * *

[Signatures to appear on the following page.]

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the date first above written.

CERTARA USA, INC.

/s/ Richard Traynor

By: Richard Traynor

Title: Secretary

EQT AVATAR PARENT L.P.

/s/ Ethan Waxman

By: Ethan Waxman

Title:

EXECUTIVE

/s/ William Feehery

William Feehery

RELEASE OF CLAIMS

As used in this Release of Claims (this “Release”), the term “claims” will include all claims, covenants, warranties, promises, undertakings, actions, suits, causes of action, obligations, debts, accounts, attorneys’ fees, judgments, losses, and liabilities, of whatsoever kind or nature, in law, in equity, or otherwise.

For and in consideration of the Severance Benefits, and other good and valuable consideration, I, William Feehery, for and on behalf of myself and my heirs, administrators, executors, and assigns, effective the date on which this release becomes effective pursuant to its terms, do fully and forever release, remise, and discharge each of the Parent and each of its direct and indirect subsidiaries and affiliates, including the Company, together with their respective officers, directors, partners, shareholders, employees, and agents (collectively, the “Group”) from any and all claims whatsoever up to the date hereof that I had, may have had, or now have against the Group, for or by reason of any matter, cause, or thing whatsoever, including any claim arising out of or attributable to my employment or the termination of my employment with the Company, whether for tort, breach of express or implied employment contract, intentional infliction of emotional distress, wrongful termination, unjust dismissal, defamation, libel, or slander, or under any federal, state, or local law dealing with discrimination based on age, race, sex, national origin, handicap, religion, disability, or sexual orientation. This release of claims includes, but is not limited to, all claims arising under the Age Discrimination in Employment Act (“ADEA”), Title VII of the Civil Rights Act, the Americans with Disabilities Act, the Civil Rights Act of 1991, the Family Medical Leave Act, and the Equal Pay Act, each as may be amended from time to time, and all other federal, state, and local laws, the common law, and any other purported restriction on an employer’s right to terminate the employment of employees. The release contained herein is intended to be a general release of any and all claims to the fullest extent permissible by law.

I acknowledge and agree that as of the date I execute this Release, I have no knowledge of any facts or circumstances that give rise or could give rise to any claims under any of the laws listed in the preceding paragraph.

By executing this Release, I specifically release all claims relating to my employment and its termination under ADEA, a United States federal statute that, among other things, prohibits discrimination on the basis of age in employment and employee benefit plans.

Notwithstanding any provision of this Release to the contrary, by executing this Release, I am not releasing (i) any claims relating to my rights under Section 7 of the Employment Agreement, including under the Equity Documents, (ii) any claims that cannot be waived by law, or (iii) my right of indemnification as provided by, and in accordance with the terms of, the Company’s by-laws or a Company insurance policy or agreement providing such coverage, as any of such may be amended from time to time.

I expressly acknowledge and agree that I –

- Am able to read the language, and understand the meaning and effect, of this Release;
 - Have no physical or mental impairment of any kind that has interfered with my ability to read and understand the meaning of this Release or its terms, and that I am not acting under the influence of any medication, drug, or chemical of any type in entering into this Release;
-

- Am specifically agreeing to the terms of the release contained in this Release because the Company has agreed to pay me the Severance Benefits in consideration for my agreement to accept it in full settlement of all possible claims I might have or ever had, and because of my execution of this Release;
- Acknowledge that, but for my execution of this Release, I would not be entitled to the Severance Benefits;
- Understand that, by entering into this Release, I do not waive rights or claims under ADEA that may arise after the date I execute this Release;
- Had or could have [twenty-one (21)][forty-five (45)]¹ days from the date of my termination of employment (the “Release Expiration Date”) in which to review and consider this Release, and that if I execute this Release prior to the Release Expiration Date, I have voluntarily and knowingly waived the remainder of the review period;
- Have not relied upon any representation or statement not set forth in this Release or my Employment Agreement made by the Company or any of its representatives;
- Was advised to consult with my attorney regarding the terms and effect of this Release; and
- Have signed this Release knowingly and voluntarily.

I represent and warrant that I have not previously filed, and to the maximum extent permitted by law agree that I will not file, a complaint, charge, or lawsuit against any member of the Group regarding any of the claims released herein. If, notwithstanding this representation and warranty, I have filed or file such a complaint, charge, or lawsuit, I agree that I shall cause such complaint, charge, or lawsuit to be dismissed with prejudice and shall pay any and all costs required in obtaining dismissal of such complaint, charge, or lawsuit, including without limitation the attorneys’ fees of any member of the Group against whom I have filed such a complaint, charge, or lawsuit. This paragraph shall not apply, however, to a claim of age discrimination under ADEA or to any non-waivable right to file a charge with the United States Equal Employment Opportunity Commission (the “EEOC”); *provided, however*, that if the EEOC were to pursue any claims relating to my employment with Company, I agree that I shall not be entitled to recover any monetary damages or any other remedies or benefits as a result and that this Release and the Severance Benefits will control as the exclusive remedy and full settlement of all such claims by me.

¹ To be selected based on whether applicable termination was “in connection with an exit incentive or other employment termination program” (as such phrase is defined in the Age Discrimination in Employment Act of 1967).

Nothing in this Release shall prohibit or impede me from communicating, cooperating or filing a complaint with any Governmental Entity with respect to possible violations of any U.S. federal, state or local law or regulation, or otherwise making disclosures to any Governmental Entity, in each case, that are protected under the whistleblower provisions of any such law or regulation; provided, that in each case such communications and disclosures are consistent with applicable law. I understand and acknowledge that an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that is made (1) in confidence to a federal, state, or local government official or to an attorney solely for the purpose of reporting or investigating a suspected violation of law, or (2) in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. I understand and acknowledge further that an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal; and does not disclose the trade secret, except pursuant to court order. Except as otherwise provided in this paragraph or under applicable law, under no circumstance am I authorized to disclose any information covered by the Company's attorney-client privilege or attorney work product, or the Company's trade secrets, without the prior written consent of the Company's General Counsel or other officer designated by the Company. I do not need the prior authorization of (or to give notice to) any member of the Company Group regarding any communication, disclosure, or activity permitted by this paragraph.

I hereby agree to waive any and all claims to re-employment with the Company or any other member of the Company Group and affirmatively agree not to seek further employment with the Company or any other member of the Company Group.

Notwithstanding anything contained herein to the contrary, this Release will not become effective or enforceable prior to the expiration of the period of seven (7) calendar days following the date of its execution by me (the "Revocation Period"), during which time I may revoke my acceptance of this Release by notifying the Company, in writing, delivered to the Company at its principal executive office, marked for the attention of its General Counsel, with copy to the Board. To be effective, such revocation must be received by the Company no later than 11:59 p.m. on the seventh (7th) calendar day following the execution of this Release. Provided that the Release is executed and I do not revoke it during the Revocation Period, the eighth (8th) day following the date on which this Release is executed shall be its effective date. I acknowledge and agree that if I revoke this Release during the Revocation Period, this Release will be null and void and of no effect, and neither the Company nor any other member of the Group will have any obligations to pay me the Severance Benefits.

The provisions of this Release shall be binding upon my heirs, executors, administrators, legal personal representatives, and assigns. If any provision of this Release shall be held by any court of competent jurisdiction to be illegal, void, or unenforceable, such provision shall be of no force or effect. The illegality or unenforceability of such provision, however, shall have no effect upon and shall not impair the enforceability of any other provision of this Release.

EXCEPT WHERE PREEMPTED BY FEDERAL LAW, THIS RELEASE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH FEDERAL LAW AND THE LAWS OF THE STATE OF PENNSYLVANIA, APPLICABLE TO AGREEMENTS MADE AND TO BE PERFORMED IN THAT STATE WITHOUT GIVING EFFECT TO THE PRINCIPLES OF CONFLICTS OF LAWS. I HEREBY WAIVE ANY RIGHT TO TRIAL BY JURY IN CONNECTION WITH ANY SUIT, ACTION, OR PROCEEDING UNDER OR IN CONNECTION WITH THIS RELEASE.

Capitalized terms used, but not defined herein, shall have the meanings ascribed to such terms in my Employment Agreement, dated May 14, 2019, with the Company (the "Employment Agreement").

[Executive]
Date:

Exhibit B

Class B Profits Interest Unit Agreement

[Attached]

EQT AVATAR PARENT L.P.
2017 CLASS B PROFITS INTEREST UNIT INCENTIVE PLAN
CLASS B PROFITS INTEREST UNIT AWARD AGREEMENT

This Class B Profits Interest Unit Award Agreement (this "**Agreement**"), is made as of the date set forth on the Master Signature Page hereto (hereinafter referred to as the "**Date of Grant**"), between EQT Avatar Parent L.P., a Delaware limited partnership (the "**Partnership**"), and the individual named on the Master Signature Page hereto (the "**Participant**"):

RECITALS:

WHEREAS, the Partnership has adopted the EQT Avatar Parent L.P. 2017 Class B Profits Interest Unit Incentive Plan, as amended from time to time (the "**Plan**"), which Plan is incorporated herein by reference and made a part of this Agreement (capitalized terms used and not otherwise defined in this Agreement shall have the meanings set forth in the Plan or in the Partnership Agreement, as applicable);

WHEREAS, the Participant is employed by or otherwise provides services to the Partnership or an Affiliate thereof;

WHEREAS, the General Partner has determined that it would be in the best interests of the Partnership to make the award of Class B Profits Interest Units provided for herein to the Participant pursuant to the Plan and the terms set forth herein; and

WHEREAS, the award set forth herein is designed to compensate the Participant for his time and commitment in the performance of services to the Partnership or an Affiliate thereof by providing the Participant with a share of the appreciation and profits of the Partnership with respect to periods beginning after the date hereof.

NOW THEREFORE, in consideration of the mutual covenants hereinafter set forth, the parties hereto agree as follows:

1. Definitions. Defined terms are as set forth in Exhibit I hereto.
2. Award of Class B Profits Interest Units.

(a) Class B Profits Interest Units. Subject to the terms and conditions of this Agreement and the Plan, the Partnership hereby grants to the Participant an award of the number of Class B Profits Interest Units set forth on the Participant's Master Signature Page, with a Distribution Threshold as set forth on such Master Signature Page, in each case subject to adjustment as set forth in the Plan and this Agreement. The Class B Profits Interest Units shall vest in accordance with Section 3 of this Agreement.

(b) Distributions. Distributions in respect of Class B Profits Interest Units shall be made to the Participant in accordance with the provisions of the Partnership Agreement.

3. Vesting. The Class B Profits Interest Units granted to the Participant shall vest in accordance with this Section 3. All such Class B Profits Interest Units shall be unvested on the Date of Grant and shall vest as follows:

(a) Time Vesting Units: With respect to 50% of the Class B Profits Interest Units subject to this Agreement (the "**Time Vesting Units**"), so long as the Participant has not undergone a Termination prior to the applicable vesting date, 25% of the Time Vesting Units will vest on the first anniversary of the Date of Grant (the "**First Vesting Date**") and 2.0833% will vest on each monthly anniversary of the First Vesting Date (such that in the ordinary course, assuming no Termination, the Time Vesting Units shall fully vest on the fourth anniversary of the Date of Grant); provided, however, that all unvested Time Vesting Units will vest upon the consummation of a Change in Control.

(b) Performance Vesting Units: With respect to the remaining 50% of the Class B Profits Interest Units subject to this Agreement (the "**Performance Vesting Units**"), the Performance Vesting Units will vest upon a Measurement Date as follows, so long as the Participant has not undergone a Termination prior to the applicable vesting date (except as otherwise provided in Section 4 below):

- o 1/3 of the Performance Vesting Units will vest upon the Measurement Date on which the Initial EQT Investors (as defined in the Partnership Agreement) have achieved a Return on Investment of at least 2.0;
- o 1/3 of the Performance Vesting Units will vest upon the Measurement Date on which the Initial EQT Investors have achieved a Return on Investment of at least 2.5; and
- o 1/3 of the Performance Vesting Units will vest upon the Measurement Date on which the Initial EQT Investors have achieved a Return on Investment of at least 3.0.

For purposes of the above, to the extent the achieved Return on Investment falls between any of the levels described above, in addition to the number of Performance Vesting Units that vest at the level that is achieved, an additional number of Performance Vesting Units will vest based on a linear interpolation between the applicable levels between which the Return on Investment falls. Performance Vesting Units that do not vest prior to or upon the Final Measurement Date will be forfeited upon such Final Measurement Date.

4. General Termination of Employment Provisions; Breach of Restrictive Covenants Agreement.

(a) All vesting of Class B Profits Interest Units will cease immediately upon a Participant's Termination for any reason, all unvested Class B Profits Interest Units will be immediately cancelled and forfeited without consideration upon such Termination, and if such Termination is by the Service Recipient for Cause, all vested Class B Profits Interest Units will be immediately cancelled and forfeited without consideration upon such Termination. Notwithstanding the foregoing, in the event of the Participant's Termination by the Service Recipient without Cause, by the Participant for Good Reason, or due to the Participant's death or Disability, (i) the Time-Vesting Units scheduled to vest during the 12 month period following Participant's date of Termination shall vest on the date of the Participant's Termination and (ii) the Participant's Performance Vesting Units shall remain outstanding and eligible to vest upon any Measurement Date that occurs during the six-month period following the date of such Termination, and any Performance Vesting Units that do not vest prior to the expiration of such six-month period will be immediately cancelled and forfeited without consideration at the end of such period.

(b) Breach of Restrictive Covenants Agreement. Notwithstanding any other provision of this Agreement, in the event of an RC Breach, all Class B Profits Interest Units (whether vested or unvested) will immediately be cancelled and forfeited without consideration.

5. Rights as Holder of Class B Profits Interest Units. The Participant shall be the record owner of the Class B Profits Interest Units granted hereunder unless and until such Class B Profits Interest Units are forfeited pursuant to Section 4, repurchased pursuant to Section 10 hereof or transferred in accordance with Section 7, and as record owner shall be entitled to all rights of a holder of Class B Profits Interest Units; provided, that the Class B Profits Interest Units shall be subject to the limitations on transfer and encumbrance set forth in this Agreement, the Plan and the Partnership Agreement.

6. Investment Intent; Other Representations of Participant.

(a) Investment Intent. The Participant hereby represents and warrants that the Class B Profits Interest Units will be held for investment purposes and are not being received with a view to distribution thereof, and covenants and agrees to make such other reasonable and customary representations as requested by the Partnership regarding matters relevant to compliance with applicable securities laws as are deemed necessary by counsel to the Partnership; and

(b) No Reliance on the Partnership. In making his or her investment decision with respect to the receipt of the Class B Profits Interest Units, the Participant has not relied upon the Partnership or any of its Affiliates, or any representative thereof for any advice of any sort, including, but not limited to, tax or securities law advice.

7. Transferability. The Participant may Transfer, directly or indirectly, any Class B Profits Interest Unit or any interest in any Class B Profits Interest Unit only with the prior written consent of the Board, which consent shall be withheld or granted in the sole discretion of the Board, or as otherwise expressly permitted or required under the Partnership Agreement. Any purported assignment, transfer or grant by the Participant, directly or indirectly, of any Class B Profits Interest Unit or any interest in any Class B Profits Interest Unit which is made without such prior written consent or pursuant to the terms of the Partnership Agreement shall be entirely null and void, *ab initio*.

8. Section 83(b) Election and Certain Related Income Tax Considerations. As a condition subsequent to the issuance of the Class B Profits Interest Units pursuant to this Agreement, the Participant shall execute and deliver to each of the Partnership, the entity to whom the Participant provides services and the Internal Revenue Service (the “**IRS**”) a timely, valid election under Section 83(b) of the Code (the “**83(b) Election**”). The Participant hereby acknowledges that (x) the Partnership has not provided, and is not hereby providing, the Participant with tax advice regarding the 83(b) Election and has urged the Participant to consult the Participant’s own tax advisor with respect to the income taxation consequences thereof, and (y) the Partnership has not advised the Participant to rely on any determination by it or its representatives as to the fair market value specified in the 83(b) Election and will have no liability to the Participant if the actual fair market value of the Class B Profits Interest Units on the date hereof exceeds the amount specified in the 83(b) Election.

9. Becoming a Partner of The Partnership; No Access to Information Regarding The Partnership. As a further condition to the issuance of the Class B Profits Interest Units pursuant to this Agreement, the Participant shall execute and deliver to the Partnership a copy of the Partnership Agreement, together with such other documents as the General Partner or the Board may require, evidencing such Participant’s status as a Partner (as defined in the Partnership Agreement) of the Partnership. Notwithstanding the Participant’s status as a Partner of the Partnership, the Participant shall have no right, solely by virtue of holding a Class B Profits Interest Unit, to (a) examine the books and records of or any other information of the Partnership or (b) obtain any information about the identities of the other Partners of the Partnership (or of the size or nature of such other Partners’ interests in the Partnership).

10. Right to Repurchase Class B Profits Interest Units.

(a) The Class B Profits Interest Units are subject to the Partnership’s right of repurchase (the “**Call Right**”) exercisable by the Partnership in its sole discretion during the ninety (90) day period following (x) the later of (i) the Termination of such Participant’s employment with the Service Recipient for any reason and (ii) the six (6) month anniversary of the date such Class B Profits Interest Units became vested, and, if later, (y) a breach of any of the provisions in any Restrictive Covenant Agreement. The Call Right shall expire on the earlier of (i) an IPO or (ii) a Change in Control.

(b) In the event the Call Right is exercised, the purchase price for the Class B Profits Interest Units subject to the exercised Call Right shall be the Fair Market Value per unit on the date such Call Right is exercised, provided, however, that in the event the Participant disagrees with the Fair Market Value as determined by the Board in connection with any repurchase of Class B Profits Interest Units, the Participant may, within thirty (30) days following the Participant's receipt of the notice of the Partnership's exercise of the Call Right, require the Board to seek an independent appraisal to determine the Fair Market Value of the Class B Profits Interest Units (an "**Outside Appraisal**"). Any such Outside Appraisal shall be made by a qualified accounting firm or investment banking firm or similar firm having substantial experience in the valuation of similar enterprises in the United States that is mutually agreed upon by the Partnership and the Participant (an "**Appraiser**"). The Partnership shall bear 100% of the fees and expenses of the Appraiser; provided, however, that the Participant shall immediately reimburse the Partnership for 50% of the fees and expenses of the Appraiser if the Fair Market Value of a Class B Profits Interest Unit as determined by the Appraiser is less than or equal to 110% of the Fair Market Value as determined by the Board. The determination of Fair Market Value by the Appraiser shall be binding on the parties.

(c) In the event the Call Right is exercised, the aggregate purchase price for such Class B Profits Interest Units subject to the exercised Call Right will be payable by the Partnership (or, if applicable, the Initial EQT Investors or one of their affiliates) in cash in a lump sum within thirty (30) days of the exercise of such repurchase right (or the date on which the Appraiser determines Fair Market Value, if later) (the "**Repurchase Date**"); provided, that if the Partnership is prohibited from paying in cash under any applicable financing arrangement, any applicable installment may be paid by promissory note in installments of up to three years. Any amounts not paid in full within thirty (30) days of the Repurchase Date will bear interest at the prime lending rate in effect as of the Repurchase Date. Notwithstanding any other provision in this Agreement, the Partnership may elect to pay the purchase price hereunder in shares or other equity securities of one of its respective direct or indirect subsidiaries with a fair market value equal to the applicable purchase price; provided, that such subsidiary promptly repurchases such shares or other equity securities for cash equal to the applicable purchase price.

11. **Restrictive Covenants.** Participant acknowledges and recognizes the highly competitive nature of the businesses of the Partnership Group and its Affiliates and accordingly agrees, in Participant's capacity as an investor and equity holder in the Partnership, to the provisions of Appendix A to this Agreement. Participant acknowledges and agrees that remedies of the Partnership Group at law for a breach or threatened breach of any of the provisions of Appendix A would be inadequate and the Partnership Group would suffer irreparable damages as a result of such breach or threatened breach by Participant, regardless of whether the Participant then holds Class B Profits Interest Units. In recognition of this fact, the Participant agrees that, in the event of such a breach or threatened breach, in addition to any remedies at law, the Partnership Group, without posting any bond, shall be entitled to obtain equitable relief in the form of specific performance, temporary restraining order, temporary or permanent injunction or any other equitable remedy which may then be available.

12. Partnership Agreement. Neither the adoption of the Plan nor the grant of any Class B Profits Interest Units pursuant to this Agreement shall restrict in any way the adoption of any amendment to the Partnership Agreement in accordance with the terms of such agreement.

13. Notices. Any notice necessary under this Agreement shall be addressed to the Partnership at the principal executive office of the Partnership and to the Participant at the address appearing in the personnel records of the Partnership (or other member of the Partnership Group) for the Participant or to either party at such other address as either party hereto may hereafter designate in writing to the other. Any such notice shall be deemed effective upon receipt thereof by the addressee.

