Amendment No. 2 to confidential draft submission
As submitted confidentially to the Securities and Exchange Commission on October 23, 2020 pursuant to the Jumpstart Our Business Startups Act. This draft registration statement has not been publicly filed with the Securities and Exchange Commission and all information herein remains strictly confidential.

No. 333-

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Maravai LifeSciences Holdings, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**8731**	**85-2786970**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

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San Diego, California 92121
Telephone: (858) 546-0004
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

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 registered additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please 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, 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	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☐
		Emerging growth company	☒

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. ☐

Title of Each Class of Securities to be Registered	**Proposed Maximum Offering Price(1)(2)**	**Amount of Registration Fee**
Class A Common Stock, par value $0.01 per share	$	$

(1) Includes the aggregate offering price of shares of common stock subject to the underwriters' option to purchase additional shares.
(2) Estimated solely for purposes of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933.

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 this Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. The prospectus is not an offer to sell these securities nor a solicitation of an offer to buy these securities in any jurisdiction where the offer and sale is not permitted.

PRELIMINARY PROSPECTUS (Subject to Completion)
Issued , 2020

Shares

maravai LifeSciences

Class A Common Stock

This is the initial public offering of shares of Class A common stock of Maravai LifeSciences Holdings, Inc., par value $0.01 per share. Maravai LifeSciences Holdings, Inc. is offering shares of its Class A common stock to be sold in the offering.

Prior to this offering, there has been no public market for the Class A common stock of Maravai LifeSciences Holdings, Inc. It is currently estimated that the initial public offering price per share will be between $ and $. Maravai LifeSciences Holdings, Inc. intends to apply to have its Class A common stock listed on The Nasdaq Global Select Market under the symbol "MRVI."

Maravai LifeSciences Holdings, Inc. has two authorized classes of common stock: Class A and Class B (together, the "common stock"). Holders of the Class A common stock and Class B common stock are each entitled to one vote per share. All holders of Class A common stock and Class B common stock will vote together as a single class except as otherwise required by applicable law. Holders of Class B common stock do not have any right to receive dividends or distributions upon the liquidation or winding up of Maravai LifeSciences Holdings, Inc.

Maravai LifeSciences Holdings, Inc. will use the net proceeds from this offering to purchase (i) newly-issued units ("LLC Units") in Maravai Topco Holdings, LLC ("Topco LLC") and (ii) outstanding LLC Units from Maravai Life Sciences Holdings, LLC ("MLSH 1"), the sole existing member of Topco LLC. The purchase price for the LLC Units will be equal to the initial public offering price of the shares of Class A common stock less the underwriting discounts and commissions referred to below. Topco LLC will use the net proceeds it receives from Maravai LifeSciences Holdings, Inc. in connection with this offering as described under "Use of Proceeds." Upon completion of this offering, Maravai LifeSciences Holdings, Inc. will have LLC Units representing a % economic interest in Topco LLC and, although Maravai LifeSciences Holdings, Inc. will initially have a minority economic interest in Topco LLC, it will be the sole managing member of Topco LLC and will operate and control its business. MLSH 1 will hold the remaining LLC Units representing a % economic interest in Topco LLC. Each LLC Unit, together with one share of our Class B common stock, is, from time to time, exchangeable for one share of Class A common stock or, at our election, for cash from a substantially concurrent public offering or private sale (based on the price of our Class A common stock in such public offering or private sale). Maravai LifeSciences Holdings, Inc. will be a holding company, and upon consummation of this offering and the application of the net proceeds therefrom, its sole asset will be LLC Units of Topco LLC. Immediately following this offering, the holders of Class A common stock will collectively own 100% of the economic interests in Maravai LifeSciences Holdings, Inc. and have % of the voting power of Maravai LifeSciences Holdings, Inc. MLSH 1, through ownership of our Class B common stock, will have the remaining % of the voting power of Maravai LifeSciences Holdings, Inc.

Maravai LifeSciences Holdings, Inc. is an "emerging growth company" as the term is used in the Jumpstart Our Business Startups Act of 2012 and, as such, has elected to comply with certain reduced public company reporting requirements for this prospectus.

Investing in our Class A common stock involves risks. See "Risk Factors" beginning on page 24 to read about factors you should consider before buying shares of our Class A common stock.

Immediately after this offering, assuming an offering size as set forth above, funds controlled by our equity sponsor, GTCR, LLC ("GTCR"), will control approximately % of the combined voting power of our outstanding shares of Class A common stock and Class B common stock (or % if the underwriters' option to purchase additional shares is exercised in full). As a result, we expect to be a "controlled company" within the meaning of the corporate governance standards of The Nasdaq Stock Market. See "Management—Corporate Governance—Controlled Company Status."

PRICE $ A SHARE

	Per share	Total
Initial public offering price	*$*	*$*
Underwriting discounts and commissions (1)	*$*	*$*
Proceeds, before expenses, to Maravai LifeSciences Holdings, Inc.	*$*	*$*

(1) See "Underwriters" for additional information regarding underwriting compensation.

At our request, the underwriters have reserved up to % of the shares of Class A common stock offered by this prospectus for sale, at the initial public offering price, for sale to certain individuals through a directed share program, including our directors, certain employees and certain other individuals identified by management. See "Underwriters—Directed Share Program."

The underwriters have the option to purchase up to an additional shares of Class A common stock from us at the initial public offering price less the underwriting discounts and commissions for a period of 30 days after the date of this prospectus.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The underwriters expect to deliver shares of Class A common stock against payment in New York, New York on or about , 2020.

MORGAN STANLEY *JEFFERIES* *GOLDMAN SACHS & CO. LLC*

BOFA SECURITIES *CREDIT SUISSE* *UBS INVESTMENT BANK*

BAIRD *WILLIAM BLAIR*

, 2020.

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Neither we nor any of the underwriters have authorized anyone to provide any information or make any representations other than that contained in this prospectus or in any free writing prospectus filed with the Securities and Exchange Commission ("SEC"). We 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. We are offering to sell, and seeking offers to buy, shares of Class A common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the Class A common stock. Our business, financial condition, results of operations, and prospects may have changed since such date.

For investors outside of the United States, neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about, and to observe any restrictions relating to, this offering and the distribution of this prospectus outside of the United States.

Through and including , 2020 (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.

BASIS OF PRESENTATION

In connection with the consummation of this offering, we will effect certain organizational transactions. Unless otherwise stated or the context otherwise requires, all information in this prospectus reflects the consummation of the organizational transactions and this offering, which we refer to collectively as the "Organizational Transactions." See "Organizational Structure" for a description of the Organizational Transactions and a diagram depicting our anticipated structure after giving effect to the Organizational Transactions, including this offering.

Unless we state otherwise or the context otherwise requires, the terms "we," "us," "our," "our business," "the Company" and "Maravai" refer to and similar references refer: (1) on or following the consummation of the Organizational Transactions, including this offering, to Maravai LifeSciences Holdings, Inc. and its consolidated subsidiaries, including Topco LLC, and (2) prior to the consummation of the Organizational Transactions, including this offering, to Topco LLC and its consolidated subsidiaries. The term "GTCR" or "our Sponsor" refers to GTCR, LLC, our equity sponsor, and the term "Topco LLC" refers to Maravai Topco Holdings, LLC.

We will be a holding company and the sole managing member of Topco LLC and, upon consummation of this offering and the application of net proceeds therefrom, our sole asset will be LLC Units of Topco LLC. Topco LLC is the predecessor of the issuer, Maravai LifeSciences Holdings, Inc., for financial reporting purposes. Maravai LifeSciences Holdings, Inc. will be the reporting entity following this offering.

Accordingly, this prospectus contains the historical financial statements of Topco LLC and its consolidated subsidiaries. The unaudited pro forma condensed consolidated financial data of Maravai LifeSciences Holdings, Inc. presented in this prospectus has been derived from the application of pro forma adjustments to the historical consolidated financial statements of Topco LLC and its subsidiaries included elsewhere in this prospectus. These pro forma adjustments give effect to the Organizational Transactions as described in "Organizational Structure," including the consummation of this offering and other related transactions, as if all such transactions had occurred on January 1, 2019. See "Unaudited Pro Forma Condensed Consolidated Financial Information" for a complete description of the adjustments and assumptions underlying the unaudited pro forma consolidated financial data included in this prospectus.

MARKET AND INDUSTRY DATA

Unless otherwise indicated, information in this prospectus concerning economic conditions, our industry, our markets and our competitive position is based on a variety of sources, including information from independent industry analysts and publications, as well as our own estimates and research.

Our estimates are derived from publicly available information released by third-party sources, as well as data from our internal research, and are based on such data and our knowledge of our industry, which we believe to be reasonable. We have not had this information verified by any independent sources. The independent industry publications used in this prospectus were not prepared on our behalf. While we are not aware of any misstatements regarding any information presented in this prospectus, forecasts, assumptions, expectations, beliefs, estimates and projects involve risk and uncertainties and are subject to change based on various factors, including those described under the headings "Forward-Looking Statements" and "Risk Factors."

TRADEMARKS AND TRADENAMES

This prospectus includes our trademarks and service marks, "Maravai LifeSciences," "TriLink BioTechnologies," "Glen Research," "Cygnus Technologies," "Vector Laboratories," "CleanCap®," and "MockV™," which are protected under applicable intellectual property laws and are the property of Maravai LifeSciences Holdings, Inc. or its subsidiaries. This prospectus also contains trademarks, service marks, trade names and copyrights of other companies which are the property of their respective owners. Solely for convenience, trademarks and trade names referred to in this prospectus may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information that you should consider before investing in our Class A common stock. For a more complete understanding of us and this offering, you should read and carefully consider the entire prospectus, including the more detailed information set forth under "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," and our consolidated financial statements and the related notes. Some of the statements in this prospectus are forward-looking statements. See "Forward-Looking Statements." Unless otherwise stated, this prospectus assumes no exercise of the underwriters' option to purchase additional shares.

OVERVIEW

We are a leading life sciences company providing critical products to enable the development of drug therapies, diagnostics, novel vaccines and support research on human diseases. Our more than 5,000 customers as of August 31, 2020 include the top 20 global biopharmaceutical companies ranked by research and development expenditures according to industry consultants, and many other emerging biopharmaceutical and life sciences research companies, as well as leading academic research institutes and *in vitro* diagnostics companies. Our products address the key phases of biopharmaceutical development and include complex nucleic acids for diagnostic and therapeutic applications, antibody-based products to detect impurities during the production of biopharmaceutical products, and products to detect the expression of proteins in tissues of various species.

Our businesses principally serve high growth market segments in biopharmaceutical development and manufacturing. We estimate that the market segments we serve are growing at a weighted average blended rate of 20% per annum. In particular, the field of cell and gene therapy has emerged as one of the fastest growing treatment modalities to address a host of human conditions. There are more than 400 cell and gene therapies in development or launched and sales in this category are expected to grow more than tenfold by 2024, according to industry consultants and management estimates. Our portfolio offers key products for each stage of the cell and gene therapy development lifecycle. For example, our mRNA products are used in drug development to assist in the production of immune-activating antigens; our CleanCap® technology is used to stabilize mRNA; and we expect our upcoming plasmid DNA products will be used as vectors in gene editing for cellular therapies. We also provide biologics safety testing technology used to ensure the safety of the biological drug manufacturing process and drug products. We estimate that more than % of our revenue for the nine months ended September 30, 2020 were in support of vaccines and therapies in development, including biological drugs and cell and gene therapies.