14. Choice of Law; Forum. ALL ISSUES AND QUESTIONS CONCERNING THE APPLICATION, CONSTRUCTION, VALIDITY, INTERPRETATION AND ENFORCEMENT OF THIS AGREEMENT AND THE EXHIBITS AND APPENDICES TO THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF DELAWARE, WITHOUT GIVING EFFECT TO ANY CHOICE OF LAW OR CONFLICT OF LAW RULES OR PROVISIONS (WHETHER OF THE STATE OF DELAWARE OR ANY OTHER JURISDICTION) THAT WOULD CAUSE THE APPLICATION OF THE LAWS OF ANY JURISDICTION OTHER THAN THE STATE OF DELAWARE (EXCEPT THAT THE PROVISIONS OF SECTION 1 OF APPENDIX A SHALL BE GOVERNED BY THE LAW OF THE STATE WHERE PARTICIPANT IS PRINCIPALLY EMPLOYED BY THE SERVICE RECIPIENT). EACH OF THE PARTIES HERETO HEREBY (I) IRREVOCABLY SUBMITS TO THE EXCLUSIVE JURISDICTION OF ANY COURT LOCATED IN THE STATE OF DELAWARE FOR THE PURPOSES OF ANY SUIT, ACTION OR OTHER PROCEEDING ARISING OUT OF THIS AGREEMENT; (II) AGREES THAT THE SERVICE OF ANY PROCESS, SUMMONS, NOTICE OR DOCUMENT BY U.S. REGISTERED MAIL TO SUCH PERSON'S ADDRESS SET FORTH HEREIN SHALL BE EFFECTIVE SERVICE OF PROCESS FOR ANY ACTION, SUIT OR PROCEEDING IN THE STATE OF DELAWARE WITH RESPECT TO ANY MATTERS TO WHICH IT HAS SUBMITTED TO JURISDICTION AS SET FORTH HEREIN IN THE IMMEDIATELY PRECEDING CLAUSE (I); AND (III) IRREVOCABLY AND UNCONDITIONALLY WAIVES (AND AGREES NOT TO PLEAD OR CLAIM) ANY OBJECTION TO THE LAYING OF VENUE OF ANY ACTION, SUIT OR PROCEEDING ARISING OUT OF THIS AGREEMENT IN ANY STATE OR FEDERAL COURT LOCATED IN THE STATE OF DELAWARE, OR THAT ANY SUCH ACTION, SUIT OR PROCEEDING BROUGHT IN ANY SUCH COURT HAS BEEN BROUGHT IN AN INCONVENIENT FORUM.

15. WAIVER OF JURY TRIAL. EACH OF THE PARTIES TO THIS AGREEMENT HEREBY IRREVOCABLY WAIVES, AND SHALL CAUSE ITS AFFILIATES TO WAIVE, ALL RIGHT TO A TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE OTHER AGREEMENTS AND INSTRUMENTS DELIVERED HEREUNDER OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY.

16. Class B Profits Interest Units Subject to Plan and Partnership Agreement. By entering into this Agreement the Participant agrees and acknowledges that (i) the Participant has received and read a copy of the Plan and the Partnership Agreement and (ii) the Class B Profits Interest Units are subject to the Plan and the Partnership Agreement, the terms and provisions of such Plan and Partnership Agreement are hereby incorporated herein by reference. In the event of a conflict between any term or provision contained herein or therein, the Partnership Agreement shall govern and prevail, and then in decreasing order of seniority, the Plan and lastly, this Agreement.

17. Rules of Construction. The parties hereto agree that they have been represented by counsel during the negotiation and execution of this Agreement and have participated jointly in the drafting of this Agreement and, therefore, waive the application of any Law, holding or rule of construction providing that ambiguities in an agreement or other document will be construed against the party drafting such agreement or document.

18. Definitional Provisions. Defined terms used in this Agreement in the singular shall import the plural and vice versa. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. All references herein to Sections shall be deemed to be references to Sections of this Agreement unless the context shall otherwise require. The words "include," "includes" and "including" shall be deemed to be followed by the phrase "without limitation." The words "hereof," "herein" and "hereunder" and words of similar import when used in this Agreement shall refer to this Agreement as a whole and not to any particular provision of this Agreement. Any statute or laws defined or referred to herein shall include any rules, regulations or forms promulgated thereunder from time to time and as from time to time amended, modified or supplemented, including by succession of successor rules, regulations or forms. Unless otherwise expressly provided herein, any agreement, instrument or statute defined or referred to herein or in any agreement or instrument that is referred to herein means such agreement, instrument or statute as from time to time amended, modified or supplemented, including (in the case of agreements or instruments) by waiver or consent and (in the case of statutes) by succession of comparable successor statutes and references to all attachments thereto and instruments incorporated therein. Any reference to the number of Class B Profits Interest Units means such Class B Profits Interest Units as appropriately adjusted to give effect to any share combinations, restructuring or other capitalizations of the Partnership or its capital structure. Any reference herein to the holder of a particular class or series of Class B Profits Interest Units shall be a reference to such Person solely in its capacity as a holder of that particular class or series of such Class B Profits Interest Units.

19. Signature in Counterparts. This Agreement may be signed in counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

[Remainder of Page Intentionally Blank]

* * * * *

This Agreement between the Partnership and the Participant named on the Master Signature Page hereto is dated and executed as of the date set forth on such Master Signature Page.

* * * * *

Exhibit I

Definitions

“**83(b) Election**” shall have the meaning set forth in Section 8.

“**Agreement**” shall have the meaning set forth in the Preamble.

“**Business**” shall have the meaning set forth in Section 1(a) of Appendix A.

“**Call Right**” shall have the meaning set forth in Section 10(a).

“**Cause**” shall have the meaning set forth in the Employment Agreement between the Partnership and the Participant dated May 14, 2019.

“**Change in Control**” means (i) the sale (whether by merger, recapitalization or other sale or business combination transaction) of all or substantially all of the assets of the Partnership (in one transaction or a series of related transactions) to any person (or group of persons acting in concert), other than to (A) the Initial EQT Investors or one of their respective affiliates, (B) any employee benefit plan (or trust forming a part thereof) maintained by the Partnership or any of its subsidiaries, or (C) any other person of which a majority of its voting power or other equity securities is owned, directly or indirectly, by the Partnership (any entity in clause (B) or (C), a “**Controlled Party**”); or (ii) a merger, recapitalization of the Partnership, or other sale or business combination by the Partnership (in one transaction or a series of related transactions) to a person (or group of persons acting in concert), in each case, that results in any person (or group of persons acting in concert) (other than (A) the Initial EQT Investors or their affiliates or (B) any Controlled Party) owning more than 50% of the equity interests or voting power of the Partnership (or any resulting entity after a merger or business combination transaction). For the avoidance of doubt, none of an IPO, stock dividend or distribution, stock split, or any other similar capital structure change shall alone constitute a Change in Control.

“**Competitive Activities**” shall have the meaning set forth in Section 1(a) of Appendix A.

“**Confidential Information**” shall have the meaning set forth in Section 2(a)(ii) of Appendix A.

“**Date of Grant**” shall have the meaning set forth in the Preamble.

“**Disability**” shall have the meaning set forth in the Employment Agreement between the Partnership and the Participant dated May 14, 2019.

“**Employment Term**” shall have the meaning set forth in Section 1(a) of Appendix A.

“**Exchange Act**” means the Securities Exchange Act of 1934, as amended from time to time, and the rules and regulations promulgated pursuant thereto.

“**Fair Market Value**” means the fair market value of a Class B Unit as determined by the Board in good faith assuming a hypothetical orderly liquidation of the Partnership and without regard to any discount for lack of liquidity or minority interest.

“**Final Measurement Date**” means the earlier to occur of (i) a Change in Control or (ii) following an IPO, the date upon which the Initial EQT Investors no longer holds equity securities of the Partnership (or such other entity that an IPO of the Partnership is effectuated through) representing more than 10% of the outstanding equity securities of such entity.

“**Good Reason**” shall have the meaning set forth in the Employment Agreement between the Partnership and the Participant dated May 14, 2019.

“**Governmental Entity**” shall have the meaning set forth in Section 2(a)(v) of Appendix A.

“**Inventions**” shall have the meaning set forth in Section 2(b)(i) of Appendix A.

“**IPO**” means (i) the first registered initial public offering in the United States or foreign jurisdiction of the equity securities of the IPO Corporation or any entity into which the equity securities of the IPO Corporation may be converted in connection with such offering, pursuant to an effective registration statement under the Securities Act (other than a registration statement on Forms S-4 or S-8 or any similar form) or pursuant to other applicable foreign Laws or (ii) the date of effectiveness of a registration of a class of securities of the IPO Corporation or any entity into which the securities of the IPO Corporation may be converted in connection with such registration under the Exchange Act to be traded on a national securities exchange that has registered with the United States Securities and Exchange Commission under Section 6 of the Exchange Act.

“**IPO Corporation**” means the entity that undertakes the IPO as determined by the General Partner of the Partnership.

“**IRS**” shall have the meaning set forth in Section 8.

“**Marketable Securities**” means securities that (i) are traded on the New York Stock Exchange, the NASDAQ Stock Market or any similar national securities exchange, or any successor thereto, and (ii) are, at the time of receipt, registered pursuant to an effective registration statement filed under the Securities Act and will remain registered until such time as such securities can be sold by the holder thereof pursuant to Rule 144; provided that Marketable Securities shall not include any securities of the Partnership (or any entity which the Partnership effectuates an IPO through). The fair market value of any Marketable Securities will equal the volume-weighted average of the closing prices on the principal securities exchange on which such Marketable Securities are listed for the (20) trading days preceding the trading day immediately preceding the day on which a definitive agreement is entered into with respect to the transaction that results in the receipt of such Marketable Securities by the Initial EQT Investors.

“Measurement Date” means (i) prior to the Final Measurement Date, each date upon which the Initial EQT Investors receive Sponsor Cash Amounts, (ii) in the sole discretion of the Participant, the date of an IPO prior to the Final Measurement Date, or (iii) the Final Measurement Date.

“Participant” shall have the meaning set forth in the Preamble.

“Partnership” shall have the meaning set forth in the Preamble.

“Performance Vesting Units” shall have the meaning set forth in Section 3(b).

“Plan” shall have the meaning set forth in the Recitals.

“Proprietary Rights” shall have the meaning set forth in Section 2(b)(i) of Appendix A.

“RC Breach” means Participant’s breach of Sections 1(a) and (b) of Appendix A hereto or any similar corresponding provision applicable to Participant under a written agreement between members of the Partnership Group, from time to time.

“Repurchase Date” shall have the meaning set forth in Section 10(c).

“Restrictive Covenant Agreement” means the restrictive covenants attached hereto as Appendix A or any covenants of non-competition, non-solicitation, non-interference, no-hire, non-disparagement, confidentiality or similar covenants contained in any employment agreement or similar agreement between the Participant and a member of the Partnership Group.

“Restrictive Covenant Period” shall have the meaning set forth in Section 1(a) of Appendix A.

“Return on Investment” means, as of any Measurement Date, the quotient obtained by dividing (i) Sponsor Cash Amounts by (ii) Sponsor Cash Invested; provided, that, (x) in the case of prong (ii) of the definition of Measurement Date, the Return on Investment achieved by the Initial EQT Investors in connection with an IPO shall be determined based on the offering price to the public assuming all equity securities of the IPO vehicle held by the Sponsor were disposed of as of such IPO, (y) in the case of prong (i) of the definition of Final Measurement Date, the Return on Investment achieved by the Initial EQT Investors in connection with such Final Measurement Date shall be determined as if 100% of the Partnership was sold in connection with such Change in Control at the price per unit received by the Initial EQT Investors in such Change in Control and (z) in the case of prong (iii) of the definition of Final Measurement Date, the Return on Investment achieved by the Initial EQT Investors in connection with such Final Measurement Date shall be determined as if the remaining equity holdings were sold at a fair market value equal to the volume-weighted average of the closing prices on the principal securities exchange on which such equity holdings are listed for the twenty (20) trading days preceding the trading day immediately preceding the Final Measurement Date.

“**Securities Act**” means the Securities Act of 1933, as amended from time to time.

“**Sponsor Cash Amounts**” means, as of any Measurement Date, without duplication, the cumulative amount of all cash (including cash dividends, cash distributions, and cash proceeds) and the fair market value of any Marketable Securities, in each case actually received by the Initial EQT Investors on or before such Measurement Date with respect to or in exchange for equity securities of the Partnership (including, in each case, any portion subject to escrow or holdback and the value of any earnout); *provided, however*, that Sponsor Cash Amounts, as determined in, connection with a Change in Control, shall also include the fair market value, as determined by the Board in good faith, of any securities that are not Marketable Securities received in connection with such Change in Control.

“**Sponsor Cash Invested**” means, as of any Measurement Date, without duplication, all cash invested by the Initial EQT Investors in equity securities of the Partnership on or before such Measurement Date, including any additional capital invested in the Partnership by the Initial EQT Investors following the Closing and through such applicable Measurement Date.

“**Time Vesting Units**” shall have the meaning set forth in Section 3(a).

Appendix A

Restrictive Covenants

1. Non-Competition; Non-Solicitation; Non-Interference. Participant acknowledges and recognizes the highly competitive nature of the businesses of the Partnership Group and its Affiliates and accordingly agrees as follows:

(a) Prior to the Participant's Termination for any reason (the "**Employment Term**") and until the first anniversary of Participant's Termination, Participant will not (i) directly or indirectly, in any geographic location in which the Partnership Group engages, own, operate, manage, control, invest in, lend to, acquire an interest in, or otherwise engage or participate in (whether as an employee, independent contractor, consultant, partner, shareholder, joint venturer, investor, or any other type of participant) the management or conduct of any business activities, whether through selling, distributing, manufacturing, marketing, purchasing, or otherwise, that compete directly or indirectly with the Partnership or any member of the Partnership Group ("**Competitive Activities**"), it being understood that Competitive Activities as of the date hereof include, without limitation, principally engaging in the business of model based drug development consulting services or technology solutions, including with respect to discovery, pre-clinical, clinical and postmarketing drug development and regulatory submissions and review and any other business in which the Partnership is actively engaged at the time of termination (the "**Business**").

(b) During the Employment Term and until the first anniversary of Participant's Termination, Participant will not directly or indirectly:

(i) (A) solicit or induce any customer, supplier, licensee, or other business relation (or any actively sought prospective customer, supplier, licensee, or other business relation) of the Partnership or any member of the Partnership Group to cease doing business with or materially reduce the amount of business conducted with the Partnership or any member of the Partnership Group, or materially interfere with the relationship between any such customer, supplier, licensee, or other business relation (or any actively sought prospective customer, supplier, licensee, or other business relation) and the Partnership or any member of the Partnership Group; or (B) knowingly or intentionally assist any Person in any substantive or direct way to do, or attempt to do, anything prohibited by clause (A) above; or

(ii) (A) solicit or hire, directly or indirectly, for employment, or assist others in hiring, employing, inducing, or soliciting for employment (except in the performance of Participant's duties), any employees of the Partnership or any member of the Partnership Group (or individuals who were employed during the one-year period prior to the termination of Participant's employment with the Service Recipient); or (B) knowingly or intentionally assist any Person in any substantive or direct way to do, or attempt to do, anything prohibited by clause (A) above.

(c) If a final and non-appealable judicial determination is made that any of the provisions of this Section 1 constitutes an unreasonable or otherwise unenforceable restriction against Participant, the provisions of this Section 1 will not be rendered void but will be deemed to be modified to the minimum extent necessary to remain in force and effect for the longest period and largest geographic area that would not constitute such an unreasonable or unenforceable restriction.

(d) The period of time during which the provisions of this Section 1 shall be in effect shall be extended by the length of time during which Participant is in breach of the terms hereof.

(e) The provisions of Section 1 hereof shall survive the termination of Participant's employment for any reason.

2. Confidentiality; Intellectual Property.

(a) Confidentiality.

(i) Participant acknowledges that the Confidential Information obtained by Participant while employed by the Service Recipient is the property of the Partnership Group. Therefore, Participant agrees that Participant shall not disclose to any unauthorized Person or use for Participant's own purposes any Confidential Information without the prior written consent of the Partnership, unless and to the extent that the aforementioned matters become generally known to and available for use by the public other than as a result of Participant's acts or omissions in violation of this Agreement; provided, however, that if Participant receives a request to disclose Confidential Information pursuant to a deposition, interrogation, request for information or documents in legal proceedings, subpoena, civil investigative demand, governmental or regulatory process, or similar process, (i) Participant shall, as promptly as practicable, notify in writing the Partnership, and consult with and reasonably assist the Partnership, at the Partnership's expense, in seeking a protective order or request for other appropriate remedy, (ii) in the event that such protective order or remedy is not obtained, or if the Partnership waives compliance with the terms hereof, Participant shall disclose only that portion of the Confidential Information which, based on the advice of Participant's legal counsel, is legally required to be disclosed and shall exercise reasonable best efforts to provide that the receiving Person shall agree to treat such Confidential Information as confidential to the extent possible (and permitted under applicable law) in respect of the applicable proceeding or process, and (iii) the Partnership shall be given an opportunity to review the Confidential Information prior to disclosure thereof.

(ii) For purposes of this Agreement, “**Confidential Information**” means information, observations, and data concerning the business or affairs of the Partnership Group, including, without limitation, all business information (whether or not in written form) that relates to any member of the Partnership Group, or its customers, suppliers, or contractors or any other third parties in respect of which the Partnership or any member of the Partnership Group has a business relationship or owes a duty of confidentiality, or their respective businesses or products, and that is not known to the public generally other than as a result of Participant’s breach of this Agreement, including but not limited to technical information or reports, formulas, trade secrets, unwritten knowledge and “know-how,” operating instructions, training manuals, customer lists, customer buying records and habits, product sales records and documents, and product development, marketing, and sales strategies, market surveys, marketing plans, profitability analyses, product cost, long-range plans, information relating to pricing, competitive strategies, and new product development, information relating to any forms of compensation or other personnel-related information, contracts, and supplier lists. Confidential Information will not include such information known to Participant prior to Participant’s involvement with the Partnership or any predecessor thereof or information rightfully obtained from a third party (other than pursuant to a breach by Participant of this Agreement). Without limiting the foregoing, Participant and the Partnership each agree to keep confidential the existence of, and any information concerning, any dispute between Participant and the Partnership or any member of the Partnership Group, except that Participant and the Partnership each may disclose information concerning such dispute to the court that is considering such dispute or to their respective legal counsel, immediate family and advisors (provided that such counsel agrees not to disclose any such information other than as necessary to the prosecution or defense of such dispute).

(iii) Participant acknowledges that all notes, memoranda, specifications, devices, formulas, records, files, lists, drawings, documents, models, equipment, property, computer, software, or intellectual property relating to the businesses of the Partnership Group, in whatever form (including electronic), and all copies thereof, that are received or created by Participant while an employee of the Service Recipient (including but not limited to Confidential Information and Inventions) are and shall remain the property of the Partnership Group, and Participant shall as promptly as practicable return such property to the Partnership upon the termination of Participant’s employment and, in any event, at the Partnership’s request.

(iv) Participant agrees further that Participant will not improperly use or disclose any confidential information or trade secrets, if any, of any former employers or any other Person to whom Participant has an obligation of confidentiality, and will not bring onto the premises of the Partnership or any member of the Partnership Group any unpublished documents or any property belonging to any former employer or any other Person to whom Participant has an obligation of confidentiality unless consented to in writing by the former employer or other Person.

(b) Nothing in this Agreement shall prohibit or impede the Participant from communicating, cooperating or filing a complaint with any U.S. federal, state or local governmental or law enforcement branch, agency or entity (collectively, a “**Governmental Entity**”) with respect to possible violations of any U.S. federal, state or local law or regulation, or otherwise making disclosures to any Governmental Entity, in each case, that are protected under the whistleblower provisions of any such law or regulation, provided that in each case such communications and disclosures are consistent with applicable law. The Participant understands and acknowledges that an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that is made (i) in confidence to a federal, state, or local government official or to an attorney solely for the purpose of reporting or investigating a suspected violation of law, or (ii) in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. The Participant understands and acknowledges further that an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal; and does not disclose the trade secret, except pursuant to court order. Notwithstanding the foregoing, under no circumstance will the Participant be authorized to disclose any information covered by attorney-client privilege or attorney work product of any member of the Company without prior written consent of the Company’s General Counsel or other officer designated by the Company.

(c) Intellectual Property.

(i) Participant agrees that the results and proceeds of Participant’s services for the Partnership Group (including, but not limited to, any Confidential Information and other trade secrets, products, services, processes, know-how, designs, developments, innovations, analyses, drawings, reports, techniques, formulas, methods, developmental or experimental work, improvements, discoveries, inventions, ideas, source and object codes, programs, matters of a literary, musical, dramatic, or otherwise creative nature, writings, and other works of authorship) resulting from services performed while an employee of the Partnership and any works in progress, whether or not patentable or registrable under copyright or similar statutes, that were made, developed, conceived, or reduced to practice or learned by Participant, either alone or jointly with others (collectively, “**Inventions**”), shall be works-made-for-hire, and the Partnership (or, if applicable or as directed by the Partnership, any member of the Partnership Group) shall be deemed the sole owner throughout the universe of any and all trade secret, patent, copyright, and other intellectual property rights (collectively, “**Proprietary Rights**”) of whatsoever nature therein, whether or not now or hereafter known, existing, contemplated, recognized, or developed, with the right to use the same in perpetuity in any manner the Partnership determines in its sole discretion, without any further payment to Participant whatsoever. If, for any reason, any of such results and proceeds shall not legally be a work-made-for-hire or there are any Proprietary Rights that do not accrue to the Partnership (or, as the case may be, any member of the Partnership Group) under the immediately preceding sentence, then Participant hereby irrevocably assigns and agrees to assign any and all of Participant’s right, title, and interest thereto, including any and all Proprietary Rights of whatsoever nature therein, whether or not now or hereafter known, existing, contemplated, recognized, or developed, to the Partnership (or, if applicable or as directed by the Partnership, any member of the Partnership Group), and the Partnership or such member of the Partnership Group shall have the right to use the same in perpetuity throughout the universe in any manner determined by the Partnership or such member of the Partnership Group without any further payment to Participant whatsoever. As to any Invention that Participant is required to assign, Participant shall promptly and fully disclose to the Partnership all information known to Participant concerning such Invention.

(ii) Participant agrees that, from time to time, as may be requested by the Partnership and at the Partnership's sole cost and expense, Participant shall do any and all things that the Partnership may reasonably deem useful or desirable to establish or document the Partnership's exclusive ownership throughout the United States of America or any other country of any and all Proprietary Rights in any such Inventions, including the execution of appropriate copyright or patent applications or assignments. To the extent that Participant has any Proprietary Rights in the Inventions that cannot be assigned in the manner described above, Participant unconditionally and irrevocably waives the enforcement of such Proprietary Rights. This Section 2(b)(ii) is subject to and shall not be deemed to limit, restrict, or constitute any waiver by the Partnership of ownership of any Proprietary Rights to which the Partnership (or other applicable member of the Partnership Group) may be entitled by operation of law by virtue of the Partnership's (or other applicable member of the Partnership Group's) being Participant's employer. Participant agrees further that, from time to time, as may be requested by the Partnership and at the Partnership's sole cost and expense, Participant shall assist the Partnership in every reasonable, proper and lawful way to obtain and from time to time enforce Proprietary Rights relating to Inventions in any and all countries. To this end, Participant shall execute, verify, and deliver such documents and perform such other acts (including appearances as a witness) as the Partnership may reasonably request for use in applying for, obtaining, perfecting, evidencing, sustaining, and enforcing such Proprietary Rights and the assignment thereof. In addition, Participant shall execute, verify, and deliver assignments of such Proprietary Rights to the Partnership or its designees. Participant's obligation to assist the Partnership with respect to Proprietary Rights relating to such Inventions in any and all countries shall continue beyond the termination of Participant's employment with the Service Recipient.

(iii) Participant hereby waives and quitclaims to the Partnership any and all claims, of any nature whatsoever, that Participant now or may hereafter have for infringement of any Proprietary Rights assigned hereunder to the Partnership.

3. Non-Disparagement. Participant shall not, whether in writing (electronically or otherwise) or orally, malign, denigrate, or disparage the Partnership, any other member of the Partnership Group, or any of their respective predecessors or successors, or any of their respective current or former managers, directors, officers, employees, shareholders, partners, members, agents, or representatives, with respect to any of their respective past or present activities, or otherwise publish (whether in writing (electronically or otherwise) or orally) statements that tend to portray any of the aforementioned parties in an unfavorable light. The Partnership shall instruct its members, the members of its board of directors, and the senior executives of the Service Recipient, in their capacities as such, not to, whether in writing (electronically or otherwise) or orally, malign, denigrate, or disparage Participant with respect to his past or present activities, or otherwise publish (whether in writing (electronically or otherwise) or orally) statements that tend to portray Participant in an unfavorable light.

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT, dated as of May 15, 2014, is entered into between Arsenal MBDD Holding, LLC, a Delaware limited liability company (the "Company"), and Edmundo Muniz (the "Executive").

1. Employment Duties and Acceptance.

1.1 Employment by the Company. Effective as of May 27, 2014 ("Start Date"), the Company shall employ the Executive, for itself and its subsidiaries and affiliates, to render exclusive and full-time services in the capacity of Chief Executive Officer of the Company. Executive shall be an "at-will" employee for all purposes. Executive will also hold the position of CEO of Certara USA, Inc., a wholly-owned subsidiary of the Company.

1.2 Duties and Responsibilities. The Executive shall have duties and responsibilities consistent with his/her position, subject to the oversight and direction by the CEO and the board of managers of the Company (the "Board"). The Executive will report to the Board. The Executive shall devote substantially all of the Executive's working time and efforts to the business and affairs of the Company. Executive shall not, without the prior approval of the Board, whether for compensation or otherwise, directly or indirectly, alone or as a member of any partnership or other organization, be actively engaged in or concerned with any other business duties or personal pursuits which interfere with the performance of the Executive's responsibilities under this Agreement. However, Executive may serve on the board of directors or as a trustee for another entity, provided that such entity does not operate within the Restricted Business and that such activity does not interfere with the Executive obligations to the Company, provided further any such additional activity must first be approved by the Board (the "Permitted Outside Activity").

1.3 Acceptance of Employment by the Executive. The Executive accepts such employment and shall render the services described above. The Executive shall serve on the Board of the Company. Subject to appointment by the Board as such, the Executive may also serve as an officer of any other entity controlled by, or under common control with, the Company, and as a director of any other entity controlled by or under common control with the Company, in each case without any compensation therefor other than that specified in this Agreement. Upon termination of employment with Company hereunder for any reason, the Executive shall, upon request, resign as a director or officer of the Company and of any other entity controlled by, or under common control with, the Company.

1.4 Place of Employment. The Executive's principal place of employment shall be in Princeton, NJ ("Employment Location"), subject to such reasonable travel as the rendering of the services hereunder may require.

2. Term of Employment. The stated term of employment under this Agreement (the "Term") shall commence on the Start Date and shall continue until Executive ceases to be employed by the Company or any of its subsidiaries and affiliates for any reason. Subject to the terms hereof, Company may not terminate Executive without Cause on less than thirty (30) days advance notice, provided that the Company may terminate Executive without such notice if it elects to pay Executive his Base Salary during such period. Executive shall not leave the employ of the Company without Good Reason on less than thirty (30) days advance notice.

3. Compensation.

3.1 Salary. As compensation for all services to be rendered pursuant to this Agreement, the Company shall pay the Executive during the Term a salary, initially \$425,000 per annum, payable not less frequently than monthly, less such deductions as shall be required to be withheld by applicable rules and regulations (the "Base Salary"). The Base Salary shall not preclude raises, incentive bonus plans and other compensation or incentives, including equity incentives should the Board, in its sole and absolute discretion, so determine to provide such additional compensation or incentives to the Executive. Executive's compensation shall be reviewed at least once per year.

3.2 Incentive Bonus. In addition to his Base Salary, and beginning with calendar year 2015, Executive shall be eligible to receive an annual incentive bonus in an amount up to 50% of Executive's Base Salary (the "Incentive Bonus") in the sole discretion of the Board. The applicable criteria for achieving an Incentive Bonus shall be established by the Board annually, provided that if the Company exceeds the criteria for such year, Executive shall be entitled to earn a bonus in excess of 50% of his Base Salary. For calendar year 2014, Executive shall be eligible to receive a pro-rated annual incentive bonus in an amount up to 50% of Executive's Base Salary (the "Incentive Bonus") in the sole discretion of the Board. All amounts payable under this Section 3.2 are "Incentive Bonus Payments").

3.3 Equity. Subject to, and conditioned upon, approval by the Board in the exercise of its business judgment, Executive will receive a grant of profits interests in the Company equal to 3.2% of the equity of the Company (as determined on a fully-diluted basis as of the Start Date) and on the terms of the equity compensation plan of the Company, as may be in effect at the time of such option grant (the "Plan"), and a grant agreement on such terms as provided to other senior level executives of the Company, and shall be subject to any other terms and conditions determined by the Board at the time of such grant.

3.4 Participation in Employee Benefit Plans. The Executive shall be permitted, if and to the extent eligible, to participate on the same terms in any group life, hospitalization or disability insurance plan, health program, pension plan or similar benefit plan of the Company that is available generally to other senior executives and managers of the Company. The Company may amend or terminate its benefit plans at any time in its discretion.

3.5 Expenses. Subject to policies applicable to senior executives of the Company generally, as may from time to time be established by the Board, the Company shall pay or reimburse the Executive for reasonable travel, entertainment and other business expenses actually incurred or paid by the Executive during the Term in the performance of the Executive's services under this Agreement, and which expenses are consistent with the Company's policies in effect from time to time with respect to such travel, entertainment and other business expenses, upon presentation of expense statements or vouchers or such other supporting information as it may require.

3.6 Vacation. The Executive shall be entitled to an annual vacation of four weeks per annum, in accordance with the Company's vacation policy in effect from time to time.

3.7 Moving Expenses. The Company will reimburse the Executive for up to \$10,000 of moving expenses incurred during 2014, upon presentation of expense statements or vouchers or such other supporting information as Company may require.

3.8 Incentive Bonus Advance. Promptly after the Start Date, the Company will advance to Executive \$50,000 against any Incentive Bonus Payments payable to Executive hereunder. The Company shall offset the first \$50,000 payable to the Executive in Incentive Bonus against this advance.

4. Termination.

4.1 Termination upon Death. If the Executive dies while employed by the Company, this Agreement shall terminate and the Executive or the Executive's estate shall be entitled only to receive the Accrued Obligations payable through the date of such death.

4.2 Termination upon Disability. If the Executive becomes physically or mentally disabled while employed by the Company (whether totally or partially, so that the Executive is unable substantially to perform the Executive's services hereunder as determined, in good faith, by the Board following consultation with medical advisors selected by the Board) for (a) a period of three consecutive months, or (b) for shorter periods aggregating three months during any six month period (in each of clauses (a) and (b), such time periods shall include any legally required leaves of absence or accommodation), the Company may, by written notice to the Executive, terminate the Executive's employment. In the event of termination of the Executive's employment by the Company by reason of disability, the Executive shall be entitled only to receive the Accrued Obligations payable through the date of termination.

4.3 Termination for Cause. The Company may at any time by written notice to the Executive terminate the Executive's employment for Cause (as defined below) and the Executive shall be entitled only to receive the Accrued Obligations payable through the date of termination.

4.4 Termination with Good Reason or without Cause. The Executive may terminate the Executive's employment with the Company at any time with Good Reason (as defined below), and the Company may terminate the Executive's employment without Cause, in each case upon ten (30) days written notice to the other party thereto. Following a termination by the Executive with Good Reason or by the Company without Cause, and so long as the Executive has not breached and does not breach the provisions of Sections 5.1, 5.2, 5.3, 5.4 or 5.5 and the Executive has entered into an effective general release of claims reasonably satisfactory to the Company that becomes effective and irrevocable by no later than the 30th day after Executive's termination of employment, the Executive shall have the right to:

(a) Payment by the Company of an amount equal to the Accrued Obligations as of the date of termination, plus any Incentive Bonus Payment that has been earned as of the date of termination but has not been paid (it being understood that the determination of whether any Incentive Bonus Payment is earned is to be made in the reasonable determination of the Board), in each case which shall be paid when they otherwise would have been paid had Executive not been terminated; and

(b) Continuation of Executive's then-applicable Base Salary for the Applicable Salary Continuation Period, payable in accordance with the Company's normal payroll practices.

For purposes of this Agreement:

“Accrued Obligations” means as of the date of Executive's termination, (a) Executive's earned but unpaid Base Salary, if any, through such date, (b) any unreimbursed business expenses payable to Executive pursuant to applicable Company policy and (c) any Incentive Bonus awarded by the Board but not previously paid to the Executive with respect to the fiscal year preceding the fiscal year in which such date of termination occurs.

“Applicable Salary Continuation Period” means the twelve-month period following Executive's termination of employment. Notwithstanding the foregoing, within thirty (30) days of the termination by Executive for Good Reason or termination by the Company without Cause, the Company shall have the unilateral right to extend the Applicable Salary Continuation Period for up to twenty-four (24) months.

“Cause” means (i) Executive's conviction of, or plea of nolo contendere to, a felony or to any other crime involving fraud, dishonesty or breach of trust, (ii) Executive's gross negligence or intentional misconduct in the performance of Executive's duties to the Company, (iii) Executive's public or consistent drunkenness or illegal use of narcotics that is reasonably likely to become materially injurious to the reputation or business of the Company or that is reasonably likely to impair Executive's performance of duties to the Company, (iv) Executive's fraud or willful dishonesty or misrepresentation intended to result in direct or indirect gain or personal enrichment at the expense of the Company or its equity holders, (v) the repeated or intentional failure of the Executive to follow the reasonable and lawful directions of the Board, following notice to the Executive and a reasonable opportunity to cure such repeated failure, (vi) any other intentional conduct of Executive that materially injures the Company or its reputation including but not limited to knowingly participating or allowing accounting or tax improprieties, embezzlement or theft, or (vii) a material breach of this Agreement by the Executive, provided that it shall not be deemed Cause under this clause (vii) unless (A) within twenty (20) days after the occurrence of such act the Company gives written notice to the Executive stating that such act constitutes Cause and is not acceptable to the Company and requesting that the Executive cure such act, (B) the Executive fails to cure such act within thirty (30) days.

“Good Reason” means (i) a material diminution in Executive's authority, duties, or responsibilities, (ii) a material breach of this Agreement by the Company, (iii) a material diminution in Executive's Base Salary, or (iv) a requirement that Executive relocate more than fifty (50) miles from the Employment Location, provided that Good Reason shall not exist unless (1) within twenty (20) days after the occurrence of such act the Executive gives written notice to the Company stating that such act constitutes Good Reason, is not acceptable to the Executive, and requesting that the Company cure such act, (2) the Company fails to cure such act within thirty (30) days, and (3) the Executive terminates his or her employment with the Company within ninety (90) days after delivery of such notice.

4.5 Voluntary Termination. The Executive may terminate the Executive's employment with the Company at any time in the Executive's sole and absolute discretion upon giving at least thirty (30) days advance written notice to such effect to the Company (a "Voluntary Termination"). In the event the Executive's employment is terminated during the Term by the Executive's Voluntary Termination (other than termination by the Executive for Good Reason), then the Executive shall be entitled only to receive the Accrued Obligations payable through the date of such Voluntary Termination.

5. Confidentiality, Intellectual Property, Noncompete and Nonsolicitation.

5.1 Nondisclosure and Nonuse of Confidential Information. The Executive will not disclose or use at any time during or after the Term any Confidential Information (as defined below) of which the Executive is or becomes aware, whether or not such information is developed by the Executive, except to the extent that such disclosure or use is directly related to and required by the Executive's performance of duties assigned to the Executive pursuant to this Agreement. Under all circumstances and at all times, the Executive will take all appropriate steps to safeguard Confidential Information in the Executive's possession and to protect it against disclosure, misuse, espionage, loss and theft. For purposes hereof, "Confidential Information" means information that is not generally known to the public and that was or is used, developed or obtained by the Company, and Arsenal MBDD Holding, LP, for which the Company is the general partner (the "LP"), or any of the LP's direct or indirect subsidiaries (collectively, "Company Group") in connection with their business. It shall not include information (a) required to be disclosed by court or administrative order, (b) lawfully obtainable from other sources or which is in the public domain through no fault of the Executive; or (c) the disclosure of which is consented to in writing by the Company.

5.2 Ownership of Intellectual Property. In the event that the Executive as part of Executive's activities on behalf of the Company Group generates, authors or contributes to any invention, design, new development, device, product, method of process (whether or not patentable or reduced to practice or comprising Confidential Information), any copyrightable work (whether or not comprising Confidential Information) or any other form of Confidential Information relating directly or indirectly to the business of the Company Group as now or hereinafter conducted (collectively, "Intellectual Property"), the Executive acknowledges that such Intellectual Property is the sole and exclusive property of the Company and hereby assigns all right title and interest in and to such Intellectual Property to the Company. Any copyrightable work prepared in whole or in part by the Executive during the Term will be deemed "a work made for hire" under Section 201(b) of the Copyright Act of 1976, as amended, and the Company will own all of the rights comprised in the copyright therein. The Executive will promptly and fully disclose all Intellectual Property and will cooperate with the Company to protect the Company's interests in and rights to such Intellectual Property (including providing reasonable assistance in securing patent protection and copyright registrations and executing all documents as reasonably requested by the Company, whether such requests occur prior to or after termination of Executive's employment hereunder).

5.3 Delivery of Materials upon Termination of Employment. As requested by the Company, from time to time and upon the termination of the Executive's employment with the Company for any reason, the Executive will promptly deliver to the Company all copies and embodiments, in whatever form or medium, of all Confidential Information or Intellectual Property in the Executive's possession or within the Executive's control (including written records, notes, photographs, manuals, notebooks, documentation, program listings, flow charts, magnetic media, disks, diskettes, tapes and all other materials containing any Confidential Information or Intellectual Property) irrespective of the location or form of such material and, if requested by the Company, will provide the Company with written confirmation that all such materials have been delivered to the Company.

5.4 Noncompetition. The Executive acknowledges that during the Executive's employment with the Company, the Executive will become familiar with trade secrets and other Confidential Information concerning the Company Group, and that the Executive's services are of special, unique and extraordinary value to the Company. Therefore, the Executive hereby agrees that at any time during his or her employment with the Company and (i) for a period equal to the Applicable Salary Continuation Period (including as may be extended by the Company after the termination of employment) after a termination pursuant to Section 4.4, and (ii) for a period of twenty four (24) months thereafter for any other termination of Executive's employment (the "Noncompetition Period"), the Executive will not directly or indirectly own, manage, control, participate in, consult with, render services for or in any manner engage in any business worldwide that is a direct competitor with the businesses of the Company or the Company Group, as such businesses exist or are in process or being planned as of the termination of employment (the "Restricted Business"), provided that the Executive may work for an entity that participates in the Restricted Business if Executive has no active role in any aspect of their business that participates in the Restricted Business. It shall not be considered a violation of this Section 5.4 for the Executive to be a passive owner of not more than 2% of the outstanding stock of any class of a corporation which is publicly traded, so long as the Executive has no active participation in the business of such corporation. Notwithstanding anything to the contrary contained herein, the term Restricted Business shall not include the business of any member of the Company Group if Executive did not, directly or indirectly, manage, control, or otherwise materially participate in, consult with, render services to or on behalf of such business during the Term.

5.5 Nonsolicitation. The Executive hereby agrees that (a) during the Term and for a period of twenty four (24) months after the termination of employment for any reason (the "Nonsolicitation Period"), the Executive will not, directly or indirectly through another entity, hire or actively induce or attempt to induce any employee of the Company Group to leave the employ of the Company Group, or in any way interfere with the relationship between the Company Group any employee thereof or otherwise employ or receive the services of any individual who was an employee of the Company Group during such Nonsolicitation Period or within the twelve month period prior thereto and (b) during the Nonsolicitation Period, the Executive will not induce or attempt to induce any customer, supplier, client or other business relation of the Company Group to cease doing business with the Company Group.

5.6 Enforcement of Noncompete and Nonsolicitation. If, at the enforcement of Sections 5.4 and 5.5, a court holds that the duration, scope or area restrictions stated herein are unreasonable under circumstances then existing, the parties agree that the maximum duration, scope or area reasonable under such circumstances will be substituted for the stated duration, scope or area and that the court will be permitted to revise the restrictions contained in Sections 5.4 or 5.5 to cover the maximum duration, scope and area permitted by law.

5.7 Equitable Relief. The Executive acknowledges that (a) the covenants contained herein are reasonable, (b) the Executive's services are unique, and (c) a breach or threatened breach by the Executive of any of the Executive's covenants and agreements with the Company contained in Sections 5.1, 5.2, 5.3, 5.4 or 5.5 could cause irreparable harm to the Company for which they would have no adequate remedy at law. Accordingly, and in addition to any remedies which the Company may have at law, including, without limitation, the immediate termination without notice of any payments, benefits, remuneration or perquisites being made to the Executive under this Agreement, in the event of an actual or threatened breach by the Executive of the Executive's covenants and agreements contained in Sections 5.1, 5.2, 5.3, 5.4 or 5.5, the Company shall have the absolute right to apply to any court of competent jurisdiction for such injunctive or other equitable relief as such court may deem necessary or appropriate in the circumstances.

6. Other Provisions.

6.1 Notices. Any notice or other communication required or which may be given hereunder shall be in writing and shall be delivered personally, telecopied (with a confirming copy by overnight delivery service or first class mail), sent by overnight delivery service with delivery signature required, or sent with return receipt requested by certified, registered, or express mail, postage prepaid to the parties at the following addresses or at such other addresses as shall be specified by the parties by like notice, and shall be deemed given when so delivered personally, telecopied or if mailed, two days after the date of mailing, as follows:

if to the Company, at:

Arsenal MBDD Holding, LLC
c/o Arsenal Capital Partners
100 Park Ave., 31st Floor
New York, New York, 10017
Attention: Don Deieso
Fax: []

with a copy (which shall not constitute effective notice) to:

Alan Lefkowitz
c/o WCG
202 Carnegie Center, Suite 107
Princeton, NJ 08540

if to the Executive, at:

Edmundo Muniz
[]

6.2 Entire Agreement. This Agreement (including the documents referred to herein) constitutes the entire agreement among the parties and supersedes and nullifies any prior understandings, agreements or representations by or among the parties, written or oral, that may have related in any way to the subject matter hereof.

6.3 Waivers and Amendments. This Agreement may be amended, modified, superseded, cancelled, renewed or extended, and the terms and conditions hereof may be waived, only by a written instrument signed by the parties making specific reference to this Agreement, or, in the case of a waiver, by the party waiving compliance. No delay on the part of any party in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any waiver on the part of any party of any right, power or privilege hereunder, nor any single or partial exercise of any right, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder.

6.4 Governing Law. This Agreement shall be governed by and construed and enforced in accordance with and subject to, the laws of the State of New Jersey applicable to agreements made and to be performed entirely within such state.

6.5 Acknowledgments. The Executive acknowledges that the Executive has read this entire Agreement, has had the opportunity to consult with an attorney, and fully understands the terms of this Agreement. The Executive is satisfied with the terms of this Agreement and agrees that its terms are binding upon the Executive and the Executive's heirs, assigns, executors, administrators, and legal representatives.