Our proprietary capabilities and products underpin the value we aim to provide to our customers. Among other capabilities, we are experts in RNA and mRNA products, which are challenging and often unstable molecules requiring significant chemical modifications to ensure their stability and efficacy in our customers' applications. Notably, according to research commissioned by us consisting of over 70 interviews with our current and former customers, our competitors and industry experts focused across our three business segments (the "Industry Analysis"), we believe CleanCap® is viewed as a leading solution to ensure the stability of mRNA. CleanCap® is a novel chemical approach to produce a cap analog, which, in addition to making mRNA more stable, aids in protein production and helps prevent an unwanted immune response to the mRNA. As of September 30, 2020, CleanCap® had been used by 109 customers and had been incorporated into several development programs targeting immunization against the novel strain of coronavirus, SARS-CoV-2 ("COVID-19"). These programs included one phase II/III clinical program led by Pfizer in partnership with BioNTech, four phase I/II clinical programs led by Arcturus Therapeutics in partnership with Duke-NUS Medical School, Imperial College London, Fosun Pharma in partnership with BioNTech and CureVac and one pre-clinical program led by the University of Tokyo in partnership with Daiichi-Sankyo. In addition, CleanCap® will potentially be used in three additional COVID-19 mRNA vaccine programs that are in earlier stages of development, led by Chula Vaccine Research Center in partnership with the University of Pennsylvania, eTheRNA Immunotherapies and Greenlight Biosciences. We estimate our mRNA and CleanCap® products have also been incorporated in at least 33 therapeutic programs in development. Should one or more of these programs proceed to commercialization, we believe we will continue to supply our customers and our products will likely be incorporated in customer regulatory filings.

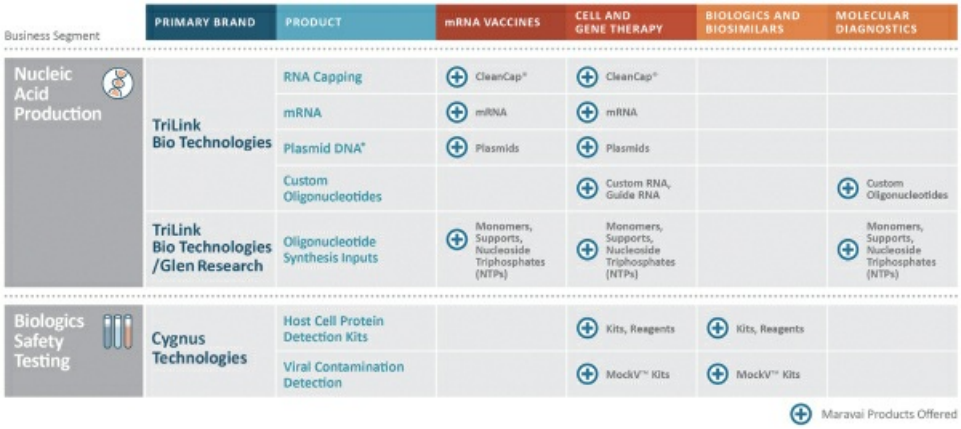
mRNA is at the core of our capabilities. We developed our expertise in mRNA with a belief in its potential as a therapeutic modality. With the COVID-19 pandemic, mRNA has shown its potential for more rapid vaccine design and manufacture when compared to traditional techniques involving culturing inactivated virus to elicit an immune response. According to the World Health Organization, there were 193 COVID-19 vaccine development programs as of October 2, 2020, with some of the lead candidates for approval in the RNA class. COVID-19 has helped highlight the potential advantage of mRNA as a treatment modality and directed significant resources to the developing base of knowledge about mRNA. We believe this knowledge will be directed at future vaccine programs as well as therapeutic agents for a host of human diseases. We are positioned to serve our biopharmaceutical customers in the fast-growing mRNA field across a range of clinical programs for a variety of diseases. Approximately % of our revenue were derived from products that support mRNA research for the nine months ended September 30, 2020.

Forming long-term partnerships with our customers is core to our strategy. We primarily serve our customers during the product development and process development phases. During product development, we collaborate with our customers to develop and synthesize nucleic acids, which in some cases comprise the active pharmaceutical ingredients ("APIs") of our customers' pre-commercial products. While we do not provide products that are themselves regulated as drugs or *in vitro* diagnostics, our customers frequently incorporate our products into their highly validated products and processes. For example, we provide oligonucleotides and antibody-based products used by *in vitro* diagnostic product manufacturers for their on-market products. Because of the extensive validation required for these products, these components are frequently purchased for the life of our customers' products and we believe they are unlikely to be substituted. In addition, our analytical tools are used in the design and development of manufacturing processes and often will be used throughout the life cycle of our customers' manufactured products. As a result, our customer relationships may span many years.

We believe we are a leader in providing critical products and solutions to life sciences customers worldwide to support all phases of biopharmaceutical development for innovative vaccines, therapies and diagnostics. The end markets we serve are growing rapidly, and we believe we will continue to benefit as biopharmaceutical companies increasingly look for partners like us with specialized and technical capabilities and products and services that span from research and development through commercialization. For the year ended December 31, 2019, we generated revenue of $143.1 million, representing 16% growth as compared to the year ended December 31, 2018. We incurred net losses of $5.2 million and generated Adjusted EBITDA of $62.0 million for the year ended December 31, 2019.

OUR PORTFOLIO AND CAPABILITIES

Our products address our customers' needs for nucleic acid production, biologics safety testing and protein detection, and our operations are aligned to these three segments. For the nine months ended September 30, 2020, we sold more than % of our products and services to biopharmaceutical customers and our products serve high growth applications in vaccines, cell and gene therapies, biological drugs and molecular diagnostics.



* Our plasmid DNA products are expected to launch in Q1 2021.

Nucleic Acid Production (% of Revenue for the Nine Months Ended September 30, 2020)

We are a global provider of highly modified, complex nucleic acids and related products. We have recognized expertise in complex chemistries and products provided under exacting quality standards. Our core offerings include mRNA, long and short oligonucleotides, our proprietary CleanCap® capping technology and oligonucleotide building blocks. We offer a suite of CleanCap® analogs that are specifically made for therapeutics and vaccines. Based on the Industry Analysis, we believe our cap analogs are critical features of several mRNA vaccines in development. Our offerings address key customer needs for critical components, from research-grade to good manufacturing practices ("GMP") grade materials. We market our nucleic acid products under the TriLink BioTechnologies and Glen Research brands.

Biologics Safety Testing (% of Revenue for the Nine Months Ended September 30, 2020)

We provide products and services under the Cygnus Technologies brand that ensure the purity of our customers' biopharmaceutical products, including biological drugs. For over 20 years, the Cygnus Technologies brand has been associated with products and services that enable the detection of impurities and contaminants present in bioproduction. Our biologics safety testing products are used during development and scale-up, during the regulatory approval process and throughout commercialization. We are recognized globally for the detection of host cell proteins ("HCPs") and process-related impurities during bioproduction.

Protein Detection (% of Revenue for the Nine Months Ended September 30, 2020)

We believe that we are a leader in labeling and detection reagents for immunohistochemistry, immunofluorescence and glycobiology, principally in research settings, with Vector Laboratories, the brand under which we market our protein detection products, having been cited over 350,000 times in scientific

publications. Our products are used to detect the expression of proteins in tissue, which may indicate an ongoing disease process, with the use of antibody-based detection systems. We also manufacture lectins, proteins that preferentially bind to carbohydrates and which are used, for example, in the study of glycosylation, the process by which carbohydrates attach to proteins and lipids. Glycosylation is critical in a range of biological processes, including cell-to-cell adhesion, the performance of glycoprotein-based drugs and cancer. In addition, we manufacture bioconjugation reagents to allow rapid and quantifiable conjugation of all classes of biomolecules.

OUR COMPETITIVE STRENGTHS

We believe we are a leader in providing nucleic acid products and biologics safety testing products to biopharmaceutical customers worldwide. Our success is built on our ability to provide proprietary technologies and products under exacting quality standards to reliably serve our customers' needs for critical raw materials.

Leading Supplier of Critical Solutions for Life Sciences from Discovery to Commercialization

We seek to be an important component of our customers' supply chain by providing inputs that are central to the performance of their products and processes throughout the product lifecycle. By collaborating with customers early in the development phase, our products frequently follow our customers' development path to commercialization and are likely to be incorporated as raw materials in their on-market products and processes. Our decades-long experience and track record, coupled with our ongoing investment in facilities and quality systems, allow our customers to rely on us for their critical products. Our approach is to be a trusted partner throughout the life cycle of our customers' products.

Innovation, Proprietary Technologies and Knowhow Underpin Our Portfolio

Our expertise in complex chemistries leads customers to seek our collaboration in designing complex products that meet high performance expectations. Based on the responses to the Industry Analysis, we believe the solutions we provide, in many cases, cannot be provided effectively by our competitors. In certain cases, like our CleanCap® technology, our knowhow is backed by intellectual property. In other cases, such as our HCP products, our antibodies are proprietary and therefore can only be supplied by us. We believe the proprietary nature of our knowhow and products solidifies our long-term customer relationships.

Products with Outstanding Performance

We believe our products stand out when compared to our competitors because they present innovative solutions to customer needs, as indicated by the responses to the Industry Analysis, while providing reliable performance and quality. CleanCap®, for example, offers advantages over competing technologies in yield, stability and safety. Our oligonucleotides address complex chemistry challenges, which few competitors can address. The results of the Industry Analysis indicate that our HCP ELISAs have defined the market for impurity detection and we believe they have become a *de facto* standard in biologics safety testing. Our protein detection assays have been recognized for their performance for over 40 years.

Trusted Brands

Our TriLink BioTechnologies, Glen Research, Cygnus Technologies and Vector Laboratories product brands are well known in their respective markets for consistent quality and performance. This brand recognition has been earned over decades. Our manufacturing processes, quality standards, technical support and high-touch customer service ensure that we maintain the reputation of our brands.

State-of-the-Art Manufacturing Facilities

Our biopharmaceutical customers manufacture their products to meet stringent quality standards and expect their critical suppliers to meet their exacting requirements. Our customers further expect that we have the

production capacity to meet their needs. As of September 30, 2020, we estimate that $ million has been invested in our flagship San Diego, California facility and manufacturing suites to produce materials under GMP conditions, along with the necessary quality systems, to meet requirements specified by our customers. We similarly invest in our other sites to ensure we meet our customers' expectations. We believe that the capacity to manufacture to stringent biopharmaceutical standards is constrained in the industry and our ability to meet this demand sets us apart from our competition.

Experienced Leaders and Talented Workforce

Our management includes experienced leaders with demonstrated records of success at Maravai and other highly regarded industry participants. In addition, as of August 31, 2020, approximately 10% of our workforce have advanced degrees. We believe the quality of our personnel is critical to ensuring the collaborative, long-standing relationships we maintain with many of our customers.

OUR MARKETS

We participate in three distinct market segments: nucleic acid production, biologics safety testing and protein detection, which together represented approximately $8.4 billion in annual spending in 2019 and which are expected to grow at a 15% compound annual growth rate ("CAGR") through 2023 according to industry consultants and management estimates. Of that combined market, we estimate our addressable portion represents approximately $3.6 billion. Our addressable segments, adjusted for the mix of products we offer, are expected to grow at a weighted average blended rate of 20% per annum through 2023. We benefit from favorable industry dynamics in our broader market segments and specific growth drivers in our addressable market segments.

The biopharma space remains well-funded, as demonstrated by the substantial amount of capital that has been raised in recent years. In addition, the level of capital markets activity in this space over recent years underscores the rapid pace of biopharmaceutical innovation and increasing cost of drug development. According to Dealogic, between 2015 and 2020 to date, more than $195 billion has been raised by biotechnology companies and in the U.S. public capital markets. This includes over $35 billion raised by companies across more than 228 initial public offerings, reflecting an average of 40 initial public offerings of biotechnology companies per year from 2015 to the six-month period ended June 30, 2020.