6.6 Assignment. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, heirs and permitted assigns. No rights or obligations of the Executive under this Agreement may be assigned or transferred by the Executive other than the Executive's right to compensation and benefits hereunder, which may be transferred by will or operation of law subject to the limitations of this Agreement. No rights or obligations of the Company under this Agreement may be assigned or transferred by the Company except that such rights or obligations may be assigned or transferred pursuant to a merger or consolidation or amalgamation or scheme of arrangement in which the Company is not the continuing entity, or the sale or liquidation of all or substantially all of the assets of the Company, *provided* that the assignee or transferee is the successor to all or substantially all of the assets of the Company and such assignee or transferee assumes by operation of law or in a writing duly executed by the assignee or transferee all of the liabilities, obligations and duties of the Company, as contained in this Agreement, either contractually or as a matter of law, as if no such assignment or transfer had taken place.

6.7 Counterparts. This Agreement may be executed in two or more counterparts (which may be effectively delivered by facsimile or other electronic means), each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

6.8 Headings. The headings in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement.

6.9 Insurance and Indemnity. The Company shall, to the fullest extent permitted by applicable law and solely in accordance with the terms of the Company's operating agreement as in effect at any time, indemnify Executive for any liabilities by reason of the fact that such person is or was a director or officer of the Company. The Company shall also maintain coverage under a directors and officers liability insurance policy for the benefit of Executive and the Company's other directors and officers, which insurance policy shall have reasonable and appropriate terms and conditions.

6.10 Severability. If any term, provision, covenant or restriction of this Agreement, or any part thereof, is held by a court of competent jurisdiction of any foreign, federal, state, county or local government or any other governmental, regulatory or administrative agency or authority to be invalid, void, unenforceable or against public policy for any reason, the remainder of the terms, provisions, covenants and restrictions of this Agreement shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

6.11 Section 409A.

(a) If the Company determines in good faith that any provision of this Agreement would cause the Executive to incur an additional tax, penalty, or interest under Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"), and the applicable guidance thereunder ("Section 409A"), the Company and the Executive shall use reasonable efforts to reform such provision, if possible, in a mutually agreeable fashion to maintain to the maximum extent practicable the original intent of the applicable provision without violating the provisions of Section 409A or causing the imposition of such additional tax, penalty, or interest under Section 409A. The preceding provision, however, shall not be construed as a guarantee by the Company of any particular tax effect to the Executive under this Agreement.

(b) For purposes of Section 409A, the right to a series of installment payments under this Agreement shall be treated as a right to a series of separate payments.

(c) With respect to any reimbursement of expenses of, or any provision of in-kind benefits to, the Executive, as specified under this Agreement, such reimbursement of expenses or provision of in-kind benefits shall be subject to the following conditions: (1) the expenses eligible for reimbursement or the amount of in-kind benefits provided in one taxable year shall not affect the expenses eligible for reimbursement or the amount of in-kind benefits provided in any other taxable year, except for any medical reimbursement arrangement providing for the reimbursement of expenses referred to in Section 105(b) of the Code; (2) the reimbursement of an eligible expense shall be made no later than the end of the year after the year in which such expense was incurred; and (3) the right to reimbursement or in-kind benefits shall not be subject to liquidation or exchange for another benefit.

(d) "Termination of employment," or words of similar import, as used in this Agreement means, for purposes of any payments under this Agreement that are payments of deferred compensation subject to Section 409A, the Executive's "separation from service" as defined in Section 409A.

(e) Notwithstanding anything in this Agreement to the contrary, if the period during which the Executive has discretion to execute or revoke the general release of claims provided for by Section 5.4 straddles two calendar years, the payments provided for by Section 5.4 shall begin as soon as practicable in the second of the two calendar years, regardless of which calendar year the Executive actually delivers the executed release to the Company, subject to the release first becoming effective.

signature page follows

IN WITNESS WHEREOF, the parties have executed this Agreement the date first above written.

Arsenal MBDD Holding, LLC

/s/ Donald A. Deieso

Name: Donald A. Deieso

Title: Chairman

Executive:

/s/ Edmundo Muniz

Name: Edmundo Muniz

Amendment to Employment Agreement

This Amendment to Employment Agreement (“Amendment”), dated February 21, 2019 (the “Effective Date”), is entered into between Certara Holdco, Inc. (the “Company”), a Delaware corporation, and Edmundo Muniz (“Executive”).

WHEREAS, Arsenal MBDD Holding, L.P. (“Arsenal”) and Executive entered into that certain Employment Agreement, dated May 15, 2014 (the “Employment Agreement”);

WHEREAS, the Company is a wholly-owned subsidiary of EQT Avatar Holdings, Inc., the successor-in-interest to Arsenal MBDD Holding, L.P.;

WHEREAS, the parties acknowledge and agree that the Employment Agreement is in full force and effect;

WHEREAS, the parties desire to amend the Employment Agreement to include additional post-employment benefits on the terms and subject to the conditions set forth herein;

NOW, THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Definitions. Capitalized terms used and not defined in this Amendment have the respective meanings assigned to them in the Employment Agreement.
2. Amendment to the Employment Agreement. As of the Effective Date, the Employment Agreement is hereby amended or modified as follows:

The following section is hereby added to the Employment Agreement as Section 4.4(c):

“(c) COBRA. Executive’s termination of employment under this Section 4.4 is a qualifying event for purposes of continuation of coverage of Executive’s health insurance under COBRA. If Executive elects COBRA coverage, the Company shall pay 100% of health insurance premiums under COBRA for Executive and his eligible dependents, in each case solely to the extent Executive was receiving such coverage as of the Termination Date, until the earlier of (i) eighteen (18) months following the Termination Date or (ii) until Executive is otherwise eligible for coverage by another group health plan (the “COBRA Period”). Please be advised that in order to receive COBRA coverage, Executive must submit the acceptance letter to the COBRA Administrator, regardless of who is paying for the benefit. Executive will not have coverage until the COBRA election form has been received by the COBRA Administrator. Such continuation coverage shall cease to apply if Executive is eligible to receive equivalent or superior other coverage from Executive’s new employer or pursuant to the Executive spouse’s plan without Executive being required to incur or pay any cost therefor. In the event that the Company determines in its discretion that it is not practicable or possible to continue to provide such medical or dental benefits, the Company shall pay Executive for the cost of replacing such benefits on an after-tax basis (i.e., grossing up of payments to the Executive to account for taxes).”

3. Miscellaneous.

(a) This Amendment is governed by and construed in accordance with, the laws of the State of Delaware, without regard to the conflict of laws provisions of such State.

(b) This Amendment may be executed in counterparts, each of which is deemed an original, but all of which constitute one and the same agreement.

IN WITNESS WHEREOF, the Parties have executed this Amendment as of the Effective Date.

Certara Holdco, Inc.

By: /s/ Richard Traynor
Name: Richard Traynor
Title: Secretary

/s/ Edmundo Muniz
Edmundo Muniz

EMPLOYMENT AGREEMENT

This EMPLOYMENT AGREEMENT (this "Agreement") is made and entered into as of September 17, 2020, by and between Certara USA, Inc., a Delaware corporation (the "Company") and Craig Rayner (the "Executive").

WITNESSETH :

WHEREAS, Executive entered into that certain Employment Agreement, dated September 2, 2016, with Certara Australia Pty Ltd., an affiliate of Company and subsidiary of Parent (the "Australian Employment Agreement");

WHEREAS, Executive and Company desire for Executive to relocate from Australia to the United States;

WHEREAS, Executive and Company have separately agreed to the terms of Executive's relocation package;

WHEREAS, the Company and Executive desire to terminate the Australian Employment Agreement and enter into this Agreement embodying the terms of Executive's continuing employment.

NOW, THEREFORE, in consideration of the promises and mutual covenants contained herein and for other good and valuable consideration, the receipt and sufficiency of which are mutually acknowledged, the Company and Executive hereby agree as follows:

Section 1. Definitions. Capitalized terms not otherwise defined elsewhere in this Agreement shall have the meaning set forth in this Section 1.

(a) "Accrued Obligations" shall mean (i) all accrued but unpaid Base Salary through the date of termination of Executive's employment, payable within thirty (30) days following the date of termination, (ii) any unpaid or unreimbursed business expenses incurred in accordance with Section 6 hereof, payable within thirty (30) days following the date of termination and (iii) any benefits provided under the Company's employee benefit plans upon a termination of employment, including rights with respect to equity participation under the Equity Documents, in accordance with the terms contained therein.

(b) "Board" shall mean the Board of Directors of EQT Avatar Parent L.P. (the "Parent").

(c) "Cause" shall mean (i) Executive's act(s) of gross negligence or willful misconduct in the course of Executive's employment hereunder, (ii) willful failure or refusal by Executive to perform in any material respect his duties or responsibilities, (iii) misappropriation (or attempted misappropriation) by Executive of any assets or business opportunities of the Company or any other member of the Company Group, (iv) embezzlement or fraud committed (or attempted) by Executive, or at his direction, (v) Executive's conviction of, or pleading "guilty" or "no contest" to, (x) a felony or (y) any other criminal charge that has, or could be reasonably expected to have, a material adverse impact on the performance of Executive's duties to the Company or any other member of the Company Group or otherwise result in material injury to the reputation or business of the Company or any other member of the Company Group, (vi) any material violation by Executive of the policies of the Company, including but not limited to those relating to sexual harassment or business conduct, and those otherwise set forth in the manuals or statements of policy of the Company, or (vii) Executive's material breach of this Agreement or of the Equity Documents.

(d) “Code” shall mean the Internal Revenue Code of 1986, as amended, and the rules and regulations promulgated thereunder.

(e) “Company Group” shall mean the Parent together with any of its direct or indirect subsidiaries, including the Company.

(f) “Compensation Committee” shall mean the committee of the Board designated to make compensation decisions relating to senior executive officers of the Company Group.

(g) “Confidential Information” has the meaning set forth in the Restrictive Covenants.

(h) “Disability” shall mean any physical or mental disability or infirmity of Executive that prevents the performance of Executive’s duties for a period of (i) ninety (90) consecutive days or (ii) one hundred twenty (120) non-consecutive days during any twelve (12) month period. Any question as to the existence, extent, or potentiality of Executive’s Disability upon which Executive and the Company cannot agree shall be determined by a qualified, independent physician selected by the Company and approved by Executive (which approval shall not be unreasonably withheld, delayed or conditioned). The determination of any such physician shall be final and conclusive for all purposes of this Agreement.

(i) “Good Reason” shall mean, without Executive’s consent, (i) a material demotion in Executive’s title, duties, or responsibilities as set forth in Section 3 hereof or (ii) a material reduction in Base Salary set forth in Section 4(a) hereof or Target Annual Bonus opportunity set forth in Section 4(b) hereof (other than pursuant to an across-the-board reduction applicable to all similarly situated executives) or (iii) any other material breach of a provision of this Agreement by the Company (other than a provision that is covered by clause (i) or (ii) above). Executive acknowledges and agrees that his exclusive remedy in the event of any breach of this Agreement shall be to assert Good Reason pursuant to the terms and conditions of Section 7(f) hereof. Notwithstanding the foregoing, during the Term of Employment, in the event that the Board reasonably believes that Executive may have engaged in conduct that could constitute Cause hereunder, the Board may, in its sole and absolute discretion, suspend Executive from performing his duties hereunder, and in no event shall any such suspension constitute an event pursuant to which Executive may terminate employment with Good Reason or otherwise constitute a breach hereunder; *provided*, that no such suspension shall alter the Company’s obligations under this Agreement during such period of suspension.

(j) “Person” shall mean any individual, corporation, partnership, limited liability company, joint venture, association, joint-stock company, trust (charitable or non-charitable), unincorporated organization, or other form of business entity.

(k) “Release of Claims” shall mean the Release of Claims in substantially the same form attached hereto as Exhibit A (as the same may be revised from time to time by the Company upon the advice of counsel).

(l) “Restrictive Covenants” shall mean the Restrictive Covenants attached as Appendix A to Executive’s Class B Profits Interest Unit Award Agreement (the “Award Agreement”), a copy of which is attached hereto as Exhibit B.

(m) “Severance Term” shall mean the six (6) month period following Executive’s termination by the Company without Cause (other than by reason of death or Disability) or by Executive with Good Reason.

Section 2. Acceptance and Term of Employment.

The Company agrees to employ Executive, and Executive agrees to serve the Company, on the terms and conditions set forth herein. Executive’s employment hereunder shall commence on November 21, 2020, unless Executive is not permitted to commence employment on that date under U.S. immigration law, in which case employment shall commence on the earliest date permitted under U.S. immigration law (“Commencement Date”), and continue until terminated as provided in Section 7 hereof (“Term of Employment”).

Effective as of the Commencement Date, Executive agrees and acknowledges that his employment with Certara Australia Pty Ltd will come to an end and that the Australian Employment Agreement is terminated, and Executive shall have no surviving rights thereunder, except that Company will make, or cause to be made, through Certara Australia Pty Ltd., a payment equal to your accrued annual leave.

For the avoidance of doubt, nothing in this Agreement, or the termination of the Australian Employment Agreement, shall have any effect on any of Executive’s (i) Class B Profits Interest Unit Award Agreements dated November 17, 2017, November 8, 2019, and August 31, 2020, (ii) Class A unit Rollover Agreement, dated August 15, 2017, or (iii) his rights and obligations thereunder, which shall continue in full force and effect.

Section 3. Position, Duties, and Responsibilities; Place of Performance.

(a) Position, Duties, and Responsibilities. During the Term of Employment, Executive shall be employed and serve as the President, iDD, of the Company (together with such other position or positions consistent with Executive’s title as the Board shall specify from time to time) and shall have such duties and responsibilities commensurate with such title.

(b) Performance. Executive shall devote his full business time, attention, skill, and best efforts to the performance of his duties under this Agreement and shall not engage in any other business or occupation during the Term of Employment, including, without limitation, any activity that (x) conflicts with the interests of the Company or any other member of the Company Group, (y) interferes with the proper and efficient performance of Executive’s duties for the Company, or (z) interferes with Executive’s exercise of judgment in the Company’s best interests. Notwithstanding the foregoing, nothing herein shall preclude Executive from (i) serving, with the prior written consent of the Board, as a member of the board of directors or advisory board (or the equivalent in the case of a non-corporate entity) of a non-competing for-profit business and one or more charitable organizations, (ii) engaging in charitable activities and community affairs, and (iii) managing Executive’s personal investments and affairs; *provided, however*, that the activities set out in clauses (i), (ii), and (iii) shall be limited by Executive so as not to materially interfere, individually or in the aggregate, with the performance of his duties and responsibilities hereunder.

(c) Principal Place of Employment. Executive's principal place of employment shall be in Princeton, New Jersey, although Executive understands and agrees that he may be required to travel from time to time for business reasons including, without limitation, the other offices.

Section 4. Compensation.

During the Term of Employment, Executive shall be entitled to the following compensation:

(a) Base Salary. Executive shall be paid an annualized Base Salary (the "Base Salary"), payable in accordance with the regular payroll practices of the Company, of \$309,000.00

(b) Annual Bonus. Executive shall be eligible for an annual incentive bonus award determined by the Compensation Committee in respect of each fiscal year during the Term of Employment (the "Annual Bonus"). The Annual Bonus shall otherwise be subject to the terms and conditions of the annual bonus plan adopted by the Board or the Compensation Committee, if any, under which bonuses are generally payable to senior executives of the Company, as in effect from time to time. The Annual Bonus shall be paid in cash to Executive at the same time as annual bonuses are generally payable to other senior executives of the Company, subject to Executive's continuous employment through the annual bonus payment date (subject to Section 7 below).

Section 5. Employee Benefits.

During the Term of Employment, Executive shall be entitled to participate in health, insurance, retirement, and other benefits provided generally to senior executives of the Company. Executive shall also be entitled to the same number of holidays, vacation days, and sick days, as well as any other benefits, in each case as are generally allowed to senior executives of the Company in accordance with the Company policy as in effect from time to time. Nothing contained herein shall be construed to limit the Company's ability to amend, suspend, or terminate any employee benefit plan or policy at any time, and the right to do so is expressly reserved.

Section 6. Reimbursement of Expenses. Executive is authorized to incur reasonable business expenses in carrying out his duties and responsibilities under this Agreement, and the Company shall promptly reimburse him for all such reasonable business expenses, subject to documentation in accordance with the Company's policy, as in effect from time to time.

Section 7. Termination of Employment.

(a) General. The Term of Employment, and Executive's employment hereunder, shall terminate upon the earliest to occur of (i) Executive's death, (ii) a termination by reason of a Disability, (iii) a termination by the Company with or without Cause, and (iv) a termination by Executive with or without Good Reason. Except as otherwise expressly required by law (e.g., COBRA) or as specifically provided herein, all of Executive's rights to Base Salary, Annual Bonus, employee benefits and other compensatory amounts hereunder (if any) shall cease upon the termination of Executive's employment hereunder.

(b) Deemed Resignation. Upon any termination of Executive's employment for any reason, except as may otherwise be requested by the Company in writing and agreed upon in writing by Executive, Executive shall be deemed to have resigned from any and all directorships, committee memberships, and any other positions Executive holds with the Company or any other member of the Company Group.

(c) Termination Due to Death or Disability. Executive's employment shall terminate automatically upon his death. The Company may terminate Executive's employment immediately upon the occurrence of a Disability, such termination to be effective upon Executive's receipt of written notice of such termination. Upon Executive's death or in the event that Executive's employment is terminated due to his Disability, Executive or his estate or his beneficiaries, as the case may be, shall be entitled to:

(i) The Accrued Obligations; and

(ii) Any unpaid Annual Bonus in respect of any completed fiscal year that has ended prior to the date of such termination, which amount shall be paid at such time annual bonuses are paid to other senior executives of the Company (the "Prior Year Bonus Amount").

Following Executive's death or a termination of Executive's employment by reason of a Disability, except as set forth in this Section 7(c), Executive shall have no further rights to any compensation or any other benefits under this Agreement.

(d) Termination by the Company for Cause.

(i) The Company may terminate Executive's employment at any time for Cause, effective upon delivery to Executive of written notice of such termination; *provided, however,* that with respect to any Cause termination relying on clause (i), (ii), (vi) or (vii) of the definition of Cause, to the extent that such act or acts or failure or failures to act are curable, Executive shall be given not less than ten (10) days' written notice by the Company of the Company's intention to terminate him for Cause, such notice to state in detail the particular act or acts or failure or failures to act that constitute the grounds on which the proposed termination for Cause is based, and such termination shall be effective at the expiration of such ten (10) day notice period unless Executive has fully cured such act or acts or failure or failures to act that give rise to Cause during such period.

(ii) In the event that the Company terminates Executive's employment for Cause, he shall be entitled only to the Accrued Obligations. Following such termination of Executive's employment for Cause, except as set forth in this Section 7(d)(ii), Executive shall have no further rights to any compensation or any other benefits under this Agreement.

(e) Termination by the Company without Cause. The Company may terminate Executive's employment at any time without Cause, effective upon delivery to Executive of written notice of such termination. In the event that Executive's employment is terminated by the Company without Cause (other than due to death or Disability), Executive shall be entitled to:

(i) The Accrued Obligations;

(ii) The Prior Year Bonus Amount; and

(iii) An amount equal to the prorated Base Salary during the Severance Term, such amount to be paid in substantially equal payments during the Severance Term, and payable in accordance with the Company's regular payroll practices.

Notwithstanding the foregoing, the payments and benefits described in clauses (ii) and (iii) above shall immediately terminate, and the Company shall have no further obligations to Executive with respect thereto, in the event that Executive breaches the Restrictive Covenants. Following such termination of Executive's employment by the Company without Cause, except as set forth in this Section 7(e), Executive shall have no further rights to any compensation or any other benefits under this Agreement. For the avoidance of doubt, Executive's sole and exclusive remedy upon a termination of employment by the Company without Cause shall be receipt of the Severance Benefits.

(f) Termination by Executive with Good Reason. Executive may terminate his employment with Good Reason by providing the Company thirty (30) days' written notice setting forth in reasonable specificity the event that constitutes Good Reason, which written notice, to be effective, must be provided to the Company within thirty (30) days of the occurrence of such event. During such thirty (30) notice period, the Company shall have a cure right (if curable), and if not cured within such period, Executive's termination will be effective upon the expiration of such cure period, and Executive shall be entitled to the same payments and benefits as provided in Section 7(e) hereof for a termination by the Company without Cause, subject to the same conditions on payment and benefits as described in Section 7(e) hereof. Following such termination of Executive's employment by Executive with Good Reason, except as set forth in this Section 7(f), Executive shall have no further rights to any compensation or any other benefits under this Agreement. For the avoidance of doubt, Executive's sole and exclusive remedy upon a termination of employment with Good Reason shall be receipt of the Severance Benefits.

(g) Termination by Executive without Good Reason. Executive may terminate his employment without Good Reason by providing the Company sixty (60) days' written notice of such termination. In the event of a termination of employment by Executive under this Section 7(g), Executive shall be entitled only to the Accrued Obligations. In the event of termination of Executive's employment under this Section 7(g), the Company may, in its sole and absolute discretion, by written notice accelerate such date of termination without changing the characterization of such termination as a termination by Executive without Good Reason. Following such termination of Executive's employment by Executive without Good Reason, except as set forth in this Section 7(g), Executive shall have no further rights to any compensation or any other benefits under this Agreement.