Business Segment	PRIMARY BRAND	PRODUCT	TOTAL MARKET SIZE (2019)	MARKET GROWTH (2019-2023 CAGR)	ADDRESSABLE MARKET SIZE[1] (2019)	ADDRESSABLE MARKET GROWTH[2] (2019-2023 CAGR)
Nucleic Acid Production	TriLink Biotechnologies and Glen Research	• RNA Capping (CleanCap®) • mRNA • Plasmid DNA • Oligonucleotides and Inputs	$3.5B	19%	$2.8B	28%
Biologics Safety Testing	Cygnus Technologies	• Host Cell Protein Detection • Viral Contamination Detection	$2.8B	12%	$575M	13%
Protein Detection	Vector Laboratories	• Immunohistochemistry	$2.2B	8%	$200M	6%
		TOTAL	$8.4B	15%	$3.6B	20%

1 Includes products, use cases, and customer types relevant to Maravai

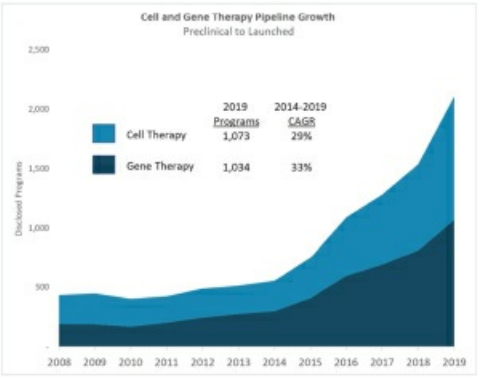
2 Growth rates weighted by revenue exposure to addressable market segments

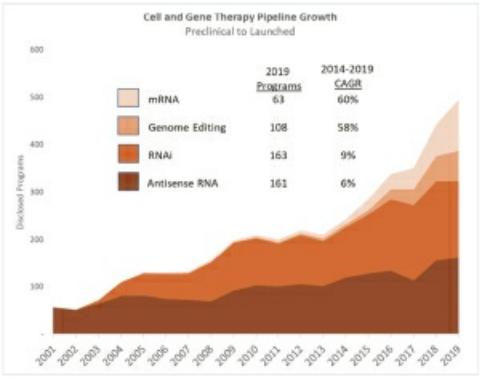
Biopharmaceutical customers are increasingly relying on outside parties to provide important inputs and services for their clinical research and manufacturing, a development driving growth for suppliers with unique capabilities and the ability to manufacture at an appropriate scale to support customer programs. We believe that

suppliers like ourselves, with this rare combination of capabilities, proprietary products and the required investment in manufacturing and quality systems, are benefiting from rapid growth as biopharmaceutical customers seek to partner with a small number of trusted suppliers.

In addition to the continued trend toward outsourcing, several market developments are driving increased growth, above the broader market growth rates, in our addressable market segments, including:

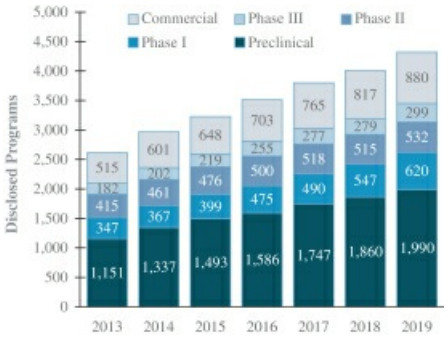
- **Pivot toward mRNA vaccines, driven in part by COVID-19**. mRNA vaccine pre-clinical programs grew approximately 38% in 2019, before the COVID-19 pandemic. That rate is expected to increase to approximately 63% in 2020. The increased growth is being driven, in part, by 25 COVID-19 vaccine programs using mRNA as of October 2, 2020 according to the World Health Organization. Six of the 25, including one phase II/III clinical program led by Pfizer in partnership with BioNTech, four phase I/II clinical programs led by Arcturus Therapeutics in partnership with Duke-NUS Medical School, Imperial College London, Fosun Pharma in partnership with BioNTech and CureVac and one pre-clinical program led by the University of Tokyo in partnership with Daiichi-Sankyo, involve our CleanCap® products and up to three more in earlier stages of development, led by Chula Vaccine Research Center in partnership with the University of Pennsylvania, eTheRNA Immunotherapies and Greenlight Biosciences, will potentially use our CleanCap® products. mRNA vaccine technology is gaining prominence as a result of its faster development time, lower manufacturing costs and improved safety because of the lower risk of unwanted immune responses. RNA expertise is highly specialized and customers seek partners to provide these complex products. A small number of providers, like ourselves, can provide this RNA capability.
- **Rapid growth in development of cell and gene therapies**. Sales of cell and gene therapy drugs are expected to grow from $1 billion in 2019 to $25 billion by 2024, according to industry consultants. We support the development of these therapies with products used in gene editing and cell therapy research, and we are well positioned to supply materials for gene therapy with our launch of DNA plasmid products, which we expect in the first quarter of 2021.



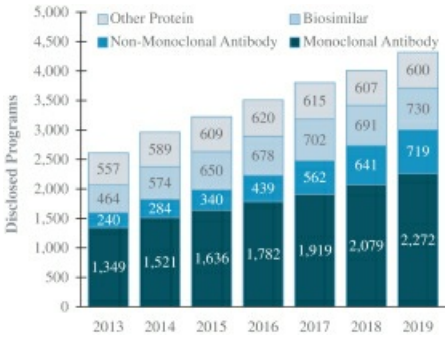


- **Large and growing pipeline of protein-based therapeutics.** In addition to cell and gene therapies, an increase in protein-based therapies is driving the need for impurity testing during process development and manufacturing.

Protein Therapy Pipeline Growth
CAGR = 9%



Protein Therapy Pipeline Mix
CAGR = 9%



Source: Industry consultants. Included proteins are biosimilars, antibodies, recombinant proteins, hormonal products and coagulation factor

- **Rise in molecular diagnostics, driven by COVID-19**: The market for molecular diagnostics is growing dramatically because of demand for new tests related to COVID-19. This growth is driving demand for our products, particularly oligonucleotides and related inputs.
- **COVID-19 providing both short-term and expected long-term growth**: Several of our product categories are experiencing accelerated growth in 2020, notably our CleanCap® and oligonucleotides products. We expect the impact of COVID-19 on our growth to sustain in the longer-term as the entire mRNA category, as well as research in other therapeutic categories, experience increased growth from lessons learned and research conducted for COVID-19 diffuses more broadly into other vaccines and therapies.

Anticipated COVID-19 Impact on Market Growth

Business Segment	Primary Brand	Product	Near Term (2020-2021)	Long Term (2022+)	Comments
Nucleic Acid Production	TriLink BioTechnologies	RNA Capping	⊕	⊕	• Significant growth from '19 to '20 driven by COVID mRNA programs • Success will grow R&D pipeline for non-COVID mRNA therapeutics, vaccines, & diagnostics in 2022+, sustaining significant category growth
		mRNA	⊕	⊕	
		Plasmid DNA	⊖	⊖	• Minimal impact • Not a significant input to COVID vaccines, PCR diagnostics, etc.
		Custom Oligonucleotides	⊕	⊖	• Molecular diagnostics driving outsized near-term growth, likely to return to historic growth rates
	TriLink BioTechnologies /Glen Research	Oligonucleotide Synthesis Inputs	⊕	⊖	• Supporting commercialized efforts that rely on mRNA for vaccines & therapeutics, likely to return to secular category growth rates
Biologics Safety Testing	Cygnus Technologies	Host Cell Protein Detection	⊖	⊖	• Minimal impact • HCP tests & viral clearance growing from biologics & biosimilars market, not directly impacted by COVID vaccines & diagnostics
		Viral Contamination Detection	⊖	⊖	
Protein Detection	Vector Laboratories	Immunohistochemistry	⊗	⊖	• Market decline in '20 due to COVID-driven lab closures, expect post-COVID recovery

⊕ Strong Positive Impact ⊕ Moderate Positive Impact ⊖ Minimal Impact ⊗ Negative Impact

* Our plasmid DNA products are expected to launch in Q1 2021.

OUR STRATEGY

Our customers strive to improve human health. Our goal is to provide them with products and services to accelerate their development efforts, from basic research through clinical trials and ultimately to commercialization for drugs, diagnostics and vaccines.

Supporting Biopharma Customers from Product Development through Commercialization

Our customers include both emerging and established biopharmaceutical leaders developing novel therapies, diagnostics and vaccines. Emerging biopharmaceutical customers frequently seek the support we can offer in our state-of-the-art facilities under our stringent quality standards, with the capabilities that result from the capital and process investments we have made over the last several years. Although our products are exempt from current GMP regulations, we are capable of manufacturing reagents from research-grade to GMP-grade, which often exceeds the in-house capabilities of our pre-commercial customers. See "Business—Government Regulation." The results of the Industry Analysis indicate that our emerging and established customers also seek us out for our leading capabilities in nucleic acid chemistries, especially in highly modified nucleic acids and mRNA, and process control assays. We further support our customers as they transition from product development to commercialization by providing critical raw materials for their drugs.

Developing Proprietary Technologies that Deepen Our Relationships with Our Customers

We are experts in nucleic acids and our scientists aim to develop proprietary enabling technologies that become integral to our customers' products. For example, CleanCap®, our proprietary chemical capping technology, has demonstrated its advantages in terms of the stability of the associated mRNA and its efficiency in protein production when compared to traditional capping technologies. This efficiency has led biopharmaceutical customers to employ CleanCap® in their vaccine and therapeutic programs. As those products proceed through development into commercialization, we believe CleanCap® will be a critical input in on-market vaccines and therapeutics, with 109 customers having used CleanCap® as of September 30, 2020 and six COVID-19 vaccine programs incorporating CleanCap® as of September 30, 2020, including one phase II/III clinical program led by Pfizer in partnership with BioNTech, four phase I/II clinical programs led by Arcturus Therapeutics in partnership with Duke-NUS Medical School, Imperial College London, Fosun Pharma in partnership with BioNTech and CureVac and one pre-clinical program led by the University of Tokyo in partnership with Daiichi-Sankyo. We expect to supply our customers throughout their products' life cycle.

Forming Long-Term Partnerships for Critical Biopharmaceutical Components and Process Tests

Our products are frequently incorporated into regulated and highly validated therapeutic and diagnostic products and processes. Our biopharmaceutical customers expect us to provide them with consistent, high quality products that meet narrow specifications, and that we ensure their supply chain for such products for the length of their programs. In many cases, we may be the sole source of the products we provide. Our emphasis on partnership generally leads to long-term relationships with our customers.

Focusing Our Efforts on High Growth End Markets

While biopharmaceutical research and *in vitro* diagnostics markets are experiencing strong growth, we target the highest growth segments within those markets. Our product portfolio is well positioned to serve the biologics, cell and gene therapy and mRNA vaccine and therapeutic end markets, which are currently experiencing above-market growth. By investing in technologies at the forefront of biopharmaceutical and *in vitro* diagnostics, we aim to remain focused on the highest-growth applications.

Opportunistically Acquiring Leading Life Sciences Businesses and Supporting Their Continued Development

We built our business by acquiring established and emerging companies with strong scientific foundations in our target markets and investing in their systems, processes and people to accelerate their growth and expand their technologies. Going forward, we may opportunistically pursue strategic acquisitions that meet, or could meet after being acquired and expanded, the following criteria:

- address our core target markets;
- have a demonstrated adherence to high quality standards;
- be leaders in their market niches;
- have differentiated or proprietary products and processes that provide clear value to our biopharmaceutical and other customers; and
- have a track record of attractive rates of growth and compelling returns on invested capital.

Our acquisition strategy is to invest significantly in our acquired businesses. We strive to rapidly integrate their information and financial systems, seek opportunities to invest in their facilities and personnel and augment their commercial capabilities through a combination of sales and marketing resources dedicated to each business, supported by our global marketing infrastructure. We will continue to seek a balance between driving growth organically and through opportunistic acquisitions.

RISKS ASSOCIATED WITH OUR BUSINESS

There are a number of risks related to our business, this offering and our Class A common stock that you should consider before you decide to participate in this offering. You should carefully consider all the information presented in the section entitled “Risk Factors” in this prospectus. Some of the principal risks related to our business include the following:

- our history of losses, the risk that we may continue to incur losses in the future and our ability to generate sufficient revenue to achieve or maintain profitability;
- the fluctuation of our operating results, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide;
- our dependence on a limited number of customers for a high percentage of our revenue;
- the use of certain of our products in the production of vaccines and therapies that represent relatively new and still-developing modes of treatment, which may experience unforeseen adverse events, negative clinical outcomes or increased regulatory scrutiny;
- the impact of COVID-19 and any pandemic, epidemic or outbreak of infectious disease;
- changes in economic conditions;
- our dependence on customers’ spending on and demand for outsourced nucleic acid production, biologics safety testing and protein detection research products and services;
- competition with life science, pharmaceutical and biotechnology companies who are substantially larger than we are and potentially capable of developing new approaches that could make our products, services and technologies obsolete;
- the ability of our products and services to perform as expected and the reliability of the technology on which our products and services are based;

- our ability to obtain, maintain and enforce intellectual property protection for our current and future products; and
- the other factors set forth under "Risk Factors."

These and other risks are more fully described in the section entitled "Risk Factors" in this prospectus. If any of these risks actually occurs, our business, financial condition, results of operations, cash flows and prospects could be materially and adversely affected. As a result, you could lose all or part of your investment in our Class A common stock.

OUR SPONSOR

We have a valuable relationship with our equity sponsor, GTCR. In connection with this offering, we will enter into a director nomination agreement (the "Director Nomination Agreement") with GTCR that provides GTCR the right to designate nominees to our board of directors (the "Board"), subject to certain conditions. See "Certain Relationships and Related Party Transactions—Director Nomination Agreement" for more details with respect to the Director Nomination Agreement.

Founded in 1980, GTCR is a leading growth-oriented private equity firm focused on investing in growth companies in the Healthcare, Financial Services & Technology, Technology, Media & Telecommunications and Growth Business Services industries. The Chicago-based firm pioneered The Leaders Strategy™—finding and partnering with management leaders in core domains to identify, acquire and build market-leading companies through transformational acquisitions and organic growth. Maravai is an example of the Leaders Strategy™, whereby GTCR is partnering with Carl Hull and Eric Tardif to build and grow a leading life sciences platform. Since its inception, GTCR has invested more than $18.0 billion in over 200 companies.

GENERAL CORPORATE INFORMATION

Our principal executive offices are located at 10770 Wateridge Circle Suite 200, San Diego, California, 92121. Our telephone number is (858)546-0004. Our website address is www.maravai.com. The information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus, and you should not consider any information contained on, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our Class A common stock. We are a holding company and all of our business operations are conducted through, and substantially all of our assets are held by, our subsidiaries.

IMPLICATIONS OF BEING AN EMERGING GROWTH COMPANY

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"). We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year following the fifth anniversary of the completion of this offering, (2) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (3) the date on which we are deemed to be a large accelerated filer (this means the market value of common that is held by non-affiliates exceeds $700.0 million as of the end of the second quarter of that fiscal year), or (4) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

An emerging growth company may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- not being required to comply with the independent registered public accounting firm attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (the "Sarbanes-Oxley Act");

- only required to present two years of audited financial statements, plus unaudited condensed financial statements for any interim period, and related management's discussion and analysis of financial condition and results of operations;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We have elected to take advantage of certain of the reduced disclosure obligations regarding financial statements and executive compensation in this prospectus and expect to elect to take advantage of other reduced burdens in future filings. As a result, the information that we provide to our shareholders may be different than you might receive from other public reporting companies in which you hold equity interests.

Under the JOBS Act emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to avail ourselves of the extended transition period for complying with new or revised financial accounting standards. As a result of the accounting standards election, we will not be subject to the same implementation timing for new or revised accounting standards as other public companies that are not emerging growth companies, which may make comparison of our financials to those of other public companies more difficult.

OWNERSHIP AND ORGANIZATIONAL STRUCTURE

Maravai LifeSciences Holdings, Inc. is a Delaware corporation formed to serve as a holding company that will hold an interest in Topco LLC. Maravai LifeSciences Holdings, Inc. has not engaged in any business or other activities other than in connection with its formation and this offering. Upon consummation of this offering and the application of the proceeds therefrom, we will be a holding company, our sole asset will be an equity interest in Topco LLC and we will operate and control all of the business and affairs and consolidate the financial results of Topco LLC. See "Organizational Structure" for a complete description of the Organizational Transactions.

In connection with the Organizational Transactions:

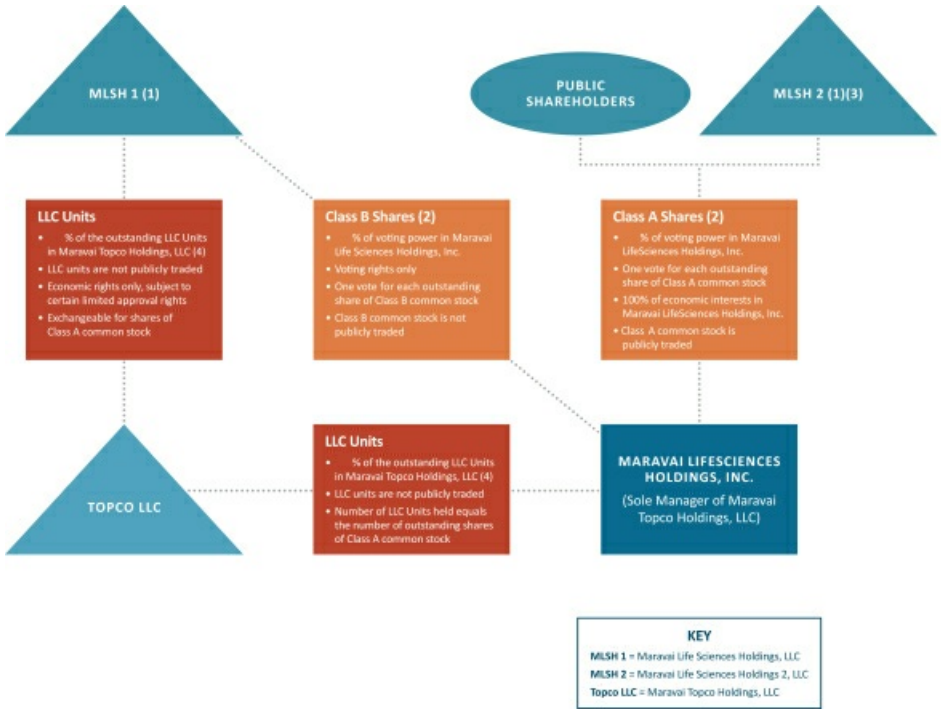
- We will amend and restate Topco LLC's existing operating agreement (the "LLC Operating Agreement") to, among other things, (i) modify Topco LLC's capital structure by replacing the membership interests currently held by Topco LLC's existing owners (beneficially owned through MLSH 1) with a new class of LLC Units held initially by MLSH 1 and (ii) appoint Maravai LifeSciences Holdings, Inc. as the sole managing member of Topco LLC. See "Organizational Structure—Amended and Restated Operating Agreement of Topco LLC.
- Certain of the entities (the "Blocker Entities") through which GTCR and other existing members of MLSH 1 hold their ownership interests in MLSH 1 will form Maravai Life Sciences Holdings 2, LLC ("MLSH 2") and engage in a series of transactions (the "Blocker Mergers") that will result in each of the Blocker Entities merging with and into Maravai LifeSciences Holdings, Inc., with Maravai LifeSciences Holdings, Inc. remaining as the surviving corporation. As a result of such transactions, (i) the former equityholders of the Blocker Entities will become members of MLSH 2 and (ii) MLSH 2 will exchange all of the equity interests in the Blocker Entities for (x) shares of Class A common stock and (y) the right to receive payments pursuant to the Tax Receivable Agreement.

- We will enter into an exchange agreement (the "Exchange Agreement") with MLSH 1 pursuant to which MLSH 1 will be entitled to exchange LLC Units, together with an equal number of shares of Class B common stock, for shares of Class A common stock on a one-for-one basis or, at our election, for cash, from a substantially concurrent public offering or private sale (based on the price of our Class A common stock in such public offering or private sale). See "Organizational Structure—Exchange Agreement."
- We will enter into a tax receivable agreement (the "Tax Receivable Agreement") with MLSH 1 and MLSH 2 that will provide for the payment by Maravai LifeSciences Holdings, Inc. to MLSH 1 and MLSH 2, collectively, of 85% of the amount of cash savings, if any, in U.S. federal, state and local income taxes (computed using simplifying assumptions to address the impact of state and local taxes) we actually realize (or, under certain circumstances are deemed to realize in the case of an early termination payment by us, a change in control or a material breach by us of our obligations under the Tax Receivable Agreement, as discussed below) as a result of (i) certain increases in the tax basis of assets of Topco LLC and its subsidiaries resulting from purchases or exchanges of LLC Units, (ii) certain tax attributes of the Blocker Entities, Topco LLC and subsidiaries of Topco LLC that existed prior to this offering and (iii) certain other tax benefits related to our entering into the Tax Receivable Agreement, including tax benefits attributable to payments that we are required to make under the Tax Receivable Agreement. See "Organizational Structure—Tax Receivable Agreement."
- We estimate that the net proceeds to us from the sale of our Class A common stock in this offering, after deducting underwriting discounts and commissions and estimated expenses payable by us, will be approximately $ million ($ million if the underwriters exercise their option to purchase additional shares in full), based on an assumed initial public offering price of $ per share (the midpoint of the estimated public offering price range set forth on the cover page of this prospectus). We intend to use such net proceeds as follows:
  - $ million to acquire newly-issued LLC Units in Topco LLC and $ million to acquire outstanding LLC Units from MLSH 1, in each case at a purchase price per LLC Unit equal to the initial offering price per share of Class A common stock in this offering, less underwriting discounts and commissions; and
  - $ million to pay MLSH 2 as consideration for the Blocker Mergers.

In turn, Topco LLC intends to apply the balance of the net proceeds it receives from us (including any additional proceeds it may receive from us if the underwriters exercise their option to purchase additional shares) to pay expenses incurred in connection with this offering and the Organizational Transactions and for general corporate purposes. See "Use of Proceeds."

The diagram below depicts our historical organizational structure prior to the completion of the Organizational Transactions. This diagram is provided for illustrative purposes only and does not purport to represent all legal entities owned or controlled by us, or owning a beneficial interest in us.

The diagram below depicts our expected organizational structure immediately following completion of the Organizational Transactions. This diagram is provided for illustrative purposes only and does not purport to represent all legal entities owned or controlled by us, or owning a beneficial interest in us.