(h) Release. Notwithstanding any provision herein to the contrary, the payment of any amount or provision of any benefit pursuant to subsection (e) or (f) of this Section 7 (collectively, the "Severance Benefits"), other than the Accrued Obligations, shall be conditioned upon Executive's execution, delivery to the Company, and non-revocation of the Release of Claims (and the expiration of any revocation period contained in such Release of Claims) within twenty-one days following the date of Executive's termination of employment hereunder (the "Release Execution Period"). If Executive fails to execute the Release of Claims in such a timely manner so as to permit any revocation period to expire prior to the end of such twenty-one day period, or timely revokes his acceptance of such release following its execution, Executive shall not be entitled to any of the Severance Benefits. No portion of the Severance (other than Accrued Obligations) shall be paid until the Release has become effective and all such amounts shall commence to be paid on the first regular payroll date of the Company after the Release has become effective; *provided*, that, if the Release Execution Period overlaps two calendar years, the first payment shall not be made sooner than the first day of the second year, and shall include any missed payments.

Section 8. Certain Payments.

In the event that (i) Executive is entitled to receive any payment, benefit or distribution of any type to or for the benefit of Executive, whether paid or payable, provided or to be provided, or distributed or distributable, pursuant to the terms of this Agreement or otherwise (collectively, the "Payments"), and (ii) the net after-tax amount of such Payments, after Executive has paid all taxes due thereon (including, without limitation, taxes due under Section 4999 of the Code) is less than the net after-tax amount of all such Payments otherwise due to Executive in the aggregate, if such Payments were reduced to an amount equal to 2.99 times Executive's "base amount" (as defined in Section 280G(b)(3) of the Code), then the aggregate amount of such Payments payable to Executive shall be reduced to an amount that will equal 2.99 times Executive's base amount. To the extent such aggregate parachute payment amounts are required to be so reduced, the parachute payment amounts due to Executive (but no non-parachute payment amounts) shall be reduced in the following order: (i) the parachute payments that are payable in cash shall be reduced (if necessary, to zero) with amounts that are payable last reduced first; (ii) payments and benefits due in respect of any equity, valued at full value (rather than accelerated value), with the highest values reduced first (as such values are determined under Treasury Regulation Section 1.280G-1, Q&A 24); and (iii) all other non-cash benefits not otherwise described in clause (ii) of this Section 8 reduced last. Notwithstanding the foregoing, the Company will use its good faith best efforts to solicit shareholder approval of the Executive's "excess parachute payments" in accordance with Section 280G of the Code and the regulations promulgated thereunder if Q&A 7 of the 280G regulations is applicable and Executive first waives the right to receive excess parachute payments unless approved by shareholders.

Section 9. Restrictive Covenants.

(a) General. Executive acknowledges and recognizes the highly competitive nature of the business of the Company Group, that access to Confidential Information renders Executive special and unique within the industry of the Company Group, and that Executive will have the opportunity to develop substantial relationships with existing and prospective clients, accounts, customers, consultants, contractors, investors, and strategic partners of the Company Group during the course of and as a result of Executive's employment with the Company. In light of the foregoing, as a condition of Executive's employment by the Company, and in consideration of Executive's employment hereunder and the compensation and benefits provided herein, Executive acknowledges and agrees to the Restrictive Covenants, the terms of which are incorporated herein by reference and made a part hereof. Executive further recognizes and acknowledges that the restrictions and limitations set forth in the Restrictive Covenants are reasonable and valid in geographical and temporal scope and in all other respects and are essential to protect the value of the business and assets of the Company Group.

(b) Other Covenants. Notwithstanding anything contained in this Agreement to the contrary, in the event that Executive is subject to similar restrictive covenants pursuant to any other agreement with any member of the Company Group, including, without limitation, under the Equity Documents ("Other Covenants"), the covenants contained in this Agreement shall be in addition to, and not in lieu of, any such Other Covenants, and enforcement by the Company of the covenants contained in this Agreement shall not preclude the applicable member of the Company Group from enforcing such Other Covenants in accordance with their terms.

Section 10. Representations and Warranties of Executive.

Executive represents and warrants to the Company that:

(a) Executive is entering into this Agreement voluntarily and that his employment hereunder and compliance with the terms and conditions hereof will not conflict with or result in the breach by him of any agreement to which he is a party or by which he may be bound;

(b) Executive has not violated, and in connection with his employment with the Company will not violate, any non-solicitation, non-competition, or other similar covenant or agreement with any Person by which he is or may be bound;

(c) In connection with his employment with the Company, Executive will not use any confidential or proprietary information he may have obtained in connection with employment or service with any prior service recipient; and

(d) Executive has not been terminated from any prior employer or service recipient, or otherwise disciplined in connection any such relationship, in connection with, or as a result of, any claim of workplace sexual harassment or sex or gender discrimination, and to Executive's knowledge, Executive has not been the subject of any investigation, formal allegation, civil or criminal complaint, charge, or settlement regarding workplace sexual harassment or sex or gender discrimination.

Section 11. Taxes.

The Company may withhold from any payments made under this Agreement all applicable taxes, including but not limited to income, employment, and social insurance taxes, as shall be required by law. Executive acknowledges and represents that the Company has not provided any tax advice to him in connection with this Agreement and that he has been advised by the Company to seek tax advice from his own tax advisors regarding this Agreement and payments that may be made to him pursuant to this Agreement, including specifically, the application of the provisions of Section 409A of the Code to such payments.

Section 12. Set Off; Mitigation.

To the extent not prohibited by law or in violation of Section 409A of the Code, the Company's obligation to pay Executive the amounts provided and to make the arrangements provided hereunder shall be subject to set-off, counterclaim, or recoupment of amounts owed by Executive to the Company or its affiliates; *provided, however*, that to the extent any amount so subject to set-off, counterclaim, or recoupment is payable in installments hereunder, such set-off, counterclaim, or recoupment shall not modify the applicable payment date of any installment, and to the extent an obligation cannot be satisfied by reduction of a single installment payment, any portion not satisfied shall remain an outstanding obligation of Executive and shall be applied to the next installment only at such time the installment is otherwise payable pursuant to the specified payment schedule. Executive shall not be required to mitigate the amount of any payment provided pursuant to this Agreement by seeking other employment or otherwise, and the amount of any payment provided for pursuant to this Agreement shall not be reduced by any compensation earned as a result of Executive's other employment or otherwise.

Section 13. Additional Section 409A Provisions.

Notwithstanding any provision in this Agreement to the contrary:

(a) Any payment otherwise required to be made hereunder to Executive at any date as a result of the termination of Executive's employment shall be delayed for such period of time as may be necessary to meet the requirements of Section 409A(a)(2)(B)(i) of the Code (the "Delay Period"). On the first business day following the expiration of the Delay Period, Executive shall be paid, in a single cash lump sum, an amount equal to the aggregate amount of all payments delayed pursuant to the preceding sentence, and any remaining payments not so delayed shall continue to be paid pursuant to the payment schedule set forth herein.

(b) Each payment in a series of payments hereunder shall be deemed to be a separate payment for purposes of Section 409A of the Code.

(c) Notwithstanding anything herein to the contrary, the payment (or commencement of a series of payments) hereunder of any nonqualified deferred compensation (within the meaning of Section 409A of the Code) upon a termination of employment shall be delayed until such time as Executive has also undergone a "separation from service" as defined in Treas. Reg. 1.409A-1(h), at which time such nonqualified deferred compensation (calculated as of the date of Executive's termination of employment hereunder) shall be paid (or commence to be paid) to Executive on the schedule set forth in this Section 7 as if Executive had undergone such termination of employment (under the same circumstances) on the date of his ultimate "separation from service."

(d) To the extent that any right to reimbursement of expenses or payment of any benefit in-kind under this Agreement constitutes nonqualified deferred compensation (within the meaning of Section 409A of the Code), (i) any such expense reimbursement shall be made by the Company no later than the last day of the taxable year following the taxable year in which such expense was incurred by Executive, (ii) the right to reimbursement or in-kind benefits shall not be subject to liquidation or exchange for another benefit, and (iii) the amount of expenses eligible for reimbursement or in-kind benefits provided during any taxable year shall not affect the expenses eligible for reimbursement or in-kind benefits to be provided in any other taxable year; *provided, however*, that the foregoing clause shall not be violated with regard to expenses reimbursed under any arrangement covered by Section 105(b) of the Code solely because such expenses are subject to a limit related to the period the arrangement is in effect.

(e) While the payments and benefits provided hereunder are intended to be structured in a manner to avoid the implication of any penalty taxes under Section 409A of the Code, in no event whatsoever shall any member of the Company Group be liable for any additional tax, interest, or penalties that may be imposed on Executive as a result of Section 409A of the Code or any damages for failing to comply with Section 409A of the Code (other than for withholding obligations or other obligations applicable to employers, if any, under Section 409A of the Code).

Section 14. Successors and Assigns; No Third-Party Beneficiaries.

(a) The Company. This Agreement shall inure to the benefit of the Company and its respective successors and assigns. Neither this Agreement nor any of the rights, obligations, or interests arising hereunder may be assigned by the Company to a Person (other than another member of the Company Group, or its or their respective successors) without Executive's prior written consent (which shall not be unreasonably withheld, delayed, or conditioned); *provided, however*, that in the event of a sale of all or substantially all of the assets of the Company or any direct or indirect division or subsidiary thereof to which Executive's employment primarily relates, the Company may provide that this Agreement will be assigned to, and assumed by, the acquiror of such assets, division or subsidiary, as applicable, without Executive's consent.

(b) Executive. Executive's rights and obligations under this Agreement shall not be transferable by Executive by assignment or otherwise, without the prior written consent of the Company; *provided, however*, that if Executive shall die, all amounts then payable to Executive hereunder shall be paid in accordance with the terms of this Agreement to Executive's devisee, legatee, or other designee, or if there be no such designee, to Executive's estate.

(c) No Third-Party Beneficiaries. Except as otherwise set forth in Section 7(c) or Section 14(b) hereof, nothing expressed or referred to in this Agreement will be construed to give any Person other than the Company, the other members of the Company Group, and Executive any legal or equitable right, remedy, or claim under or with respect to this Agreement or any provision of this Agreement.

Section 15. Waiver and Amendments.

Any waiver, alteration, amendment, or modification of any of the terms of this Agreement shall be valid only if made in writing and signed by each of the parties hereto; *provided, however*, that any such waiver, alteration, amendment, or modification must be consented to on the Company's behalf by the Board. No waiver by either of the parties hereto of their rights hereunder shall be deemed to constitute a waiver with respect to any subsequent occurrences or transactions hereunder unless such waiver specifically states that it is to be construed as a continuing waiver.

Section 16. Severability.

If any covenants or such other provisions of this Agreement are found to be invalid or unenforceable by a final determination of a court of competent jurisdiction, (a) the remaining terms and provisions hereof shall be unimpaired, and (b) the invalid or unenforceable term or provision hereof shall be deemed replaced by a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision hereof.

Section 17. Governing Law; Waiver of Jury Trial.

THIS AGREEMENT IS GOVERNED BY AND IS TO BE CONSTRUED UNDER THE LAWS OF THE STATE OF NEW JERSEY. EACH PARTY TO THIS AGREEMENT ALSO HEREBY WAIVES ANY RIGHT TO TRIAL BY JURY IN CONNECTION WITH ANY SUIT, ACTION, OR PROCEEDING UNDER OR IN CONNECTION WITH THIS AGREEMENT.

Section 18. Notices.

(a) Place of Delivery. Every notice or other communication relating to this Agreement shall be in writing, and shall be mailed to or delivered to the party for whom or which it is intended at such address as may from time to time be designated by it in a notice mailed or delivered to the other party as herein provided; *provided, however*, that unless and until some other address be so designated, all notices and communications by Executive to the Company shall be mailed or delivered to the Company at its principal executive office, and all notices and communications by the Company to Executive may be given to Executive personally or may be mailed to Executive at Executive's last known address, as reflected in the Company's records.

(b) Date of Delivery. Any notice so addressed shall be deemed to be given (i) if delivered by hand, on the date of such delivery, (ii) if mailed by courier or by overnight mail, on the first business day following the date of such mailing, and (iii) if mailed by registered or certified mail, on the third business day after the date of such mailing.

Section 19. Section Headings.

The headings of the sections and subsections of this Agreement are inserted for convenience only and shall not be deemed to constitute a part thereof or affect the meaning or interpretation of this Agreement or of any term or provision hereof.

Section 20. Entire Agreement.

This Agreement, together with any exhibits attached hereto, constitutes the entire understanding and agreement of the parties hereto regarding the employment of Executive. This Agreement supersedes all prior negotiations, discussions, correspondence, communications, understandings, and agreements between the parties relating to the subject matter of this Agreement.

Section 21. Survival of Operative Sections.

Upon any termination of Executive's employment, the provisions of Section 7 through Section 22 of this Agreement (together with any related definitions set forth on Appendix A) shall survive to the extent necessary to give effect to the provisions thereof.

Section 22. Counterparts.

This Agreement may be executed in two or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. The execution of this Agreement may be by actual or facsimile signature.

* * *

[Signatures to appear on the following page.]

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the date first above written.

CERTARA USA, INC.

/s/ Judith Dickinson

By:

Title:

EXECUTIVE

/s/ Craig Rayner

Craig Rayner

RELEASE OF CLAIMS

As used in this Release of Claims (this “Release”), the term “claims” will include all claims, covenants, warranties, promises, undertakings, actions, suits, causes of action, obligations, debts, accounts, attorneys’ fees, judgments, losses, and liabilities, of whatsoever kind or nature, in law, in equity, or otherwise.

For and in consideration of the Severance Benefits, and other good and valuable consideration, I, [Executive], for and on behalf of myself and my heirs, administrators, executors, and assigns, effective the date on which this release becomes effective pursuant to its terms, do fully and forever release, remise, and discharge each of the Parent and each of its direct and indirect subsidiaries and affiliates, including the Company, together with their respective officers, directors, partners, shareholders, employees, and agents (collectively, the “Group”) from any and all claims whatsoever up to the date hereof that I had, may have had, or now have against the Group, for or by reason of any matter, cause, or thing whatsoever, including any claim arising out of or attributable to my employment or the termination of my employment with the Company, whether for tort, breach of express or implied employment contract, intentional infliction of emotional distress, wrongful termination, unjust dismissal, defamation, libel, or slander, or under any federal, state, or local law dealing with discrimination based on age, race, sex, national origin, handicap, religion, disability, or sexual orientation. This release of claims includes, but is not limited to, all claims arising under the Age Discrimination in Employment Act (“ADEA”), Title VII of the Civil Rights Act, the Americans with Disabilities Act, the Civil Rights Act of 1991, the Family Medical Leave Act, and the Equal Pay Act, each as may be amended from time to time, and all other federal, state, and local laws, the common law, and any other purported restriction on an employer’s right to terminate the employment of employees. The release contained herein is intended to be a general release of any and all claims to the fullest extent permissible by law.

I acknowledge and agree that as of the date I execute this Release, I have no knowledge of any facts or circumstances that give rise or could give rise to any claims under any of the laws listed in the preceding paragraph.

By executing this Release, I specifically release all claims relating to my employment and its termination under ADEA, a United States federal statute that, among other things, prohibits discrimination on the basis of age in employment and employee benefit plans.

Notwithstanding any provision of this Release to the contrary, by executing this Release, I am not releasing (i) any claims relating to my rights under Section 7 of the Employment Agreement, (ii) any claims that cannot be waived by law, (iii) any claims with respect to any securities of the Company that I own or (iv) my right of indemnification as provided by, and in accordance with the terms of, the Company’s by-laws or a Company insurance policy providing such coverage, as any of such may be amended from time to time.

I expressly acknowledge and agree that I –

- Am able to read the language, and understand the meaning and effect, of this Release;
-

- Have no physical or mental impairment of any kind that has interfered with my ability to read and understand the meaning of this Release or its terms, and that I am not acting under the influence of any medication, drug, or chemical of any type in entering into this Release;
- Am specifically agreeing to the terms of the release contained in this Release because the Company has agreed to pay me the Severance Benefits in consideration for my agreement to accept it in full settlement of all possible claims I might have or ever had, and because of my execution of this Release;
- Acknowledge that, but for my execution of this Release, I would not be entitled to the Severance Benefits;
- Understand that, by entering into this Release, I do not waive rights or claims under ADEA that may arise after the date I execute this Release;
- Had or could have [twenty-one (21)][forty-five (45)]¹ days from the date of my termination of employment (the “Release Expiration Date”) in which to review and consider this Release, and that if I execute this Release prior to the Release Expiration Date, I have voluntarily and knowingly waived the remainder of the review period;
- Have not relied upon any representation or statement not set forth in this Release or my Employment Agreement made by the Company or any of its representatives;
- Was advised to consult with my attorney regarding the terms and effect of this Release; and
- Have signed this Release knowingly and voluntarily.

I represent and warrant that I have not previously filed, and to the maximum extent permitted by law agree that I will not file, a complaint, charge, or lawsuit against any member of the Group regarding any of the claims released herein. If, notwithstanding this representation and warranty, I have filed or file such a complaint, charge, or lawsuit, I agree that I shall cause such complaint, charge, or lawsuit to be dismissed with prejudice and shall pay any and all costs required in obtaining dismissal of such complaint, charge, or lawsuit, including without limitation the attorneys’ fees of any member of the Group against whom I have filed such a complaint, charge, or lawsuit. This paragraph shall not apply, however, to a claim of age discrimination under ADEA or to any non-waivable right to file a charge with the United States Equal Employment Opportunity Commission (the “EEOC”); *provided, however*, that if the EEOC were to pursue any claims relating to my employment with Company, I agree that I shall not be entitled to recover any monetary damages or any other remedies or benefits as a result and that this Release and the Severance Benefits will control as the exclusive remedy and full settlement of all such claims by me.

¹ To be selected based on whether applicable termination was “in connection with an exit incentive or other employment termination program” (as such phrase is defined in the Age Discrimination in Employment Act of 1967).

Nothing in this Release shall prohibit or impede me from communicating, cooperating or filing a complaint with any Governmental Entity with respect to possible violations of any U.S. federal, state or local law or regulation, or otherwise making disclosures to any Governmental Entity, in each case, that are protected under the whistleblower provisions of any such law or regulation; provided, that in each case such communications and disclosures are consistent with applicable law. I understand and acknowledge that an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that is made (1) in confidence to a federal, state, or local government official or to an attorney solely for the purpose of reporting or investigating a suspected violation of law, or (2) in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. I understand and acknowledge further that an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal; and does not disclose the trade secret, except pursuant to court order. Except as otherwise provided in this paragraph or under applicable law, under no circumstance am I authorized to disclose any information covered by the Company's attorney-client privilege or attorney work product, or the Company's trade secrets, without the prior written consent of the Company's General Counsel or other officer designated by the Company. I do not need the prior authorization of (or to give notice to) any member of the Company Group regarding any communication, disclosure, or activity permitted by this paragraph.

I hereby agree to waive any and all claims to re-employment with the Company or any other member of the Company Group and affirmatively agree not to seek further employment with the Company or any other member of the Company Group.

Notwithstanding anything contained herein to the contrary, this Release will not become effective or enforceable prior to the expiration of the period of seven (7) calendar days following the date of its execution by me (the "Revocation Period"), during which time I may revoke my acceptance of this Release by notifying the Company, in writing, delivered to the Company at its principal executive office, marked for the attention of its General Counsel, with copy to the Board. To be effective, such revocation must be received by the Company no later than 11:59 p.m. on the seventh (7th) calendar day following the execution of this Release. Provided that the Release is executed and I do not revoke it during the Revocation Period, the eighth (8th) day following the date on which this Release is executed shall be its effective date. I acknowledge and agree that if I revoke this Release during the Revocation Period, this Release will be null and void and of no effect, and neither the Company nor any other member of the Group will have any obligations to pay me the Severance Benefits.

The provisions of this Release shall be binding upon my heirs, executors, administrators, legal personal representatives, and assigns. If any provision of this Release shall be held by any court of competent jurisdiction to be illegal, void, or unenforceable, such provision shall be of no force or effect. The illegality or unenforceability of such provision, however, shall have no effect upon and shall not impair the enforceability of any other provision of this Release.

EXCEPT WHERE PREEMPTED BY FEDERAL LAW, THIS RELEASE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH FEDERAL LAW AND THE LAWS OF THE STATE OF DELAWARE, APPLICABLE TO AGREEMENTS MADE AND TO BE PERFORMED IN THAT STATE WITHOUT GIVING EFFECT TO THE PRINCIPLES OF CONFLICTS OF LAWS. I HEREBY WAIVE ANY RIGHT TO TRIAL BY JURY IN CONNECTION WITH ANY SUIT, ACTION, OR PROCEEDING UNDER OR IN CONNECTION WITH THIS RELEASE.

Capitalized terms used, but not defined herein, shall have the meanings ascribed to such terms in my Employment Agreement, dated [May __, 2019], with the Company (the "Employment Agreement").

Exhibit I

Definitions

“**83(b) Election**” shall have the meaning set forth in Section 8.

“**Agreement**” shall have the meaning set forth in the Preamble.

“**Business**” shall have the meaning set forth in Section 1(a) of Appendix A.

“**Call Right**” shall have the meaning set forth in Section 10(a).

“**Cause**” shall have the meaning set forth in the Plan.