(1) Upon completion of this offering, GTCR will control the voting power in Maravai LifeSciences Holdings, Inc. as follows: (i) approximately % (or approximately % if the underwriters exercise their option to purchase additional shares in full) through its control of MLSH 1 and (ii) approximately % through its control of MLSH 2. See "Principal Shareholders" for additional information about MLSH 1 and MLSH 2.

(2) Shares of Class A common stock and Class B common stock will vote as a single class. Each outstanding share of Class A common stock and Class B Common stock will be entitled to one vote on all matters to be voted on by shareholders generally. The Class B common stock does not have any right to receive dividends or distributions upon the liquidation or winding up of Maravai LifeSciences Holdings, Inc. In accordance with the Exchange Agreement to be entered into in connection with the Organizational Transactions, MLSH 1 will be entitled to exchange LLC Units, together with an equal number of shares of Class B common stock, for shares of Class A common stock determined in accordance with the Exchange Agreement or, at our election, for cash from a substantially concurrent public offering or private sale (based on the price of our Class A common stock in such public offering or private sale).

(3) Upon completion of this offering, we expect to award options to purchase an aggregate of shares of Class A common stock with an exercise price set at the initial public offering price issued pursuant to the 2020 Omnibus Incentive Plan (the "2020 Plan").

(4) Assumes no exercise of the underwriters' option to purchase additional shares. If the underwriters exercise their option to purchase additional shares in full, (i) the holders of Class A common stock will have % of the voting power in Maravai LifeSciences Holdings, Inc., (ii) MLSH 1, through ownership of the Class B common stock, will have % of the voting power of Maravai LifeSciences Holdings, Inc., (iii) MLSH 1 will own % of the outstanding LLC Units in Topco LLC and (iv) Maravai LifeSciences Holdings, Inc. will own % of the outstanding LLC Units in Topco LLC.

Our corporate structure following the offering, as described above, is commonly referred to as an"Up-C" structure, which is commonly used by partnerships and limited liability companies when they undertake an initial public offering of their business. Our Up-C structure together with the Tax Receivable Agreement will allow the existing owners of Topco LLC to continue to realize tax benefits associated with owning interests in an entity that is treated as a partnership, or "passthrough" entity, for income tax purposes following the offering. One of these benefits is that future taxable income of the Topco LLC that is allocated to such owners will be taxed on a flow-through basis and therefore will not be subject to corporate taxes at the entity level. Additionally, because the LLC Units that the existing owners will continue to hold are exchangeable for shares of our Class A common stock or, at our option, for cash, from Topco LLC, the Up-C structure also provides the existing owners of Topco LLC potential liquidity that holders of non-publicly traded limited liability companies are not typically afforded. See "Organizational Structure" and "Description of Capital Stock."

Following this offering, MLSH 1 will hold a number of shares of our Class B common stock equal to the number of LLC Units it owns. Holders of our Class A common stock and Class B common stock will each be entitled to one vote per share on all matters on which shareholders are entitled to vote.

Maravai LifeSciences Holdings, Inc. will also hold LLC Units, and therefore receive benefits on account of its ownership in an entity treated as a partnership, or "passthrough" entity, for income tax purposes. As Maravai LifeSciences Holdings, Inc. purchases LLC Units from MLSH 1 under the mechanism described above, it will obtain a step-up in tax basis in its share of the assets of Topco LLC and its flow-through subsidiaries. Thisstep-up in tax basis will provide Maravai LifeSciences Holdings, Inc. with certain tax benefits, such as future depreciation and amortization deductions that can reduce the taxable income allocable to Maravai LifeSciences Holdings, Inc. Pursuant to the Tax Receivable Agreement, Maravai LifeSciences Holdings, Inc. will agree to pay MLSH 1 and MLSH 2, collectively, 85% of the value of these tax benefits; however, the remaining 15% of such benefits will be available to Maravai LifeSciences Holdings, Inc. Due to the uncertainty of various factors, we cannot precisely quantify the likely tax benefits we will realize as a result of LLC Unit exchanges and the resulting amounts we are likely to pay out to LLC Unitholders pursuant to the Tax Receivable Agreement; however, we estimate that such payments may be substantial. See "Organizational Structure—Tax Receivable Agreement."

Generally, Maravai LifeSciences Holdings, Inc. will receive a pro rata share of any distributions (including tax distributions) made by Topco LLC to its members. Tax distributions will be calculated without regard to any applicable basis adjustment under Section 743(b) of the Internal Revenue Code (the "Code") and will be based upon an assumed tax rate, which, under certain circumstances, may cause Topco LLC to make tax distributions that, in the aggregate, exceed the amount of taxes that Topco LLC would have paid if it were a similarly situated corporate taxpayer. Funds used by Topco LLC to satisfy its tax distribution obligations will not be available for reinvestment in our business. See "Risk Factors—Risks Related to Our Organizational Structure."

As a result of the Organizational Transactions:

- the investors in this offering will collectively own shares of our Class A common stock and we will hold LLC Units;
- MLSH 1 will own LLC Units and shares of Class B common stock;
- our Class A common stock will collectively represent approximately % of the voting power in us; and
- our Class B common stock will collectively represent approximately % of the voting power in us.

THE OFFERING

Issuer	Maravai LifeSciences Holdings, Inc.
Class A common stock offered by us	shares.
Underwriters' option to purchase additional shares of Class A common stock	shares.
Class A common stock to be outstanding immediately after this offering	shares (or shares if the underwriters' option is exercised in full). If all outstanding LLC Units held by MLSH 1 were exchanged for newly-issued shares of Class A common stock on a one-for-one basis, shares of Class A common stock (or shares if the underwriters' option is exercised in full) would be outstanding.
Class B common stock to be outstanding immediately after this offering	shares. Immediately after this offering, MLSH 1 will own 100% of the outstanding shares of our Class B common stock.
Ratio of shares of Class A common stock to LLC Units	Our amended and restated certificate of incorporation and the amended and restated operating agreement of Topco LLC will require that we and Topco LLC at all times maintain a one-to-one ratio between the number of shares of Class A common stock issued by us and the number of LLC Units owned by us (subject to certain exceptions for treasury shares and shares underlying certain convertible or exchangeable securities).
Voting	Each share of our Class A common stock entitles its holder to one vote on all matters to be voted on by shareholders generally. Each share of our Class B common stock entitles its holder to one vote on all matters to be voted on by shareholders generally. After this offering, MLSH 1 will hold a number of shares of Class B common stock equal to the number of LLC Units it owns. See "Description of Capital Stock—Class B Common Stock." Holders of our Class A common stock and Class B common stock vote together as a single class on all matters presented to our shareholders for their vote or approval, except as otherwise required by applicable law.

Voting power held by holders of Class A common stock	% (or 100% if all outstanding LLC Units were exchanged for newly-issued shares of Class A common stock on a one-for-one basis).
Voting power held by holders of Class B common stock	% (or 0% if all outstanding LLC Units were exchanged for newly-issued shares of Class A common stock on a one-for-one basis).
Use of proceeds	We estimate, based upon an assumed initial public offering price of $ per share (which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus), we will receive net proceeds from this offering of approximately $ million (or $ million if the underwriters exercise their option to purchase additional shares in full), after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds as follows: • $ million to acquire newly-issued LLC Units (or LLC Units if the underwriters exercise their option to purchase additional shares in full) in Topco LLC and $ million to acquire outstanding LLC Units (or LLC Units if the underwriters exercise their option to purchase additional shares in full) from MLSH 1, in each case at a purchase price per LLC Unit equal to the initial public offering price per share of Class A common stock in this offering, less underwriting discounts and commissions; and • $ million to pay MLSH 2 as consideration for the Blocker Mergers. In turn, Topco LLC intends to: • apply the balance of the net proceeds it receives from us (including any additional proceeds it may receive from us if the underwriters exercise their option to purchase additional shares) to pay expenses incurred in connection with this offering and the Organizational Transactions and for general corporate purposes. See “Use of Proceeds” and “Organizational Structure.”

Controlled company	After this offering, assuming an offering size as set forth in this section, GTCR will control approximately % of the voting power (or % if the underwriters' option to purchase additional shares is exercised in full) in us. As a result, we expect to be a controlled company within the meaning of the corporate governance standards of The Nasdaq Stock Market ("NASDAQ"). See "Management—Corporate Governance—Controlled Company Status."
Directed share program	At our request, the underwriters have reserved up to shares of our Class A common stock, or % of the shares of our Class A common stock to be offered by this prospectus for sale, at the initial public offering price, for sale to certain individuals through a directed share program, including our directors, certain employees and certain other individuals identified by management. Shares purchased through the directed share program will not be subject to a lock-up restriction, except in the case of shares purchased by any of our directors or officers and certain of our employees and existing equityholders. The number of shares of our Class A common stock available for sale to the general public will be reduced to the extent these individuals or entities purchase such reserved shares. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same basis as the other shares offered by this prospectus.
Dividend policy	We currently intend to retain any future earnings for investment in our business and do not expect to pay any dividends in the foreseeable future. The declaration and payment of all future dividends, if any, will be at the discretion of our board of directors (our "Board") and will depend upon our financial condition, earnings, contractual conditions or applicable laws and other factors that our Board may deem relevant. See "Dividend Policy."
Exchange rights of holders of the LLC Units	Prior to this offering, we will enter into the Exchange Agreement with MLSH 1 so that it may exchange LLC Units, together with an equal number of shares of Class B common stock, for shares of Class A common stock on a one-for-one basis or, at our election, for cash from a substantially concurrent public offering or private sale (based on the price of our Class A common stock in such public offering or private sale). Any shares of Class B common stock so delivered will be cancelled. See "Organizational Structure—Exchange Agreement."

Tax Receivable Agreement	We will enter into the Tax Receivable Agreement with MLSH 1 and MLSH 2 that will provide for the payment by us to MLSH 1 and MLSH 2, collectively, of 85% of the amount of tax benefits, if any, that Maravai LifeSciences Holdings, Inc. actually realizes (or in some circumstances is deemed to realize) as a result of (i) certain increases in the tax basis of assets of Topco LLC and its subsidiaries resulting from purchases or exchanges of LLC Units, (ii) certain tax attributes of the Blocker Entities, Topco LLC and subsidiaries of Topco LLC that existed prior to this offering and (iii) certain other tax benefits related to our entering into the Tax Receivable Agreement, including tax benefits attributable to payments that we make under the Tax Receivable Agreement See "Organizational Structure—Tax Receivable Agreement."
Registration Rights Agreement	We intend to enter into a registration rights agreement (the "Registration Rights Agreement") with MLSH 1 and MLSH 2 in connection with this offering. The Registration Rights Agreement will provide MLSH 1 and MLSH 2 certain registration rights whereby, following our initial public offering and the expiration of any related lock-up period, MLSH 1 and MLSH 2 can require us to register under the Securities Act shares of Class A common stock, (including shares issuable to MLSH 1 upon exchange of its LLC Units). The Registration Rights Agreement will also provide for piggyback registration rights for MLSH 1 and MLSH 2. See "Certain Relationships and Related Party Transactions—Registration Rights Agreement."
Risk factors	Investing in our Class A common stock involves a high degree of risk. See "Risk Factors" elsewhere in this prospectus for a discussion of factors you should carefully consider before deciding to invest in our Class A common stock.
Symbol for trading on The Nasdaq Global Select Market	"MRVI."

Unless otherwise indicated, all information in this prospectus:

- assumes the effectiveness of the Organizational Transactions;
- assumes an initial public offering price of $ per share, which is the midpoint of the estimated public offering price range set forth on the cover of this prospectus;
- assumes that the underwriters' option to purchase additional shares of Class A common stock is not exercised;
- excludes the shares of Class A common stock that may be issuable upon exercise of redemption and exchange rights held by MLSH 1; and
- excludes shares of Class A common stock reserved for future issuance under the 2020 Plan.