“**Change in Control**” means (i) the sale (whether by merger, recapitalization or other sale or business combination transaction) of all or substantially all of the assets of the Partnership (in one transaction or a series of related transactions) to any person (or group of persons acting in concert), other than to (A) the Initial EQT Investors or one of their respective affiliates, (B) any employee benefit plan (or trust forming a part thereof) maintained by the Partnership or any of its subsidiaries, or (C) any other person of which a majority of its voting power or other equity securities is owned, directly or indirectly, by the Partnership (any entity in clause (B) or (C), a “**Controlled Party**”); or (ii) a merger, recapitalization of the Partnership, or other sale or business combination by the Partnership (in one transaction or a series of related transactions) to a person (or group of persons acting in concert), in each case, that results in any person (or group of persons acting in concert) (other than (A) the Initial EQT Investors or their affiliates or (B) any Controlled Party) owning more than 50% of the equity interests or voting power of the Partnership (or any resulting entity after a merger or business combination transaction). For the avoidance of doubt, none of an IPO, stock dividend or distribution, stock split, or any other similar capital structure change shall alone constitute a Change in Control.

“**Competitive Activities**” shall have the meaning set forth in Section 1(a) of Appendix A.

“**Confidential Information**” shall have the meaning set forth in Section 2(a)(ii) of Appendix A.

“**Date of Grant**” shall have the meaning set forth in the Preamble.

“**Disability**” shall have the meaning set forth in the Plan.

“**Employment Term**” shall have the meaning set forth in Section 1(a) of Appendix A.

“**Exchange Act**” means the Securities Exchange Act of 1934, as amended from time to time, and the rules and regulations promulgated pursuant thereto.

“**Fair Market Value**” means the fair market value of a Class B Unit as determined by the Board assuming a hypothetical orderly liquidation of the Partnership and without regard to any discount for lack of liquidity or minority interest.

“**Final Measurement Date**” means the earlier to occur of (i) a Change in Control or (ii) following an IPO, the date upon which the Initial EQT Investors no longer holds equity securities of the Partnership (or such other entity that an IPO of the Partnership is effectuated through) representing more than 10% of the outstanding equity securities of such entity.

“**Governmental Entity**” shall have the meaning set forth in Section 2(a)(v) of Appendix A.

“**Inventions**” shall have the meaning set forth in Section 2(b)(i) of Appendix A.

“**IPO**” means (i) the first registered initial public offering in the United States or foreign jurisdiction of the equity securities of the IPO Corporation or any entity into which the equity securities of the IPO Corporation may be converted in connection with such offering, pursuant to an effective registration statement under the Securities Act (other than a registration statement on Forms S-4 or S-8 or any similar form) or pursuant to other applicable foreign Laws or (ii) the date of effectiveness of a registration of a class of securities of the IPO Corporation or any entity into which the securities of the IPO Corporation may be converted in connection with such registration under the Exchange Act to be traded on a national securities exchange that has registered with the United States Securities and Exchange Commission under Section 6 of the Exchange Act.

“**IPO Corporation**” means the entity that undertakes the IPO as determined by the General Partner of the Partnership.

“**IRS**” shall have the meaning set forth in Section 8.

“**Marketable Securities**” means securities that (i) are traded on the New York Stock Exchange, the NASDAQ Stock Market or any similar national securities exchange, or any successor thereto, and (ii) are, at the time of receipt, registered pursuant to an effective registration statement filed under the Securities Act and will remain registered until such time as such securities can be sold by the holder thereof pursuant to Rule 144; provided that Marketable Securities shall not include any securities of the Partnership (or any entity which the Partnership effectuates an IPO through). The fair market value of any Marketable Securities will equal the volume-weighted average of the closing prices on the principal securities exchange on which such Marketable Securities are listed for the (20) trading days preceding the trading day immediately preceding the day on which a definitive agreement is entered into with respect to the transaction that results in the receipt of such Marketable Securities by the Initial EQT Investors.

“**Measurement Date**” means (i) prior to the Final Measurement Date, each date upon which the Initial EQT Investors receive Sponsor Cash Amounts, or (ii) the Final Measurement Date.

“**Participant**” shall have the meaning set forth in the Preamble.

“**Partnership**” shall have the meaning set forth in the Preamble.

“**Performance Vesting Units**” shall have the meaning set forth in Section 3(b).

“**Plan**” shall have the meaning set forth in the Recitals.

“**Proprietary Rights**” shall have the meaning set forth in Section 2(b)(i) of Appendix A.

“**RC Breach**” means Participant’s breach of Sections 1(a) and (b) of Appendix A hereto or any similar corresponding provision applicable to Participant under a written agreement between members of the Partnership Group, from time to time.

“**Repurchase Date**” shall have the meaning set forth in Section 10(c).

“**Restrictive Covenant Agreement**” means the restrictive covenants attached hereto as Appendix A or any covenants of non-competition, non-solicitation, non-interference, no-hire, non-disparagement, confidentiality or similar covenants contained in any employment agreement or similar agreement between the Participant and a member of the Partnership Group.

“**Restrictive Covenant Period**” shall have the meaning set forth in Section 1(a) of Appendix A.

“**Return on Investment**” means, as of any Measurement Date, the quotient obtained by dividing (i) Sponsor Cash Amounts by (ii) Sponsor Cash Invested; provided, that, (x) in the case of prong (i) of the definition of Final Measurement Date, the Return on Investment achieved by the Initial EQT Investors in connection with such Final Measurement Date shall be determined as if 100% of the Partnership was sold in connection with such Change in Control at the price per unit received by the Initial EQT Investors in such Change in Control and (y) in the case of prong (ii) of the definition of Final Measurement Date, the Return on Investment achieved by the Initial EQT Investors in connection with such Final Measurement Date shall be determined as if the remaining equity holdings were sold at a fair market value equal to the volume-weighted average of the closing prices on the principal securities exchange on which such equity holdings are listed for the twenty (20) trading days preceding the trading day immediately preceding the Final Measurement Date.

“**Securities Act**” means the Securities Act of 1933, as amended from time to time.

“**Sponsor Cash Amounts**” means, as of any Measurement Date, without duplication, the cumulative amount of all cash (including cash dividends, cash distributions, and cash proceeds) and the fair market value of any Marketable Securities, in each case actually received by the Initial EQT Investors on or before such Measurement Date with respect to or in exchange for equity securities of the Partnership (including, in each case, any portion subject to escrow or holdback and the value of any earnout); *provided, however*, that Sponsor Cash Amounts, as determined in connection with a Change in Control, shall also include the fair market value, as determined by the Board in good faith, of any securities that are not Marketable Securities received in connection with such Change in Control.

“**Sponsor Cash Invested**” means, as of any Measurement Date, without duplication, all cash invested by the Initial EQT Investors in equity securities of the Partnership on or before such Measurement Date, including any additional capital invested in the Partnership by the Initial EQT Investors following the Closing and through such applicable Measurement Date.

“**Time Vesting Units**” shall have the meaning set forth in Section 3(a).

Appendix A

Restrictive Covenants

1. Non-Competition; Non-Solicitation; Non-Interference. Participant acknowledges and recognizes the highly competitive nature of the businesses of the Partnership Group and its Affiliates and accordingly agrees as follows:

(a) Prior to the Participant's Termination for any reason (the "**Employment Term**") and until the first anniversary of Participant's Termination (the "**Restrictive Covenant Period**"), Participant will not (i) directly or indirectly, in any geographic location in which the Partnership Group engages, own, operate, manage, control, invest in, lend to, acquire an interest in, or otherwise engage or participate in (whether as an employee, independent contractor, consultant, partner, shareholder, joint venturer, investor, or any other type of participant) the management or conduct of any business activities, whether through selling, distributing, manufacturing, marketing, purchasing, or otherwise, that compete directly or indirectly with the Partnership or any member of the Partnership Group ("**Competitive Activities**"), it being understood that Competitive Activities as of the date hereof include, without limitation, principally engaging in the business of model based drug development consulting services or technology solutions, including with respect to discovery, pre-clinical, clinical and post-marketing drug development and regulatory submissions and review and any other business in which the Partnership is actively engaged at the time of termination (the "**Business**").

(b) During the Restrictive Covenant Period, Participant will not directly or indirectly:

(i) (A) solicit or induce any customer, supplier, licensee, or other business relation (or any actively sought prospective customer, supplier, licensee, or other business relation) of the Partnership or any member of the Partnership Group to cease doing business with or materially reduce the amount of business conducted with the Partnership or any member of the Partnership Group, or interfere with the relationship between any such customer, supplier, licensee, or other business relation (or any actively sought prospective customer, supplier, licensee, or other business relation) and the Partnership or any member of the Partnership Group; or (B) knowingly or intentionally assist any Person in any substantive or direct way to do, or attempt to do, anything prohibited by clause (A) above; or

(ii) (A) solicit or hire, directly or indirectly, for employment, or assist others in hiring, employing, inducing, or soliciting for employment (except in the performance of Participant's duties), any employees of the Partnership or any member of the Partnership Group (or individuals who were employed during the one-year period prior to the termination of Participant's employment with the Service Recipient); or (B) knowingly or intentionally assist any Person in any substantive or direct way to do, or attempt to do, anything prohibited by clause (A) above.

(c) If a final and non-appealable judicial determination is made that any of the provisions of this Section 1 constitutes an unreasonable or otherwise unenforceable restriction against Participant, the provisions of this Section 1 will not be rendered void but will be deemed to be modified to the minimum extent necessary to remain in force and effect for the longest period and largest geographic area that would not constitute such an unreasonable or unenforceable restriction. Moreover, notwithstanding the fact that any provision of this Section 1 is determined not to be specifically enforceable, the Partnership will nevertheless be entitled to recover monetary damages as a result of Participant's breach of such provision.

(d) The period of time during which the provisions of this Section 1 shall be in effect shall be extended by the length of time during which Participant is in breach of the terms hereof.

(e) The provisions of Section 1 hereof shall survive the termination of Participant's employment for any reason.

2. Confidentiality; Intellectual Property.

(a) Confidentiality.

(i) Participant acknowledges that the Confidential Information obtained by Participant while employed by the Service Recipient is the property of the Partnership Group. Therefore, Participant agrees that Participant shall not disclose to any unauthorized Person or use for Participant's own purposes any Confidential Information without the prior written consent of the Partnership, unless and to the extent that the aforementioned matters become generally known to and available for use by the public other than as a result of Participant's acts or omissions in violation of this Agreement; provided, however, that if Participant receives a request to disclose Confidential Information pursuant to a deposition, interrogation, request for information or documents in legal proceedings, subpoena, civil investigative demand, governmental or regulatory process, or similar process, (i) Participant shall, as promptly as practicable, notify in writing the Partnership, and consult with and reasonably assist the Partnership, at the Partnership's expense, in seeking a protective order or request for other appropriate remedy, (ii) in the event that such protective order or remedy is not obtained, or if the Partnership waives compliance with the terms hereof, Participant shall disclose only that portion of the Confidential Information which, based on the advice of Participant's legal counsel, is legally required to be disclosed and shall exercise reasonable best efforts to provide that the receiving Person shall agree to treat such Confidential Information as confidential to the extent possible (and permitted under applicable law) in respect of the applicable proceeding or process, and (iii) the Partnership shall be given an opportunity to review the Confidential Information prior to disclosure thereof.

(ii) For purposes of this Agreement, "Confidential Information" means information, observations, and data concerning the business or affairs of the Partnership Group, including, without limitation, all business information (whether or not in written form) that relates to any member of the Partnership Group, or its customers, suppliers, or contractors or any other third parties in respect of which the Partnership or any member of the Partnership Group has a business relationship or owes a duty of confidentiality, or their respective businesses or products, and that is not known to the public generally other than as a result of Participant's breach of this Agreement, including but not limited to technical information or reports, formulas, trade secrets, unwritten knowledge and "know-how," operating instructions, training manuals, customer lists, customer buying records and habits, product sales records and documents, and product development, marketing, and sales strategies, market surveys, marketing plans, profitability analyses, product cost, long-range plans, information relating to pricing, competitive strategies, and new product development, information relating to any forms of compensation or other personnel-related information, contracts, and supplier lists. Confidential Information will not include such information known to Participant prior to Participant's involvement with the Partnership or any predecessor thereof or information rightfully obtained from a third party (other than pursuant to a breach by Participant of this Agreement). Without limiting the foregoing, Participant and the Partnership each agree to keep confidential the existence of, and any information concerning, any dispute between Participant and the Partnership or any member of the Partnership Group, except that Participant and the Partnership each may disclose information concerning such dispute to the court that is considering such dispute or to their respective legal counsel (provided that such counsel agrees not to disclose any such information other than as necessary to the prosecution or defense of such dispute).

(iii) Participant acknowledges that all notes, memoranda, specifications, devices, formulas, records, files, lists, drawings, documents, models, equipment, property, computer, software, or intellectual property relating to the businesses of the Partnership Group, in whatever form (including electronic), and all copies thereof, that are received or created by Participant while an employee of the Service Recipient (including but not limited to Confidential Information and Inventions) are and shall remain the property of the Partnership Group, and Participant shall as promptly as practicable return such property to the Partnership upon the termination of Participant's employment and, in any event, at the Partnership's request. Participant agrees further that any property situated on the premises of, and owned by, the Partnership or any member of the Partnership Group, including disks and other storage media, filing cabinets, and other work areas, is subject to inspection by the Partnership's personnel at any time with or without notice.

(iv) Participant agrees further that Participant will not improperly use or disclose any confidential information or trade secrets, if any, of any former employers or any other Person to whom Participant has an obligation of confidentiality, and will not bring onto the premises of the Partnership or any member of the Partnership Group any unpublished documents or any property belonging to any former employer or any other Person to whom Participant has an obligation of confidentiality unless consented to in writing by the former employer or other Person.

(b) Nothing in this Agreement shall prohibit or impede the Participant from communicating, cooperating or filing a complaint with any U.S. federal, state or local governmental or law enforcement branch, agency or entity (collectively, a "**Governmental Entity**") with respect to possible violations of any U.S. federal, state or local law or regulation, or otherwise making disclosures to any Governmental Entity, in each case, that are protected under the whistleblower provisions of any such law or regulation, provided that in each case such communications and disclosures are consistent with applicable law. The Participant understands and acknowledges that an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that is made (i) in confidence to a federal, state, or local government official or to an attorney solely for the purpose of reporting or investigating a suspected violation of law, or (ii) in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. The Participant understands and acknowledges further that an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal; and does not disclose the trade secret, except pursuant to court order. Notwithstanding the foregoing, under no circumstance will the Participant be authorized to disclose any information covered by attorney-client privilege or attorney work product of any member of the Company without prior written consent of the Company's General Counsel or other officer designated by the Company.

(c) Intellectual Property.

(i) Participant agrees that the results and proceeds of Participant's services for the Partnership Group (including, but not limited to, any Confidential Information and other trade secrets, products, services, processes, know-how, designs, developments, innovations, analyses, drawings, reports, techniques, formulas, methods, developmental or experimental work, improvements, discoveries, inventions, ideas, source and object codes, programs, matters of a literary, musical, dramatic, or otherwise creative nature, writings, and other works of authorship) resulting from services performed while an employee of the Partnership and any works in progress, whether or not patentable or registrable under copyright or similar statutes, that were made, developed, conceived, or reduced to practice or learned by Participant, either alone or jointly with others (collectively, "**Inventions**"), shall be works-made-for-hire, and the Partnership (or, if applicable or as directed by the Partnership, any member of the Partnership Group) shall be deemed the sole owner throughout the universe of any and all trade secret, patent, copyright, and other intellectual property rights (collectively, "**Proprietary Rights**") of whatsoever nature therein, whether or not now or hereafter known, existing, contemplated, recognized, or developed, with the right to use the same in perpetuity in any manner the Partnership determines in its sole discretion, without any further payment to Participant whatsoever. If, for any reason, any of such results and proceeds shall not legally be a work-made-for-hire or there are any Proprietary Rights that do not accrue to the Partnership (or, as the case may be, any member of the Partnership Group) under the immediately preceding sentence, then Participant hereby irrevocably assigns and agrees to assign any and all of Participant's right, title, and interest thereto, including any and all Proprietary Rights of whatsoever nature therein, whether or not now or hereafter known, existing, contemplated, recognized, or developed, to the Partnership (or, if applicable or as directed by the Partnership, any member of the Partnership Group), and the Partnership or such member of the Partnership Group shall have the right to use the same in perpetuity throughout the universe in any manner determined by the Partnership or such member of the Partnership Group without any further payment to Participant whatsoever. As to any Invention that Participant is required to assign, Participant shall promptly and fully disclose to the Partnership all information known to Participant concerning such Invention.

(ii) Participant agrees that, from time to time, as may be requested by the Partnership and at the Partnership's sole cost and expense, Participant shall do any and all things that the Partnership may reasonably deem useful or desirable to establish or document the Partnership's exclusive ownership throughout the United States of America or any other country of any and all Proprietary Rights in any such Inventions, including the execution of appropriate copyright or patent applications or assignments. To the extent that Participant has any Proprietary Rights in the Inventions that cannot be assigned in the manner described above, Participant unconditionally and irrevocably waives the enforcement of such Proprietary Rights. This Section 2(b)(ii) is subject to and shall not be deemed to limit, restrict, or constitute any waiver by the Partnership of ownership of any Proprietary Rights to which the Partnership (or other applicable member of the Partnership Group) may be entitled by operation of law by virtue of the Partnership's (or other applicable member of the Partnership Group's) being Participant's employer. Participant agrees further that, from time to time, as may be requested by the Partnership and at the Partnership's sole cost and expense, Participant shall assist the Partnership in every reasonable, proper and lawful way to obtain and from time to time enforce Proprietary Rights relating to Inventions in any and all countries. To this end, Participant shall execute, verify, and deliver such documents and perform such other acts (including appearances as a witness) as the Partnership may reasonably request for use in applying for, obtaining, perfecting, evidencing, sustaining, and enforcing such Proprietary Rights and the assignment thereof. In addition, Participant shall execute, verify, and deliver assignments of such Proprietary Rights to the Partnership or its designees. Participant's obligation to assist the Partnership with respect to Proprietary Rights relating to such Inventions in any and all countries shall continue beyond the termination of Participant's employment with the Service Recipient.

(iii) Participant hereby waives and quitclaims to the Partnership any and all claims, of any nature whatsoever, that Participant now or may hereafter have for infringement of any Proprietary Rights assigned hereunder to the Partnership.

3. Non-Disparagement. Participant shall not, whether in writing (electronically or otherwise) or orally, malign, denigrate, or disparage the Partnership, any other member of the Partnership Group, or any of their respective predecessors or successors, or any of their respective current or former managers, directors, officers, employees, shareholders, partners, members, agents, or representatives, with respect to any of their respective past or present activities, or otherwise publish (whether in writing (electronically or otherwise) or orally) statements that tend to portray any of the aforementioned parties in an unfavorable light.

EMPLOYMENT AGREEMENT

EMPLOYMENT AGREEMENT, dated as of _____ (the “Effective Date”), between Certara USA, Inc. (the “Company” or “Company Group”), and Justin Edge (the “Employee”).

1. Employment Duties and Acceptance.

1.1 Employment by the Company. Effective as of January 23, 2019, or such other date as shall be mutually agreed (“Start Date”), the Company shall employ the Employee, for itself and its subsidiaries and affiliates, to render exclusive and full-time services in the capacity of President, Regulatory Science of the Company. Employee shall be an “at-will” employee for all purposes.

1.2 Duties and Responsibilities. The Employee shall have duties and responsibilities consistent with his/her position, subject to the oversight and direction by the CEO and the board of directors of the Company or its direct or indirect parent entity, or their respective designee (each, the “Board”). To the extent necessary to meet the Company’s business goals, the CEO or the Board may modify Employee’s duties or assign new duties to Employee or modify Employee’s reporting relationships. The Employee shall devote substantially all of the Employee’s working time and efforts to the business and affairs of the Company. Employee shall not, without the prior approval of the Board, whether for compensation or otherwise, directly or indirectly, alone or as a member of any partnership or other organization, be actively engaged in or concerned with any other business duties or personal pursuits which interfere with the performance of the Employee’s responsibilities under this Agreement. Notwithstanding the foregoing, Employee may provide services as a volunteer or director to charitable, educational or civic organizations; act as a member, director or officer of any industry trade association or group; and he or she may serve as a trustee, director or advisor to any family companies or trusts; provided that, in all cases, (i) Employee has notified Company of such activities and (ii) such services or acts shall not, in the reasonable judgment of the CEO or Board, interfere or be likely to interfere with Employee’s ability to discharge Employee’s duties and responsibilities to the Company. Employee shall faithfully adhere to, execute, and fulfill all lawful policies established by the Company.

1.3 Acceptance of Employment by the Employee. The Employee accepts such employment and shall render the services described above. Subject to appointment by the Board as such, the Employee may also serve as an officer of any other entity controlled by, or under common control with, the Company, and as a director of the Company and of any other entity controlled by or under common control with the Company, in each case without any compensation therefor other than that specified in this Agreement. Upon request, or upon termination of employment with Company hereunder for any reason, the Employee shall, upon request, resign as a director or officer of the Company and of any other entity controlled by, or under common control with, the Company.

1.4 Place of Employment. The Employee’s principal place of employment shall be Wilmington, DE (the “Employment Location”), subject to such reasonable travel as the rendering of the services hereunder may require. The Company acknowledges the Employee will maintain a permanent residence in the Chicago area but is expected to be on-site at the Company’s DE/PA/NJ offices for a significant portion of the Employee’s time, as the needs of the business dictate.

2. Term of Employment. The stated term of employment under this Agreement (the “Term”) shall commence on the Start Date and shall continue until Employee ceases to be employed by the Company or any of the Company Group for any reason.

3. Compensation.

3.1 Salary. As compensation for all services to be rendered pursuant to this Agreement, the Company shall pay the Employee during the Term a salary, initially \$375,000 per annum, payable in installments at such times as the Company customarily pays its other employees (but in any event no less often than monthly), less such deductions as shall be required to be withheld by applicable rules and regulations (the “Base Salary”). The Base Salary shall be reviewed at least once per year.