SUMMARY HISTORICAL FINANCIAL AND OTHER DATA

The following tables present, as of the dates and for the periods indicated, (1) the summary historical consolidated financial and other data for Topco LLC and its consolidated subsidiaries and (2) the summary unaudited pro forma financial data for Maravai LifeSciences Holdings, Inc. and its consolidated subsidiaries, including Topco LLC. Topco LLC is the predecessor of Maravai LifeSciences Holdings, Inc. for financial reporting purposes. The summary condensed consolidated statement of operations data for the nine months ended September 30, 2019 and 2020 and the summary condensed consolidated balance sheet data as of September 30, 2020 have been derived from the unaudited condensed consolidated financial statements and notes of Topco LLC and its subsidiaries included elsewhere in this prospectus. The summary consolidated statement of operations data for the years ended December 31, 2018 and 2019 and the summary consolidated balance sheet data as of December 31, 2018 and 2019 have been derived from the audited consolidated financial statements and notes of Topco LLC and its subsidiaries included elsewhere in this prospectus.

The results of operations for the periods presented below are not necessarily indicative of the results to be expected for any future period and the results for any interim period are not necessarily indicative of the results that may be expected for a full fiscal year. The information set forth below should be read together with "Use of Proceeds," "Capitalization," "Selected Consolidated Financial Data," "Unaudited Pro Forma Condensed Consolidated Financial Information" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and the accompanying notes included elsewhere in this prospectus.

The summary unaudited pro forma consolidated financial data of Maravai LifeSciences Holdings, Inc. presented below have been derived from our unaudited pro forma condensed consolidated financial statements and notes included elsewhere in this prospectus. The summary unaudited pro forma financial data as of and for the year ended December 31, 2019 and as of and for the nine months ended September 30, 2020, gives effect to the Organizational Transactions as described in "Organizational Structure," including the consummation of this offering, the use of the net proceeds therefrom and related transactions, as described in "Use of Proceeds" and "Unaudited Pro Forma Condensed Consolidated Financial Data," as if all such transactions had occurred on January 1, 2019, with respect to the condensed consolidated statement of operations data and September 30, 2020, with respect to the condensed consolidated balance sheet data. The unaudited pro forma financial data include various estimates that are subject to material change and may not be indicative of what our operations or financial position would have been had this offering and related transactions taken place on the dates indicated, or that may be expected to occur in the future. See "Unaudited Pro Forma Condensed Consolidated Financial Information" for a complete description of the adjustments and assumptions underlying the summary unaudited pro forma consolidated financial data.

The summary historical consolidated financial and other data of Maravai LifeSciences Holdings, Inc. have not been presented as Maravai LifeSciences Holdings, Inc. is a newly incorporated entity, has had no business transactions or activities to date and had no material assets or liabilities during the periods presented in this section.

	Historical Topco LLC				Pro Forma Maravai LifeSciences Holdings, Inc.	
	Year Ended December 31,		Nine Months Ended September 30,			
(in thousands, except per share and per unit data)	2018	2019	2019	2020	Year Ended December 31, 2019	Nine Months Ended September 30, 2020
			(Unaudited)		(Unaudited)	
Consolidated Statement of Operations Data:						
Revenue	$123,833	$143,140	$	$	$	$

(in thousands, except per share and per unit data)	Historical Topco LLC				Pro Forma Maravai LifeSciences Holdings, Inc.	
	Year Ended December 31,		Nine Months Ended September 30,		Year Ended December 31,	Nine Months Ended September 30,
	2018	2019	2019	2020	2019	2020
			(Unaudited)		(Unaudited)	
Operating Expenses:						
Cost of revenue	60,765	66,849				
Research and development	4,499	3,627				
Selling, general and administrative	41,194	48,354				
Change in estimated fair value of contingent consideration	939	322				
Total operating expenses	107,397	119,152				
Income from operations	16,436	23,988				
Other income (expense):						
Interest expense	(27,399)	(29,959)				
Loss on extinguishment of debt	(5,622)	—				
Other income	87	118				
Loss before income taxes	(16,498)	(5,853)				
Income tax expense (benefit)	417	(652)				
Net loss	$ (16,915)	$ (5,201)	$	$	$	$
Net loss attributable to noncontrolling interests	(12,443)	(731)				
Net loss attributable to Topco LLC member	$ (4,472)	$ (4,470)	$	$	$	$
Net loss per common unit attributable to Topco LLC member—basic and diluted	$ (17,727)	$ (8,481)	$	$	$	$
Weighted-average common units outstanding	1,000	1,000				
Per Share Data(1):						
Pro forma weighted average shares of Class A common stock outstanding:						
Basic						
Diluted						
Pro forma net loss available to Class A common stock per share:						
Basic					$	$
Diluted					$	$
Selected Other Data:						
Adjusted EBITDA(2)	$ 53,000	$ 62,014	$	$	$	$
Adjusted Free Cash Flow(3)	$ 49,193	$ 42,101	$	$	$	$

	Historical Topco LLC			Pro Forma Maravai LifeSciences Holdings, Inc.	
	As of December 31,		As of September 30,	As of December 31,	As of September 30,
	2018	2019	2020	2019	2020
			(Unaudited)	(Unaudited)	
Consolidated Balance Sheet Data (at period end):					
Cash	$ 21,866	$ 24,700	$	$	$
Working capital(4)	17,883	30,990			
Total assets	539,676	577,796			

	Historical Topco LLC			Pro Forma Maravai LifeSciences Holdings, Inc.	
	As of December 31,		As of September 30,	As of December 31,	As of September 30,
	2018	2019	2020	2019	2020
			(Unaudited)		(Unaudited)
Long-term debt, less current portion	335,550	334,783			
Total liabilities	391,660	433,169			
Total member's/shareholders' equity	148,016	144,627			

(1) See the unaudited pro forma consolidated statement of operations in "Unaudited Pro Forma Consolidated Financial Information" for the description of the assumptions underlying the pro forma net loss per share calculations.

(2) Adjusted EBITDA is a supplemental measure of operating performance that is not prepared in accordance with U.S. generally accepted accounting principles ("GAAP") and that does not represent, and should not be considered as, an alternative to net loss, as determined in accordance with GAAP. We define Adjusted EBITDA as net loss before interest, taxes, depreciation and amortization, certain non-cash items and other adjustments that we do not consider in our evaluation of ongoing operating performance from period to period.

We use Adjusted EBITDA to understand and evaluate our core operating performance and trends and to develop short-term and long-term operating plans. We believe that Adjusted EBITDA facilitates comparison of our operating performance on a consistent basis between periods and, when viewed in combination with our results prepared in accordance with GAAP, helps provide a broader picture of factors and trends affecting our results of operations.

Adjusted EBITDA has limitations as an analytical tool, and you should not consider it in isolation, or as a substitute for analysis of our results as reported under GAAP. Because of these limitations, Adjusted EBITDA should not be considered as a replacement for net loss, as determined by GAAP, or as a measure of our profitability. We compensate for these limitations by relying primarily on our GAAP results and using non-GAAP measures only for supplemental purposes.

A reconciliation of Adjusted EBITDA to net loss, the most directly comparable GAAP measure, is as follows:

	Historical Topco LLC				Pro Forma Maravai LifeSciences Holdings, Inc.	
	Year Ended December 31,		Nine Months Ended September 30,		Year Ended December 31,	Nine Months Ended September 30,
(in thousands)	2018	2019	2019	2020	2019	2020
Net loss	$(16,915)	$ (5,201)	$	$	$	$
Add:						
Amortization	20,122	20,274				
Depreciation	2,225	3,810				
Interest expense	27,399	29,959				
Income tax expense (benefit)	417	(652)				
EBITDA	33,248	48,190				
Acquisition contingent consideration[a]	939	322				
Loss on extinguishment of debt[b]	5,622	—				
Acquisition integration costs[c]	7,529	6,170				
Amortization of purchase accounting inventory step-up[d]	2,967	1,856				

(in thousands)	Historical Topco LLC Year Ended December 31, 2018	Historical Topco LLC Year Ended December 31, 2019	Historical Topco LLC Nine Months Ended September 30, 2019	Historical Topco LLC Nine Months Ended September 30, 2020	Pro Forma Maravai LifeSciences Holdings, Inc. Year Ended December 31, 2019	Pro Forma Maravai LifeSciences Holdings, Inc. Nine Months Ended September 30, 2020
Unit-based compensation(e)	2,121	1,679				
GTCR management fees(f)	574	523				
Merger and acquisition related expenses(g)	—	3,274				
Adjusted EBITDA	$ 53,000	$ 62,014	$	$	$	$

(a) Refers to the change in fair value and settlement of earn-out payments related to a 2017 acquisition.
(b) Refers to non-operating cash expense incurred on extinguishment of debt.
(c) Refers to incremental costs incurred to execute and integrate completed acquisitions.
(d) Refers to a non-cash charge related to the amortization expense of the step-up of inventory from purchase price accounting.
(e) Refers to non-cash expense associated with unit-based compensation.
(f) Refers to cash fees paid to GTCR pursuant to the advisory services agreement that will terminate in connection with this offering.
(g) Refers to diligence, legal, accounting, tax and consulting fees incurred associated with an acquisition that was not consummated.

(3) Adjusted Free Cash Flow is a supplemental measure of operating performance that is not prepared in accordance with GAAP and that does not represent, and should not be considered as, an alternative to net loss, as determined in accordance with GAAP. We define Adjusted Free Cash Flow as Adjusted EBITDA less capital expenditures.

We believe that Free Cash Flow facilitates comparison of our operating performance on a consistent basis between periods and, when viewed in combination with our results prepared in accordance with GAAP, helps provide a broader picture of factors and trends affecting our results of operations.

Adjusted Free Cash Flow has limitations as an analytical tool, and you should not consider it in isolation, or as a substitute for an analysis of our results as reported under GAAP. Because of these limitations, Adjusted Free Cash Flow should not be considered as a replacement for net loss, as determined by GAAP, or as a measure of our profitability. We compensate for these limitations by relying primarily on our GAAP results and using non-GAAP measures only for supplemental purposes.

A reconciliation of Adjusted Free Cash Flow is as follows:

	Historical Topco LLC Year Ended December 31, 2018	Historical Topco LLC Year Ended December 31, 2019	Historical Topco LLC Nine Months Ended September 30, 2019	Historical Topco LLC Nine Months Ended September 30, 2020	Pro Forma Maravai LifeSciences Holdings, Inc. Year Ended December 31, 2019	Pro Forma Maravai LifeSciences Holdings, Inc. Nine Months Ended September 30, 2020
Adjusted EBITDA	$53,000	$ 62,014	$	$	$	$
Capital expenditures(a)	$ (3,807)	$(19,913)	$	$	$	$
Adjusted Free Cash Flow	$49,193	$ 42,101	$	$	$	$

(a) We define capital expenditures as purchases of property and equipment and intangible assets, including patents, which are included in cash flows from investing activities, and accounts payable and accrued expenses.

(4) We define working capital as current assets less current liabilities.

RISK FACTORS

Investing in our Class A common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information contained in this prospectus, including our consolidated financial statements and the related notes thereto, before making a decision to invest in our Class A common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that affect us. If any of the following risks occur, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the price of our Class A common stock could decline, and you could lose all or part of your investment.

Risks Related to Our Business and Strategy

We have incurred losses since inception, we may incur losses in the future and we may not be able to generate sufficient revenue to achieve or maintain profitability.

We have incurred losses since our inception. For the years ended December 31, 2018 and 2019, we incurred net losses of $16.9 million and $5.2 million, respectively. As of December 31, 2019, we had an accumulated deficit of $42.4 million. We expect that our operating expenses will continue to increase as we grow our business and as a result of our becoming a public company. Since our inception, we have financed our operations primarily through the incurrence of indebtedness, revenue from our products and services and the sale of our equity securities. We will need to generate significant additional revenue to achieve or maintain profitability and we cannot be sure that we will remain profitable for any substantial period of time. We may never be able to generate sufficient revenue to achieve or maintain profitability and our recent and historical growth should not be considered indicative of our future performance.

Our operating results may fluctuate significantly in the future, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide.

Our quarterly and annual operating results may fluctuate significantly, which makes it difficult for us to predict our future operating results. These fluctuations may be driven by a variety of factors, many of which are outside of our control, including, but not limited to:

- demand from our largest customers, which account for a significant percentage of our sales and orders, may not meet our expectations regarding volume and price in any given time period;
- the level of demand for our products and services, which may vary significantly, and our ability to increase penetration in our existing markets and expand into new markets;
- customers accelerating, canceling, reducing or delaying orders as a result of developments related to theirpre-clinical studies and clinical trials;
- impacts on us, our suppliers and our customers as a result of theCOVID-19 pandemic;
- the relative reliability and robustness of our products and services;
- changes in governmental regulations or the regulatory posture toward our business;
- the volume and mix of the products and services we sell or changes in the production or sales costs related to our products and services;
- the success of our newer products, such as our CleanCap® mRNA products, and the introduction of other new products or product enhancements by us or others in our industry;
- the timing and amount of expenditures that we may incur to acquire, develop or commercialize additional products, services and technologies or for other purposes, such as the expansion of our facilities;

- changes in governmental and academic funding of life sciences research and developments or changes that impact budgets, budget cycles or seasonal spending patterns of our customers;
- future accounting pronouncements or changes in our accounting policies;
- difficulties encountered by our commercial carriers in delivering our products, whether as a result of external factors such as weather or internal issues such as labor disputes;
- general market conditions and other factors, including factors unrelated to our operating performance or the operating performance of our competitors; and
- the other factors described in this "Risk Factors" section.

The impact of any one of the factors discussed above, or the cumulative effects of a combination of such factors, could result in significant fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparisons of our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance.

As a result of variability and unpredictability, we may also fail to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall short of the expectations of analysts or investors or any guidance we may provide, or if the guidance we provide falls short of the expectations of analysts or investors, the price of our Class A common stock could decline substantially. Such a stock price decline could occur even when we have met or exceeded any previously publicly stated guidance we may have provided.

We depend on a limited number of customers for a high percentage of our revenue. If we cannot maintain our current relationships with customers, fail to sustain recurring sources of revenue with our existing customers, or if we fail to enter into new relationships, our future operating results will be adversely affected.

For the years ended December 31, 2018 and 2019, revenue from our top 10 customers accounted for 33% and 34% of our total revenue, respectively. For the years ended December 31, 2018 and 2019, revenue from our top five customers accounted for 25% and 26% of our total revenue, respectively, and revenue from our top six to 10 customers accounted for 8% and 9% of our total revenue during the same periods, respectively. For the year ended December 31, 2018, one single customer represented 13% of total consolidated accounts receivable. For the year ended December 31, 2019, two customers accounted for 11% and 10% of total consolidated accounts receivable. Our largest customer, Thermo Fisher Scientific Inc., accounted for 9% and 10% of our total revenue for the years ended December 31, 2018 and 2019, respectively. No other customer has accounted for 10% or more of our total revenue for these periods. The revenue attributable to our top customers has fluctuated in the past and may fluctuate in the future, which could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects. In addition, the termination of these relationships, including following any failure to renew a long-term contract, could result in a temporary or permanent loss of revenue.

Our future success depends on our ability to maintain these relationships, to increase our penetration among these existing customers and to establish new relationships. We engage in conversations with other companies and institutions regarding potential commercial opportunities on an ongoing basis, which can be time consuming. There is no assurance that any of these conversations will result in a commercial agreement, or if an agreement is reached, that the resulting relationship will be successful. Speculation in the industry about our existing or potential commercial relationships can be a catalyst for adverse speculation about us, our products, our services and our technology, which can adversely affect our reputation and our business. In addition, if our customers order our products or services, but fail to pay on time or at all, our liquidity, financial condition, results of operations, cash flows and prospects could be materially and adversely affected.

We cannot assure investors that we will be able to further penetrate our existing markets or that our products or services will gain adequate market acceptance. Any failure to increase penetration in our existing markets would adversely affect our ability to improve our operating results.

Certain of our products are used by customers in the production of vaccines and therapies, some of which represent relatively new and still-developing modes of treatment. Unforeseen adverse events, negative clinical outcomes, or increased regulatory scrutiny of these and their financial cost may damage public perception of the safety, utility, or efficacy of these vaccines and therapies or other modes of treatment and may harm our customers' ability to conduct their business. Such events may negatively impact our revenue and have an adverse effect on our performance.

Gene therapy and nucleic acid vaccines remain relatively new and are under active development, with only a few gene therapies and no nucleic acid vaccines approved to date by regulatory authorities. Public perception may be influenced by claims that gene therapy or nucleic acid vaccines are unsafe or ineffective, and gene therapy may not gain the acceptance of the public or the medical community. In addition, ethical, social, legal and financial concerns about gene therapy and nucleic acid vaccines could result in additional regulations or limitations or even prohibitions on certain gene therapies or vaccine-related products. More restrictive regulations or negative public perception could reduce certain of our customers' use of our products and services, which could negatively affect our revenue and performance. In addition, certain of the COVID-19 vaccine development programs that may incorporate our CleanCap® products are still in early stages of development, including those with Chula Vista Vaccine Research Center in partnership with the University of Pennsylvania, eTheRNA Immunotherapies and Greenlight Biosciences. There can be no assurance that these vaccine programs will proceed to clinical trials or result in a commercial product, or that any resulting vaccine will incorporate our CleanCap® products.

A pandemic, epidemic, or outbreak of an infectious disease, such as COVID-19, has affected, and may continue to materially and adversely affect our business, financial condition, results of operations, cash flows and prospects.

In late 2019, COVID-19 surfaced in Wuhan, China. Since then, COVID-19 has spread to multiple other regions and countries, including the San Francisco Bay Area, where our protein detection business is located, the San Diego, California and Washington, D.C. areas, where our nucleic acid production business is located and the Wilmington, North Carolina area, where our biologics safety testing products business is located. The COVID-19 pandemic is evolving and to date has led to the implementation of various responses, including government imposed shelter-in-place orders, quarantines, travel restrictions and other public health safety measures, as well as reported adverse impacts on healthcare resources, facilities and providers in California, across the United States and in other countries. In response to the spread of COVID-19, and in accordance with direction from state and local government authorities, we have restricted access to our facilities mostly to personnel and third parties who must perform critical activities that must be completed on-site, limited the number of such personnel that can be present at our facilities at any one time, and requested that many of our personnel work remotely. In the event that government authorities were to further modify current restrictions, our employees conducting research and development or manufacturing activities may not be able to access our laboratory or manufacturing facilities and our core activities may be significantly limited or curtailed, possibly for an extended period of time.

As a result of the COVID-19 pandemic, or similar pandemics and outbreaks that may occur in the future, we have experienced and may in the future experience severe disruptions, including:

- interruption of or delays in receiving products and supplies from the third parties we rely on to, among other things, manufacture components to our products, due to staffing shortages, production slowdowns or stoppages and disruptions in delivery systems, which may impair our ability to manufacture and sell our products and services;
- limitations on our business operations by the local, state or federal government that could impact our ability to manufacture, sell or deliver our products and services;
- on-site visit limitations and prohibitions imposed by customers that could impact our ability to engage inpre-sales activities, and to provide post-sale activities, such as training, service and support;
- delays in customers' purchasing decisions and negotiations with customers and potential customers;

- business disruptions caused by workplace, laboratory and office closures and an increased reliance on employees working from home, travel limitations, cyber security and data accessibility limits, or communication or mass transit disruptions; and
- limitations on employee resources that would otherwise be focused on the conduct of our activities, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people.

Any of these factors could severely impact our research and development activities, manufacturing business operations and sales or delay necessary interactions with local regulators, third-party vendors and other important contractors and customers. These and other factors arising from the COVID-19 pandemic could worsen in countries that are already experiencing significant levels of COVID-19 infections, could continue to spread to additional countries or could return to countries where the pandemic has been partially contained and could further adversely impact our ability to conduct our business generally and have a material adverse impact on our business, financial condition, results of operations, cash flows and prospects. For example, our protein detection segment experienced a decrease in sales for the second quarter of 2020 relative to the same period in 2019 due to stay-at-home orders in the San Francisco Bay Area and the closure of many academic laboratories that are the main customers of this segment and the reduced operations of other customers. Prolonged closures or shutdowns as a result of the COVID-19 pandemic would continue to affect sales of our protein detection segment adversely.

The extent to which the pandemic may negatively impact our consolidated operations and results of operations or those of our third-party manufacturers, suppliers, partners or customers will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the ultimate geographic spread of the disease, the duration of the pandemic, the extent of travel restrictions, additional or modified government actions, new information that will emerge concerning the severity and impact of COVID-19 and actions to contain the pandemic or treat its impact, such as social distancing, quarantines, lock-downs or business closures.

We cannot presently predict the scope and severity of any potential business shutdowns or disruptions as a result of the COVID-19 pandemic. If we or any of the third parties with whom we engage were to experience shutdowns or other business disruptions, our ability to conduct our business in the manner and on the timelines presently planned could be materially and negatively impacted, which could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

Changes in economic conditions could negatively impact our revenue and earnings.

Our reagents are sold primarily to biopharmaceutical and academic organizations developing novel vaccines and therapies and performing basic research. Research and development spending by our customers and the availability of government research funding can fluctuate due to changes in available resources, mergers of pharmaceutical and biotechnology companies, spending priorities, general economic conditions and institutional and governmental budgetary policies. Our biologics safety testing customers are biopharmaceutical companies, contract research organizations (“CROs”), contract development and manufacturing organizations (“CDMOs”) and life science companies, which largely serve the biopharmaceutical industry. Our nucleic acid production customers are largely vaccine and therapeutic drug makers or diagnostics manufacturers, which rely in part on government healthcare-related policies and funding. Changes in government funding for certain research or reductions in overall healthcare spending could negatively impact us or our customers and, correspondingly, our sales to them. Currently, the U.S. and global economies are experiencing a period of economic downturn as a result of the COVID-19 pandemic. Other global economies have been slow to recover from past downturns. Any continued or further economic downturns or reductions or delays in governmental funding could cause customers to delay or forego purchases of our products and services. In addition, the majority of our customers’ contracts can be terminated, delayed or reduced in scope upon short notice or no notice. Changes in the level of orders received and filled can cause fluctuations in our quarterly revenue and earnings.

We are dependent on our customers' spending on and demand for outsourced nucleic acid production, biologics safety testing and protein detection research products and services. A reduction in spending or demand could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

The success of our business depends primarily on the number and size of contracts with our customers, primarily pharmaceutical and biotechnology companies, for our products and services. Over the past several years, we have benefited from an increased demand for our products and services as a result of the continued growth of the global biologics market, increasing research and development budgets of our customers and greater degree of outsourcing by our customers. A slowing or reversal of any of these trends could have a significant adverse effect on the demand for our products and services.