3.2 Incentive Bonus. In addition to his Base Salary, Employee shall be eligible to receive an annual incentive bonus in an amount up to 35% of Employee’s Base Salary (the “Incentive Bonus”) in the sole discretion of the Board. The applicable criteria for achieving an Incentive Bonus shall be established by the Board annually.

4. Equity. Effective upon the Start Date, Executive is hereby granted profits interests equal to such number of Class B Profits Interest Units of the equity of EQT Avatar Parent L.P., an indirect parent company of the Company (“Parent”) and on the terms of the equity compensation plan of Parent, as may be in effect at the time of such option grant (the “Plan”), and a grant agreement (“Grant Agreement”) on such terms as provided to other senior level executives of the Company, as more fully set forth in such Grant Agreement as has been provided under separate cover.

4.1 Participation in Employee Benefit Plans. The Employee shall be permitted, if and to the extent eligible, to participate on the same terms in any group life, hospitalization or disability insurance plan, health program, pension plan or similar benefit plan of the Company that is available generally to other employees of the Company. The Company may amend or terminate its benefit plans at any time in its discretion.

4.2 Expenses. Subject to policies applicable to employees of the Company generally, as may from time to time be established by the Board, the Company shall pay or reimburse the Employee for reasonable travel, entertainment and other business expenses actually incurred or paid by the Employee during the Term in the performance of the Employee’s services under this Agreement, and which expenses are consistent with the Company’s policies in effect from time to time with respect to such travel, entertainment and other business expenses, upon presentation of expense statements or vouchers or such other supporting information as it may require.

4.3 Paid Time Off. The Employee shall be entitled to paid time off in accordance with the Company’s PTO policy.

5. Termination.

5.1 Termination upon Death. If the Employee dies while employed by the Company, this Agreement shall terminate and the Employee or the Employee's estate shall be entitled only to receive the Accrued Obligations payable through the date of such death.

5.2 Termination upon Disability. If the Employee becomes physically or mentally disabled while employed by the Company (whether totally or partially, so that the Employee is unable substantially to perform the Employee's services hereunder as determined, in good faith, by the Board following consultation with medical advisors selected by the Board) for (a) a period of three consecutive months, or (b) for shorter periods aggregating three months during any six month period (in each of clauses (a) and (b), such time periods shall include any legally required leaves of absence or accommodation), the Company may, by written notice to the Employee, terminate the Employee's employment. In the event of termination of the Employee's employment by the Company by reason of disability, the Employee shall be entitled only to receive the Accrued Obligations payable through the date of termination.

5.3 Termination for Cause. The Company may at any time by written notice to the Employee terminate the Employee's employment for Cause (as defined below) and the Employee shall be entitled only to receive the Accrued Obligations payable through the date of termination.

5.4 Termination with Good Reason or without Cause. The Employee may terminate the Employee's employment with the Company at any time with Good Reason (as defined below), and the Company may terminate the Employee's employment without Cause, in each case upon ten (10) days written notice to the other party thereto. Following a termination by the Employee with Good Reason or by the Company without Cause, and so long as the Employee has not breached and does not breach the provisions of Sections 5.1, 5.2, 5.3, 5.4 or 5.5 and the Employee has entered into an effective general release of claims reasonably satisfactory to the Company that becomes effective and irrevocable by no later than the 30th day after Employee's termination of employment, the Employee shall have the right to:

(a) Payment by the Company of an amount equal to the Accrued Obligations as of the date of termination, which shall be paid when they otherwise would have been paid had Employee not been terminated; and

(b) Continuation of Employee's then-applicable Base Salary for:

(i) twelve (12) months, if the termination pursuant to this section 5.4 occurs during the first twelve (12) months of Employee's employment; and

(ii) nine (9) months, if the termination pursuant to this section 5.4 occurs any time after the first twelve (12) months of Employee's employment;

in each case under section 5.4(b)(i) or (ii), payable in accordance with the Company's normal payroll practices.

For purposes of this Agreement:

“Accrued Obligations” means as of the date of Employee’s termination, (a) Employee’s earned but unpaid Base Salary, if any, through such date, and (b) any unreimbursed business expenses payable to Employee pursuant to applicable Company policy and (c) any Incentive Bonus that has been authorized by the Board and awarded by the CEO but not previously paid to the Employee with respect to the fiscal year preceding the fiscal year in which such date of termination occurs.

“Cause” means (i) conviction of Employee of any felony, or the conviction of Employee of a misdemeanor which involves moral turpitude, or the entry by Employee of a plea of guilty or *nolo contendere* with respect to any of the foregoing, (ii) the commission of any act or failure to act by Employee that involves moral turpitude, dishonesty, theft, destruction of property, fraud, embezzlement or unethical business conduct, or that otherwise causes material injury to the Company or any of its affiliates, whether financially or otherwise, (iii) any breach by Employee of any rule or policy of the Company or any of its affiliates, and the failure of Employee to cure such violation (to the extent such violation is capable of being cured) under this clause (iii) within twenty (20) days after receipt of written notice from the Company, (iv) any breach by Employee of the requirements of any other contract or agreement between the Company (or any of its affiliates) and such Employee, including this Agreement, and the failure of Employee to cure such breach (to the extent such breach is capable of being cured) under this clause, or (v) within ten (10) days after receipt of written notice from the Company, in each case, with respect to clauses (i) through (iv), as determined in good faith by the Board in the exercise of its reasonable business judgment..

“Good Reason” means (a) a material diminution in Employee’s authority, duties, or responsibilities, or (b) the principal place of employment of the Employee is relocated to any location which is outside of a 50 mile radius of the Employment Location; provided that Good Reason shall not exist unless within thirty (30) days after the occurrence of such act the Employee gives written notice to the Company stating that such act constitutes Good Reason. Within thirty (30) days after notice has been received, the Company shall have the opportunity, but shall not have the obligation, to cure such events or conditions that give Good Reason. If the Company does not cure such events or conditions within the thirty (30) day period, Employee must voluntarily terminate his employment within thirty (30) days of the expiration of the cure period.

5.5 Voluntary Termination. The Employee may terminate the Employee’s employment with the Company at any time in the Employee’s sole and absolute discretion upon giving at least thirty (30) days advance written notice to such effect to the Company (a “Voluntary Termination”). In the event the Employee’s employment is terminated during the Term by the Employee’s Voluntary Termination (other than termination by the Employee for Good Reason), then the Employee shall be entitled only to receive the Accrued Obligations payable through the date of such Voluntary Termination.

6. Confidentiality Invention, Intellectual Property, Noncompete and Nonsolicitation.

6.1 Nondisclosure and Nonuse of Confidential Information. The Employee will not disclose or use at any time during or after the Term any Confidential Information (as defined below) of which the Employee is or becomes aware, whether or not such information is developed by the Employee, except to the extent that such disclosure or use is directly related to and required by the Employee's performance of duties assigned to the Employee pursuant to this Agreement. Under all circumstances and at all times, the Employee will take all appropriate steps to safeguard Confidential Information in the Employee's possession and to protect it against disclosure, misuse, espionage, loss and theft. For purposes hereof, "Confidential Information" means information that is not generally known to the public and that was or is used, developed or obtained by the Company or its ultimate parent company, and their respective affiliates and subsidiaries and their respective predecessors (collectively, "Company Group") in connection with their business. It shall not include information (a) required to be disclosed by court or administrative order, (b) lawfully obtainable from other sources or which is in the public domain through no fault of the Employee; or (c) the disclosure of which is consented to in writing by the Company.

6.2 Inventions and Intellectual Property Rights. In the event that the Employee as part of Employee's activities on behalf of the Company Group generates, authors or contributes to any invention, design, new development, device, product, method of process (whether or not patentable or reduced to practice or comprising Confidential Information), any copyrightable work (whether or not comprising Confidential Information) or any other form of Confidential Information relating directly or indirectly to the business of the Company Group as now or hereinafter conducted (collectively, "Intellectual Property"), the Employee acknowledges that such Intellectual Property is the sole and exclusive property of the Company and hereby assigns all right title and interest in and to such Intellectual Property to the Company. Any copyrightable work prepared in whole or in part by the Employee during the Term will be deemed "a work made for hire" under Section 201(b) of the Copyright Act of 1976, as amended, and the Company will own all of the rights comprised in the copyright therein. The Employee will promptly and fully disclose all Intellectual Property and will cooperate with the Company to protect the Company's interests in and rights to such Intellectual Property (including providing reasonable assistance in securing patent protection and copyright registrations and executing all documents as reasonably requested by the Company, whether such requests occur prior to or after termination of Employee's employment hereunder). As used in this Agreement, the term "Invention" means any ideas, concepts, information, materials, processes, data, programs, know-how, improvements, discoveries, developments, designs, artwork, formulae, other copyrightable works, and techniques and all Intellectual Property Rights therein. The term "Intellectual Property Rights" means all trade secrets, copyrights, trademarks, mask work rights, patents and other intellectual property rights recognized by the laws of any jurisdiction or country.

6.3 Prior Inventions. Employee agrees that he/she will not incorporate, or permit to be incorporated, Prior Inventions (defined below) in any Company Inventions (defined below) without the Company's prior written consent. In addition, Employee agrees that Employee will not incorporate into any Company software or otherwise deliver to the Company any software code licensed under the GNU GPL or LGPL or any other license that, by its terms, requires or conditions the use or distribution of such code on the disclosure, licensing, or distribution of any source code owned or licensed by the Company. Employee has disclosed on Exhibit A a complete list of all Inventions that Employee has, or Employee has caused to be, alone or jointly with others, conceived, developed, or reduced to practice prior to the commencement of Employee's employment by the Company, in which Employee has an ownership interest or which Employee has a license to use, and that Employee wishes to have excluded from the scope of this Agreement (collectively referred to as "Prior Inventions"). If no Prior Inventions are listed in Exhibit A, Employee warrants that there are no Prior Inventions. If, in the course of Employee's employment with the Company, Employee incorporates a Prior Invention into a Company process, machine or other work, Employee must (i) notify the Company in writing of such usage in advance of such usage, and (ii) hereby grants the Company a non-exclusive, perpetual, fully-paid and royalty-free, irrevocable and worldwide license, with rights to sublicense through multiple levels of sub-licensees, to reproduce, make derivative works of, distribute, publicly perform, and publicly display in any form or medium, whether now known or later developed, make, have made, use, sell, import, offer for sale, and exercise any and all present or future rights in, such Prior Invention

6.4 Assignment of Company Inventions. Subject to the section titled "Government or Third Party" and except for Inventions that Employee has set forth in Exhibit A, Employee hereby assigns and agrees to assign in the future (when any such Inventions or Intellectual Property Rights are first reduced to practice or first fixed in a tangible medium, as applicable) to the Company all Employee's right, title, and interest in and to any and all Inventions (and all Intellectual Property Rights with respect thereto) made, conceived, reduced to practice, or learned by Employee, either alone or with others, during the period of Employee's employment by the Company. Inventions assigned to the Company or to a third party as directed by the Company pursuant to the section titled "Government or Third Party" are referred to in this Agreement as "Company Inventions."

6.5 Obligation to Keep Company Informed. During the period of Employee's employment and for one (1) year thereafter, Employee will promptly and fully disclose to the Company in writing (a) all Inventions authored, conceived, or reduced to practice by Employee, either alone or with others, and (b) all patent applications filed by Employee or in which Employee is named as an inventor or co-inventor

6.6 Government or Third Party. At Company's request, Employee also agrees to assign all Employee's right, title, and interest in and to any particular Company Invention to a third party, including without limitation the United States, as directed by the Company.

6.7 Enforcement of Intellectual Property Rights and Assistance. During the period of Employee's employment and thereafter and at Company's cost and expense, Employee will assist the Company in every proper way to obtain and enforce United States and foreign Intellectual Property Rights relating to Company Inventions in all countries. In the event the Company is unable to secure Employee's signature on any document needed in connection with such purposes, Employee hereby irrevocably designates and appoints the Company and its duly authorized officers and agents as Employee's agent and attorney in fact, which appointment is coupled with an interest, to act on Employee's behalf to execute and file any such documents and to do all other lawfully permitted acts to further such purposes with the same legal force and effect as if executed by Employee

6.8 Reporting of Conflicts. Employee agrees to inform the Company in writing of any apparent conflicts between Employee's work for the Company and (a) any obligations Employee may have to preserve the confidentiality of another's proprietary information or materials or (b) any rights Employee may claim to any Inventions or ideas before using the same on Company's behalf. Otherwise, the Company may conclude that no such conflict exists and Employee agrees thereafter to make no such claim against the Company. The Company shall receive such disclosures in confidence and consistent with the objectives of avoiding any conflict of obligations and rights or the appearance of any conflict of interest.

6.9 Delivery of Materials upon Termination of Employment. As requested by the Company, from time to time and upon the termination of the Employee's employment with the Company for any reason, the Employee will promptly deliver to the Company all copies and embodiments, in whatever form or medium, of all Confidential Information or Intellectual Property in the Employee's possession or within the Employee's control (including written records, notes, photographs, manuals, notebooks, documentation, program listings, flow charts, magnetic media, disks, diskettes, tapes and all other materials containing any Confidential Information or Intellectual Property) irrespective of the location or form of such material and, if requested by the Company, will provide the Company with written confirmation that all such materials have been delivered to the Company.

6.10 Non-Compete. Employee acknowledges that in the course of employment with the Company, Employee has become familiar and/or will become familiar with any of the Company Group's trade secrets and with other Confidential Information and that Employee's services have been and/or will be of special, unique and extraordinary value to the Company. Therefore, Employee hereby agrees that at any time during his or her employment with the Company and for a period of twelve (12) months thereafter the "Non-Compete Period"), Employee shall not directly or indirectly own, manage, control, participate in, consult with, render services for, operate or in any manner engage (including individually or in association with any person or entity) in any business in the world that, directly or indirectly, is competitive with the business of the Company (or with those businesses of other entities within the Company Group to the extent that Employee has any Confidential Information related to the businesses of those entities within the Company Group) as conducted or proposed to be conducted at any time prior to or during the Non-Compete Period (the "Restricted Business"), provided that Employee shall not be precluded from being an employee, partner, member or owner of any business that may provide services competitive with the Restricted Business, provided that Employee does not personally participate in any manner in the management, marketing, promotion or delivery of such services during the Non-Compete. Notwithstanding the foregoing, the Company will consider waiving this restrictive covenant, if, in the determination of the Company, such a waiver will not be detrimental to the Company.

6.11 Nonsolicitation. The Employee hereby agrees that (a) during the Term and for a period of twenty four (24) months after the termination of employment for any reason (the "Nonsolicitation Period"), the Employee will not, directly or indirectly through another entity, hire or actively induce or attempt to induce any employee of the Company Group to leave the employ of the Company Group, or in any way interfere with the relationship between the Company Group any employee thereof or otherwise employ or receive the services of any individual who was an employee or independent contractor of the Company Group during such Nonsolicitation Period or within the twelve month period prior thereto and (b) during the Nonsolicitation Period, the Employee will not induce or attempt to induce any customer, supplier, client or other business relation of the Company Group to cease or otherwise affect its doing business with the Company Group in any manner or respect.

6.12 Non-Disparagement. At no time during Employee's employment with the Company or thereafter will Employee disparage, defame or discredit the Company or engage in any activity which would have the effect of disparaging, defaming or discrediting the Company

6.13 Enforcement of Noncompete and Nonsolicitation. If, at the enforcement of Sections 6.10 and 6.11, a court holds that the duration, scope or area restrictions stated herein are unreasonable under circumstances then existing, the parties agree that the maximum duration, scope or area reasonable under such circumstances will be substituted for the stated duration, scope or area and that the court will be permitted to revise the restrictions contained in Sections 6.10 or 6.11 to cover the maximum duration, scope and area permitted by law.

6.14 Equitable Relief. The Employee acknowledges that the covenants contained herein are reasonable and necessary to protect the legitimate interests of the Company Group and that each and every one of the restraints is reasonable in respect to subject matter, length of time and geographic area, and that these restraints, individually or in the aggregate, will not prevent the Employee from obtaining other suitable employment during the period in which the Employee is bound by the restraints. The Employee acknowledges that each of these covenants has a unique, very substantial and immeasurable value to the Company and its affiliates and that the Employee has sufficient assets and skills to provide a livelihood while such covenants remain in force. The Employee further covenants that the Employee will reimburse the Company and/or the Company Group (including reasonable attorneys' fees) incurred in connection with any action to enforce any of the provisions of this Section 6 if any of the Company Group prevails on any material issue involved in such dispute. The Employee acknowledges that any violation of this Section 6 will result in irreparable injury to the Company Group and agrees that the Company shall be entitled to preliminary and permanent injunctive relief, without the necessity of proving actual damages, as well as an equitable accounting of all earnings, profits and other benefits arising from any violation of this Section 6 by the Employee, which rights shall be cumulative and in addition to any other rights or remedies to which the Company may be entitled. Without limiting the generality of the foregoing, the Noncompetition Period and Nonsolicitation Period shall be extended for an additional period equal to any period during which the Employee is in breach of the Employee's obligations under this Section 6. The Employee represents and acknowledges that (i) the Employee has been advised by the Company to consult the Employee's own legal counsel in respect of this Agreement, and (ii) the Employee has had full opportunity, prior to execution of this Agreement, to review thoroughly this Agreement with the Employee's counsel.

7. IMMUNITY FROM LIABILITY FOR CONFIDENTIAL DISCLOSURE OF A TRADE SECRET TO THE GOVERNMENT OR IN A COURT FILING.

7.1 Immunity—An Employee shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that

- (a) is made
 - (i) in confidence to a federal, state or local government official, either directly or indirectly, or to an attorney;
 - (ii) solely for the purpose of reporting or investigating a suspected violation of law; or
- and

(b) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

7.2 Use of Trade Secret Information in Anti-Retaliation Lawsuit. An Employee who files a lawsuit for retaliation by Employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual

(a) files any document containing the trade secret under seal; and

(b) does not disclose the trade secret, except pursuant to court order.

8. Other Provisions.

8.1 Notices. Any notice or other communication required or which may be given hereunder shall be in writing and shall be delivered personally, telecopied (with a confirming copy by overnight delivery service or first class mail), sent by overnight delivery service with delivery signature required, or sent with return receipt requested by certified, registered, or express mail, postage prepaid to the parties at the following addresses or at such other addresses as shall be specified by the parties by like notice, and shall be deemed given when so delivered personally, telecopied or if mailed, two days after the date of mailing, as follows:

if to the Company, at:

Certara USA, Inc.
100 Overlook Center, Suite 101
Princeton, NJ 08540
Attn: SVP, HR

With a copy to:

Certara USA, Inc.
100 Overlook Center, Suite 101
Princeton, NJ 08540
Attn: General Counsel

if to the Employee, at:

Justin Edge
[]

8.2 Entire Agreement. This Agreement (including the documents referred to herein) constitutes the entire agreement among the parties and supersedes and nullifies any prior understandings, agreements or representations by or among the parties, written or oral, that may have related in any way to the subject matter hereof.

8.3 Waivers and Amendments. This Agreement may be amended, modified, superseded, cancelled, renewed or extended, and the terms and conditions hereof may be waived, only by a written instrument signed by the parties making specific reference to this Agreement, or, in the case of a waiver, by the party waiving compliance. No delay on the part of any party in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any waiver on the part of any party of any right, power or privilege hereunder, nor any single or partial exercise of any right, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder.

8.4 Governing Law. This Agreement shall be governed by and construed in accordance with, the laws of the state in which the Company's headquarters are located without regard to conflict or choice of law provisions or rules that would defer to the substantive laws of another jurisdiction. Any suit or proceeding arising from the subject matter of this Agreement shall only be brought in the state or federal courts located in the Mercer County in the State New Jersey. The Parties agree that such venue is appropriate and waive any and all rights to contest the exclusive personal jurisdiction and venue of such courts.

8.5 Acknowledgments. The Employee acknowledges that the Employee has read this entire Agreement, has had the opportunity to consult with an attorney, and fully understands the terms of this Agreement. The Employee is satisfied with the terms of this Agreement and agrees that its terms are binding upon the Employee and the Employee's heirs, assigns, executors, administrators, and legal representatives.

8.6 Assignment. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, heirs and permitted assigns. No rights or obligations of the Employee under this Agreement may be assigned or transferred by the Employee other than the Employee's right to compensation and benefits hereunder, which may be transferred by will or operation of law subject to the limitations of this Agreement. No rights or obligations of the Company under this Agreement may be assigned or transferred by the Company except that such rights or obligations may be assigned or transferred pursuant to a merger or consolidation or amalgamation or scheme of arrangement in which the Company is not the continuing entity, or the sale or liquidation of all or substantially all of the assets of the Company, *provided* that the assignee or transferee is the successor to all or substantially all of the assets of the Company and such assignee or transferee assumes by operation of law or in a writing duly executed by the assignee or transferee all of the liabilities, obligations and duties of the Company, as contained in this Agreement, either contractually or as a matter of law, as if no such assignment or transfer had taken place.

8.7 Counterparts. This Agreement may be executed in two or more counterparts (which may be effectively delivered by facsimile or other electronic means), each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

8.8 Headings. The headings in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement

8.9 Severability. If any term, provision, covenant or restriction of this Agreement, or any part thereof, is held by a court of competent jurisdiction of any foreign, federal, state, county or local government or any other governmental, regulatory or administrative agency or authority to be invalid, void, unenforceable or against public policy for any reason, the remainder of the terms, provisions, covenants and restrictions of this Agreement shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

8.10 No Debarment. Employee represents, warrants and covenants that he/she (i) has not been convicted of a crime within the past ten (10) years; (b) is not currently, nor has ever been, debarred, excluded, suspended, and/or declared ineligible by the U.S. Department of Health and Human Services, U.S. Food and Drug Administration, or any other state or federal agency from receiving federal or state money or contracts; and (iii) is not subject to, nor is there any U.S. Department of Health and Human Services, U.S. Food and Drug Administration, or any other state or federal agency action or investigation relating to debarment, exclusion, suspension, and/or a declaration of ineligibility from receiving federal or state money or contracts currently pending or threatened against Employee. Employee covenants to immediately report to the Company any change in status with respect to the foregoing statements that arise during employment.

8.11 Cooperation With Regard to Litigation Waiver of Trial By Jury.

(a) Employee agrees to cooperate with the Company during the term of this Agreement and thereafter (including following Employee's termination of employment for any reason) by making himself or herself reasonably available to testify on behalf of the Company Group, in any action, suit or proceeding, whether civil, criminal, administrative, or investigative, and to assist the Company Group any of its affiliates in any such action, suit, or proceeding by providing information and meeting and consulting with its counsel and representatives. Employee shall be fully reimbursed for any out-of-pocket expenses and time reasonably incurred by Employee in the course of such cooperation.

(b) Each of the parties to this Agreement irrevocably and unconditionally waives the right to a trial by jury in any action, suit or proceeding arising out of, connected with or relating to this Agreement, the matters contemplated hereby, or the actions of the parties in the negotiation, administration, performance or enforcement of this Agreement.

8.12 Section 409A.

(a) If the Company determines in good faith that any provision of this Agreement would cause the Employee to incur an additional tax, penalty, or interest under Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"), and the applicable guidance thereunder ("Section 409A"), the Company and the Employee shall use reasonable efforts to reform such provision, if possible, in a mutually agreeable fashion to maintain to the maximum extent practicable the original intent of the applicable provision without violating the provisions of Section 409A or causing the imposition of such additional tax, penalty, or interest under Section 409A. The preceding provision, however, shall not be construed as a guarantee by the Company of any particular tax effect to the Employee under this Agreement.

(b) For purposes of Section 409A, the right to a series of installment payments under this Agreement shall be treated as a right to a series of separate payments.

(c) With respect to any reimbursement of expenses of, or any provision of in-kind benefits to, the Employee, as specified under this Agreement, such reimbursement of expenses or provision of in-kind benefits shall be subject to the following conditions: (1) the expenses eligible for reimbursement or the amount of in-kind benefits provided in one taxable year shall not affect the expenses eligible for reimbursement or the amount of in-kind benefits provided in any other taxable year, except for any medical reimbursement arrangement providing for the reimbursement of expenses referred to in Section 105(b) of the Code; (2) the reimbursement of an eligible expense shall be made no later than the end of the year after the year in which such expense was incurred; and (3) the right to reimbursement or in-kind benefits shall not be subject to liquidation or exchange for another benefit.

(d) "Termination of employment," or words of similar import, as used in this Agreement means, for purposes of any payments under this Agreement that are payments of deferred compensation subject to Section 409A, the Employee's "separation from service" as defined in Section 409A.

(e) Notwithstanding anything in this Agreement to the contrary, if the period during which the Employee has discretion to execute or revoke the general release of claims provided for by Section 5.4 straddles two calendar years, the payments provided for by Section 5.4 shall begin as soon as practicable in the second of the two calendar years, regardless of which calendar year the Employee actually delivers the executed release to the Company, subject to the release first becoming effective.

Signature page follows

IN WITNESS WHEREOF, the parties have executed this Agreement the date first above written.

Certara USA, Inc.

Signature: /s/ M. Stellmach

Name: M. Stellmach

Title: VP, HR

Date: January 23, 2019

Employee

Signature: /s/ Justin Edge

Name: Justin Edge

Title: _____

Date: December 19, 2018

EXHIBIT A

INVENTIONS

1. Prior Inventions Disclosure. The following is a complete list of all Prior Inventions:

None

See immediately below:

EXHIBIT A

INVENTIONS

2. Prior Inventions Disclosure. The following is a complete list of all Prior Inventions:

None

See immediately below:

Quantitative Solutions BV Confidential

CONTRACT OF EMPLOYMENT FOR AN INDEFINITE PERIOD OF TIME

THE UNDERSIGNED:

1. The private company with limited liability **Quantitative Solutions B.V.**, established in (4818 SJ) Breda at Parkstraat 1-B, legally represented in this matter by Benjamin Management B.V., established in (4835 PT) Breda at Prins Hendrikstraat 174, which company is legally represented in this matter by Mr E.H. Cox, hereinafter to be referred to as '**the Employer**';

and

2. Mr. Thomas Kerbusch, born on [], resident in [], The Netherlands at [], hereinafter to be referred to as : '**the Employee**';

jointly to be referred to hereinafter as: '**the parties**';

DECLARE TO HAVE AGREED THE FOLLOWING:

Article 1 Commencement and term

1. The Employee has entered the services of the Employer as from 1 July 2014 in the capacity of managing director Europe (EU).
2. As from 1 July 2014 Employee will be employed in the capacity of managing director Europe for an indefinite period of time.
3. The first two months after the commencement of employment is a trial period. During this period both the employer and the employee can terminate the contract with immediate effect
4. The contract of employment can be cancelled by either of the parties in writing before the last day of a calendar month, with due observance of the statutory terms of notice and the other provisions concerning notice.

Article 2 Job

1. The Employee is employed by the Employer in the capacity of managing director Europe. The job description is attached to the employment agreement as Addendum 1.
2. The Employee is expected, if in the Employer's opinion the situation at the company requires such, to perform work other than that directly related to the job or to perform work at times or places other than are usual, such in so far as the Employer can reasonably demand such.

Employer's initials:

Employee's initials: /s/ TK

Article 3 Work location

The Employee will perform the work referred to in this contract at one of the official Employer's business addresses. Up to a certain extent, work from home is possible and on mutual agreement between the Employer and the Employee. The Employee hereby declares that he is aware of the fact that the nature of the job and the work means that work will also have to be performed at places other than the work location referred to.

Article 4 Working hours

1. The Employee is expected to work at least 40 hours a week, spread over 5 days.
2. The Employee is expected to perform the work during the Employer's usual working hours. The working hours are to be specified by the Employer.
3. If the scope of the work offered gives cause to do so, the Employee declares that he is prepared to work for more than the number of hours per week referred to. On such occasions the Employer will consult beforehand with the Employee.

Article 5 Salary and other emoluments

1. The gross salary in the event of 40 working hours a week is € 10231 per month, excluding holiday allowance.
2. The salary is to be paid retroactively, after deduction of the amounts required by law and agreed, to the bank account specified by the Employee.
3. The Employee is to receive a holiday allowance of 8% annually in the month of May. The holiday allowance is calculated on the basis of the gross salary for the period 1 June to 31 May. If the Employee leaves the company, he will be entitled to a proportional amount of holiday allowance.
4. Employee will be reimbursed for commuting expenses according to statutory provisions.

Article 6 Leave and national holidays

1. The Employee is entitled, on the basis of 40 working hours a week, to 25 days leave per year with retention of salary. If the Employee leaves the company, the number of days leave will be determined proportionally.
2. If the Employee wants to take hours/days leave, he must submit a written request to the Employer in which he indicates when and how many days leave he wishes to take. The request referred to must be submitted to the Employer no later than:
 - a. five working days prior to the days leave to be taken if the number of days leave to be taken does not exceed three days;

Employer's initials:

Employee's initials: /s/ TK

- b. three calendar weeks prior to the days leave to be taken if the number of days leave to be taken exceeds three days.
3. The Employer will determine the days leave in conformity with the Employee's request except in the event of substantial interests. If the Employer has any objections the employer will make these known to the Employee in writing within two weeks after receipt of the request.
4. Furthermore the Employee has a day off during the following national holidays, also with retention of salary: New Year's Day, Good Friday, Easter Monday, The Kings Birthday, Ascension Day, Whitmonday, Christmas Day and Boxing Day.
5. The employee is entitled to a 3-day company paid paternity leave for each newly arrived child, in addition to two days entitled by Dutch legislation.

Article 7 Incapacity for work

1. If, after being called upon to do so, the Employee is unable to perform the work stipulated or suitable tasks due to illness or incapacity for work, the Employee will receive a payment in accordance with the statutory provisions and for the period as described in Article 7:629 of the Dutch Civil Code.
2. The obligation to continue payment lapses, in principle, at the moment at which the contract of employment ends.
3. The periods during which the Employee has been prevented from working as a consequence of illness or incapacity for work are to be counted together if these periods succeed each other with intervals of less than four weeks.
4. If the Employee is unable to work due to illness or incapacity for work, the Employee is obliged to notify the Employer to this effect in person by telephone.
5. During the period of illness the Employee must ensure that - in as far as is possible —he/she can be contacted by the Employer and/or the Arbo-dienst (labour conditions and absenteeism monitoring body) as engaged by the Employer. Employee must comply with all instructions of the Arbo-dienst and must everything to ensure that he will become capable for work at the shortest possible notice.
6. If the incapacity for work by the Employee is the consequence of an event for which another party is, or can be held, liable, the Employee must immediately provide the Employer with all the information and do everything in his power to enable the Employer to exercise its right of recourse as referred to in Article 6:107a of the Dutch Civil Code.

Article 8 Bonus

1. The employee shall be entitled to a performance bonus.

Employer's initials:

Employee's initials: /s/ TK

2. At the end of every year the financial performance of the company will be evaluated and the employee will be eligible to a bonus based on this financial performance. The Company's gross profits will be calculated on a cash basis and will be equal to all revenue received by the Company during the applicable period less all Company expenses (including without limitation, salaries, benefits, and travel expenses, etc.). A portion of the gross profits will be distributed as a bonus according to the following formula:
 - a. Thirty percent (30%) of the gross profits of the EU operations will be the first part of the bonus pool. The employee will receive 70% of the Oss share of this bonus pool. The Oss share of the bonus pool will be calculated as the total revenue of the Oss group divided by the total revenue of EU operations times the bonus pool (bonus pool * Oss revenue/ EU revenue). For the bonus allocation, revenue is counted once the invoices have been paid by the client.
 - b. Thirty percent (30%) of the gross profits of the worldwide operations will be the second part of the bonus pool. The employee will receive 6% of this bonus pool.
3. The formula according to which the gross profits will be distributed as a bonus will be determined on a year-to-year basis. Qualifying for determination of the Bonus are the accounts of the Employer, to the exclusion of everything else.

Article 9 Obligation to confidentiality

In connection with the obligation to confidentiality Employer refers to the annex which is attached to this contract of employment.

Article 10 Obligation to hand in company property

If Employee is suspended or the contract of employment ends in any other way or for any other reason, or at the Employer's first request, the Employee is obliged to give the Employer immediately all that which he has in his possession for the Employer in relation to or in connection with the present agreement, including computers, keys, items, documents, copies hereof and all other items that the Employer has provided him with.

Article 11 Ban on additional jobs

The Employee is forbidden from engaging in paid or unpaid (additional) jobs for third parties during the term of the contract of employment which may be/are detrimental, or compete with the Employer's interests, unless the Employer gives written permission to do so.

Article 12 Penalty clause

If the Employee acts contrary to its obligations on account of that stated in the Articles 9 (confidentiality), including the annex and/or 10 (obligation to hand in company property) and/or 11 (ban on additional jobs) of this contract, he will, contrary to Article 7:650, paragraph 3 of the Dutch Civil Code, forfeit to the Employer, without any notice of default being required, a penalty of € 4,500.00 for each violation, and a penalty of € 450.00 for each day that the violation persists, without prejudicing the Employer's right to claim full compensation plus costs and interest instead, in so far as the damage actually suffered exceeds the stipulated penalty.

Employer's initials:

Employee's initials: /s/ TK

Article 13 Applicable law and competent court

1. This contract and the resulting contracts are governed by Dutch law.
2. Any disputes which result from the present contract will be settled by the competent court in Breda.

Article 14 Other provisions

1. This contract applies equally to male and female employees.
2. Changes and additions to this contract of employment can only be legally made in the form of a written agreement signed by both parties which is to be attached to this contract of employment and which is regarded as being an inextricable part thereof. On the grounds of Article 7:611 of the Dutch Civil Code the Employee as well as the Employer will respond positively to reasonable proposals for changes to the contract of employment.
3. Changes or additions to this contract as a consequence of changed fiscal, social insurance law and/or employment law regulations, about which the Employer notifies the Employee in writing, will be regarded as having been accepted by the Employee.
4. The Employer is also authorized to change the terms and conditions of employment if the Employer has an interest in the change which is so considerable that, based on criteria of reasonableness and fairness, the Employee's interest has to yield. The change takes effect at the moment that it is communicated to the Employee.
5. Nullity of one or more provisions in this contract of employment will not result in nullity of the other provisions. In relation to provisions for which one of the parties has invoked nullity, the parties undertake to consult immediately.
6. Signing this contract of employment causes all previous contracts and agreements relating to the applicability of conditions to lapse.

Thus agreed and signed in duplicate in Breda on 20 June 2014.

Signed as correct:

The Employer

On behalf of the above:

Mr E.H. Cox

Employer's initials:

Signed as correct:

The Employee

/s/ Thomas Kerbusch
Mr. Thomas Kerbusch

Employee's initials: /s/ TK

Addendum-1:
Job Description Managing Director Europe

- Is a part of the executive committee of the company
- Is responsible for managing all European business operations
- Is capable to perform a Mentor consulting role:
 1. Provides expert scientific and strategic input on development programs, including review of development strategy, regulatory filing strategy, and guidance on ACM preparation.
 2. Able to mentor internal staff of client on how to identify and formulate key questions facing development teams.
 3. Able to mentor internal staff on developing and executing PK/PD and M&S strategies to inform key decisions (e.g. dose selection, go/no-go).
 4. Advices and reviews on CSRs, CTD, M&S reports, etc. from inception to final version.
 5. Strategic advice and consultancy in development of internal PKPD/M&S capabilities, organization and infrastructure.
 6. May provide Expert Quantitative Pharmacology Consultancy and/or Modeling Consultancy.

Employer's initials:

Employee's initials: /s/TK

SUBJECT TO COMPLETION OF THE ENVISAGED TRANSACTION

ADDENDUM TO THE CONTRACT OF EMPLOYMENT FOR AN INDEFINITE PERIOD
OF TIME DATED 20 JUNE 2014

THE UNDERSIGNED PARTIES,

1. The private company with limited liability **Quantitative Solutions B.V.**, established in (4818 SJ) Breda at Parkstraat 1-B, legally represented in this matter by Benjamin Management B.V., established in (4835 PT) Breda at Prins Hendrikstraat 174, which company is legally represented in this matter by Mr E.H. Cox, hereinafter to be referred to as “the Employer”;

and
2. **Mr Th. Kerbusch**, residing at [], the Netherlands, hereinafter referred to as “the Employee”;

WHEREAS:

- a) Certara USA, Inc. (“the Company”) has entered into a Sale and Purchase Agreement with all of the owners of the Target and the Target (“Purchase Agreement”), pursuant to which the Company will acquire all of the outstanding and issued shares of Target and its direct and indirect subsidiaries including Quantitative Solutions, LP, Quantitative Solutions Coöperatief U.A. and Quantitative Solutions BV (collectively with the Target, the “Acquired Entities”) (the “Transaction”);
- b) the definitions used in this addendum are the definitions as used in the Purchase Agreement or as defined as such in this addendum.

Clause 1 - Non-Compete, Business Relationship and Non-Solicitation Clause

- 1.1 Unless the Employer’s prior written permission has been obtained, the Employee may not during the contract of employment and for 12 months after the end of this contract of employment, regardless of how and why this employment ended:
 - a) the Employee shall not, directly or indirectly, engage in or assist others in engaging in a Competing Business anywhere in the world. Notwithstanding the foregoing, the Employee may own, directly or indirectly, solely as a passive investment, securities of any Person traded on any national securities exchange or in the over the counter market if the Employee is not a controlling Person or a member of a group which controls, such Person and does not, directly or indirectly, own 2% or more of any class of securities of such Person. For the purposes of this Clause 1.1. any reference to Competing Business includes a reference to any expansion or innovation of the business actually commenced or fully developed, but not yet marketed by the Acquired Entities or the Company or its affiliates at the date the contract of employment is terminated.

It shall not be a violation of this Clause 1.1. under a) if the Employee works for a pharmaceutical company or an academic institution of higher education even if engaged in a business that is competitive with the Acquired Entities;
 - b) the Employee shall not, directly or indirectly, (i) knowingly solicit or interfere with the relationship between the Company or any of its affiliates (which includes the Acquired Entities), on the one hand, and any of their customers, suppliers, employees or other business relations, on the other hand; and/or
-

- c) hire or offer employment to any person who was employed by any of the Company or any of its affiliates (which includes the Acquired Entities) at any time during the twelve (12) months prior to the termination of Employee's employment hereunder.

"Competing Business" means, on a world-wide basis, any business or trade carried on by the Company or any of its affiliates during the term of employment.

Clause 2 - Breach

- 2.1 Should the Employee breach any of the obligations set forth in Clause 1.1 of this contract of employment, the Employee will promptly forfeit to the Employer, an immediately payable penalty of EUR 4,500, which amount will increase by EUR 450 for each day that the breach continues, without prejudice to the Employer's right to demand performance of this contract of employment. Instead of imposing a penalty, the Employer may, without issuing a notice of default, claim full damages.
- 2.2 Payment of the penalty referred to in this clause will not release the Employee from the obligations contained in Clause 1.1 of this contract.
- 2.3 Any breach by the Employee of the obligations set forth in Clause 1.1 will constitute an urgent reason on the grounds of which the Employer may terminate this contract of employment with immediate effect.
- 2.4 Paragraphs 3, 4 and 5 of Section 7:650 of the Dutch Civil Code do not apply to this contract of employment.

Clause 3 - Severance

- 3.1 Only if the Employee's contract for employment has been terminated by the Employer without Cause or by the Employee for Good Reason, the Employer will award a compensation consisting of a base gross monthly salary and holiday allowance (not including fringe benefits) equal to the 12 months. The Employer and the Employee acknowledge that the compensation mentioned in this Clause 3.1 does include any form of transition payment (in Dutch: "transitievergoeding") to the extent that the **Employee** at some point in time would be eligible for or is awarded such transition payment as a result of the (form of) termination of the contract of employment. Therefore, if and to the extent that the Employee is awarded a transition payment, payment of this transition payment shall be deducted from the compensation as mentioned in this Clause 3.1.

“Cause” means (i) Employee’s conviction of, or plea of nolo contendere to, a felony or to any other crime involving fraud, dishonesty or breach of trust, (ii) Employee’s gross negligence or intentional misconduct in the performance of Employee’s duties to the Employer, Employee’s the repeated or intentional failure to perform at a standard reasonably expected of an employee in Employee’s position with the Employer, or Employee’s failure to devote Employee’s full business time to the Employer, (iii) Employee’s fraud or willful dishonesty or misrepresentation intended to result in direct or indirect gain or personal enrichment at the expense of the Employer or its equity holders, (iv) Employee’s public or consistent drunkenness or illegal use of narcotics that is reasonably likely to become materially injurious to the reputation or business of the Employer or that is reasonably likely to impair Employee’s performance of duties to the Employer, (v) the repeated or intentional failure of the Employee to follow the reasonable directions of the Board or the individual(s) to whom such Employee reports, following notice to the Employee and a reasonable opportunity to cure such repeated failure, or (iv) any other intentional conduct of Employee that materially injures the Employer or its reputation including but not limited to knowingly participating or allowing accounting or tax improprieties, embezzlement or theft.

“Good Reason” means (a) a material diminution in Employee’s authority, duties, or responsibilities, (b) the principal place of employment of the Employee is relocated to any location which is outside of a 50 kilometers radius of the employment location or (c) a material reduction in Employee’s base salary, other than as part of a reduction plan affecting all of the Employer’s leadership team that is instituted as a result of economic circumstances; provided that Good Reason shall not exist unless (i) within twenty (20) days after the occurrence of such act the Employee gives written notice to the Employer stating that such act constitutes Good Reason, is not acceptable to the Employee, and requesting that the Employer cure such act and (ii) the Employee terminates his or her employment with the Employer within ninety (90) days after delivery of such notice.

Clause 4 - Other terms and conditions

4.1 The other terms and conditions of the contract of employment signed on 20 June 2014 remain in full force and effect.

[Remainder of page intentionally left blank; signature page to follow]

QUANTITATIVE SOLUTIONS B.V.

Agreed:

/s/ Edmundo Muniz

On behalf of Quantitative Solutions B.V., solely authorised director

By: Edmundo Muniz

Title: Managing Director

Date:

EMPLOYEE

Agreed:

/s/ Thomas Kerbusch

By: Thomas Kerbusch

Date: 30 June 2015

(Signature page to Addendum to Contract of Employment for an Indefinite Period of Mr. Kerbusch)

Consent of Independent Registered Public Accounting Firm

We consent to the inclusion in this Registration Statement of Certara, Inc. on Form S-1 of our report dated October 7, 2020, on our audits of the consolidated financial statements of Certara, Inc. and Subsidiaries as of December 31, 2019 and 2018, and for the years then ended. We also consent to the reference to our firm under the caption "Experts" in this Registration Statement.

/s/ CohnReznick LLP
November 17, 2020
Roseland, New Jersey