In addition to these industry trends, our customers' willingness and ability to utilize our products and services are also subject to, among other things, their own financial performance, changes in their available resources, their decisions to acquire in-house manufacturing capacity, their spending priorities, their budgetary policies and practices and their need to develop new biological products, which, in turn, are dependent upon a number of factors, including their competitors' discoveries, developments and commercial manufacturing initiatives and the anticipated market, clinical and reimbursement scenarios for specific products and therapeutic areas. In addition, consolidation in the industries in which our customers operate may have an impact on our customers' spending as they integrate acquired operations, including research and development departments and associated budgets. If our customers reduce their spending on our products and services as a result of any of these or other factors, our business, financial condition, results of operations, cash flows and prospects would be materially and adversely affected.

We compete with life science, pharmaceutical and biotechnology companies who are substantially larger than we are and potentially capable of developing new approaches that could make our products, services and technology obsolete.

The market for pharmaceutical, reagent, therapeutic and diagnostic products and services is intensely competitive, rapidly evolving, significantly affected by new product introductions and other market activities by industry participants and subject to rapid technological change. We also expect increased competition as additional companies enter our market and as more advanced technologies become available. We compete with other providers of outsourced biologics products and services. We also compete with the in-house discovery, development and commercial manufacturing functions of pharmaceutical and biotechnology companies. Many of our competitors are large, well-capitalized companies with significantly greater resources and market share than we have. As a consequence, these competitors are able to spend more aggressively on product and service development, marketing, sales and other initiatives than we can. Many of these competitors also have:

- broader name recognition;
- longer operating histories and the benefits derived from greater economies of scale;
- larger and more established distribution networks;
- additional product and service lines and the ability to bundle products and services to offer higher discounts or other incentives to gain a competitive advantage;
- more experience in conducting research and development, manufacturing and marketing;
- more experience in entering into collaborations or other strategic partnership arrangements; and
- more financial, manufacturing and human resources to support product development, sales and marketing and patent and other intellectual property litigation.

These factors, among others, may enable our competitors to market their products and services at lower prices or on terms more advantageous to customers than we can offer. Competition may result in price

reductions, reduced gross margins and loss of market share, any of which could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects. Additionally, our current and future competitors, including certain of our customers, may at any time develop additional products and services that compete with our products and services and new approaches by these competitors may make our products, services, technologies and methodologies obsolete or noncompetitive. We may not be able to compete effectively against these organizations.

In addition, to develop and market our new products, services, technologies and methodologies successfully, we must accurately assess and meet customers' needs, make significant capital expenditures, optimize our development and manufacturing processes to predict and control costs, hire, train and retain the necessary personnel, increase customer awareness and acceptance of our services, provide high-quality services in a timely manner, price our products and services competitively and effectively integrate customer feedback into our business planning. If we fail to create demand for our new products, services or technologies, our future business could be harmed.

If our products and services do not perform as expected or the reliability of the technology on which our products and services are based is questioned, we could experience lost revenue, delayed or reduced market acceptance of our products and services, increased costs and damage to our reputation.

Our success depends on the market's confidence that we can provide reliable, high-quality life science reagents. We believe that customers in our target markets are likely to be particularly sensitive to product defects and errors. Our reputation and the public image of our products, services and technologies may be impaired if our products or services fail to perform as expected.

Although our products are tested prior to shipment, defects or errors could nonetheless occur. Our operating results depend on our ability to execute and, when necessary, improve our quality management strategy and systems and our ability to effectively train and maintain our employee base with respect to quality management. A failure of our quality control systems could result in problems with facility operations or preparation or provision of products. In each case, such problems could arise for a variety of reasons, including equipment malfunction, failure to follow specific protocols and procedures, problems with raw materials or environmental factors and damage to, or loss of, manufacturing operations. Such problems could affect production of a particular batch or series of batches of products, requiring the destruction of such products or a halt of facility production altogether. Furthermore, some of the products that we manufacture are subsequently incorporated into products that are sold by other life sciences companies and we have no control over the manufacture and production of those products.

In addition, in the event we, or our suppliers, fail to meet required quality standards and if our products experience, or are perceived to experience, a material defect or error, our products could be recalled or we may be unable to timely deliver products to our customers, which in turn could damage our reputation for quality and service. In the past, certain of our custom mRNA and CleanCap® reagent products have been sold with insufficient capping efficiency or with incorrect transcription instructions. Additionally, several lots of our HCP ELISA biologics safety testing kits have experienced a possible instability drift and decrease in accuracy. Although we have taken steps to improve our quality review, product documentation and reference testing procedures, we cannot guarantee that we will not experience quality assurance issues with our products in the future. Any such failure could, among other things, lead to increased costs, delayed or lost revenue, delayed market acceptance, damaged reputation, diversion of development resources, legal claims, reimbursement to customers for lost drug product, starting materials and active pharmaceutical ingredients, other customer claims, damage to and possibly termination of existing customer relationships, increased insurance costs, time and expense spent investigating the cause and, depending on the cause, similar losses with respect to other batches or products, any of which could harm our business, financial condition, results of operations, cash flows and prospects. Such defects or errors could also narrow the scope of the use of our products, which could hinder our success in the market.

Even after any underlying concerns or problems are resolved, any lingering concerns in our target markets regarding our technology or any manufacturing defects or performance errors in our products or services could continue to result in lost revenue, delayed market acceptance, damage to our reputation and claims against us.

In addition, we may be unable to maintain the quality, reliability, robustness and expected turnaround times of our products and services to continue to satisfy customer demand as we grow. To effectively manage our growth, we must continue to improve our operational, manufacturing and quality control systems and processes and other aspects of our business and continue to effectively expand, train and manage our personnel. The time and resources required to improve our existing systems and procedures, implement new systems and procedures and to adequately staff such existing and new systems and procedures is uncertain, and failure to complete this in a timely and efficient manner could adversely affect our operations and negatively impact our business and financial results. We may need to purchase additional equipment, some of which can take several months or more to procure, set up and validate, establish new production processes and increase our personnel levels to meet increased demand. There can be no assurance that any of these increases in scale, personnel expansion or equipment or process enhancements will be successfully implemented, or that we will have adequate space, including in our laboratory and production facilities, to accommodate such required expansion. Failure to manage this growth or transition could result in delays in turnaround times, higher product costs, declining product quality, deteriorating customer service and slower responses to competitive challenges. A failure in any one of these areas could make it difficult for us to meet market expectations for our products and services and could damage our reputation and our business, financial condition, results of operations, cash flows and prospects could be adversely affected.

Our products are highly complex and are subject to quality control requirements.

Whether a product is produced by us or purchased from outside suppliers, it is subject to quality control procedures, including the verification of stability and performance and, for certain products, additional validation required by certain GMP that we voluntarily follow, European Conformity (“CE”) marking and ISO 9001:2015 compliance, prior to final packaging. Certain of our products are manufactured following the voluntary GMP quality standards of the International Council for Harmonisation’s GMP Guide, comparable GMP principles for the European Union and customer-specific requirements. We believe these products are exempt from compliance with the Food, Drug, and Cosmetic Act (“FDCA”) and the current GMP (“cGMP”) regulations of the Food and Drug Administration (“FDA”), as our products are further processed and incorporated into final drug products by our customers and we do not make claims related to their safety or effectiveness. In the event we, or our suppliers, produce products that fail to comply with required quality standards, we may incur delays in fulfilling orders, write-downs, damages resulting from product liability claims and harm to our reputation.

We rely on a limited number of suppliers or, in some cases, sole suppliers, for some of our raw materials and may not be able to find replacements or immediately transition to alternative suppliers.

Certain of our raw materials are sourced from a limited number of suppliers and some materials, including a proprietary DNA reagent, certain packaging materials, specific cell lines for Cygnus Technologies’ operations and certain raw materials used in our nucleic acid production products, as well as those raw materials sold under the Glen Research brand, are sole sourced. Delays or difficulties in securing these raw materials or other laboratory materials could result in an interruption in our production operations if we cannot obtain an acceptable substitute. Any such interruption could significantly affect our business, financial condition, results of operations, cash flows and prospects. While we may identify other suppliers, raw materials furnished by such replacement suppliers may require us to alter our production operations or perform extensive validations, which may be time consuming and expensive. There can be no assurance that we will be able to secure alternative materials and revalidate them without experiencing interruptions in our workflow. If we should encounter delays or difficulties in obtaining raw materials, our business, financial condition, results of operations, cash flows and prospects could be adversely affected.

We depend on a stable and adequate supply of quality raw materials from our suppliers, and price increases or interruptions of such supply could have an adverse impact on our business, financial condition, results of operations, cash flows and prospects.

Our operations depend upon our ability to obtain raw materials at reasonable prices. If we are unable to obtain the materials we need at a reasonable price, we may not be able to produce certain of our products at marketable prices or at all, which could have a material adverse effect on our results of operations.

Although we believe that we have stable relationships with our existing suppliers, we cannot assure you that we will be able to secure a stable supply of raw materials going forward. Our suppliers may not be able to keep up with our pace of growth or may reduce or cease their supply of raw materials to us at any time. In addition, we cannot assure you that our suppliers have obtained and will be able to obtain or maintain all licenses, permits and approvals necessary for their operations or comply with all applicable laws and regulations, and failure to do so by them may lead to interruption in their business operations, which in turn may result in shortages of raw materials supplied to us. Some of our suppliers are based overseas and therefore may need to maintain export or import licenses. If the supply of raw materials is interrupted, our business, financial condition, results of operations, cash flows and prospects may be adversely affected.

Our business could be adversely affected by disruptions at our sites.

We rely upon our internal manufacturing, packaging and distribution operations to produce many of the products we sell and our warehouse facilities to store products pending sale. Any significant disruption of those operations for any reason, such as labor unrest, power interruptions, fire, hurricanes, the COVID-19 pandemic, earthquakes or other events beyond our control, could adversely affect our sales and customer relationships and therefore adversely affect our business. We have significant operations in California, near major earthquake faults, which make us susceptible to earthquake risk.

If we are unable to manufacture in specific quantities, our operating results will be harmed.

Our revenue and other operating results depend in large part on our ability to manufacture and ship our products in sufficient quantities. Any interruptions we experience in the manufacturing or shipping of our products could delay our ability to recognize revenue in a particular quarter. Manufacturing problems can and do arise, and as demand for our products increases, any such problems could have an increasingly significant impact on our operating results. While we have not generally experienced problems with, or delays in, our production capabilities that resulted in delays in our ability to ship finished products, there can be no assurance that we will not encounter such problems in the future. We may not be able to quickly ship products and recognize anticipated revenue for a given period if we experience significant delays in the manufacturing process. In addition, we must maintain sufficient production capacity in order to meet anticipated customer demand, and we may be unable to offset the associated fixed costs if orders slow, which would adversely affect our operating margins. If we are unable to manufacture our products consistently, in sufficient quantities and on a timely basis, our revenue, cash flow, gross margins and our other results of operations will be materially and adversely affected.

Natural disasters, geopolitical unrest, war, terrorism, public health issues or other catastrophic events could disrupt the supply, delivery or demand of products and services, which could negatively affect our operations and performance.

We are subject to the risk of disruption by earthquakes, hurricanes, floods and other natural disasters, fire, power shortages, geopolitical unrest, war, terrorist attacks and other hostile acts, public health issues, epidemics or pandemics, such as the COVID-19 pandemic, and other events beyond our control and the control of the third parties on which we depend. Any of these catastrophic events, whether in the United States or abroad, may have a significant negative impact on the global economy, our employees, facilities, partners, suppliers, distributors or customers, and could decrease demand for our products and services, create delays and inefficiencies in our supply chain and make it difficult or impossible for us to deliver products and services to our customers.

In addition, a catastrophic event that results in damage to specific equipment that would be difficult to replace, the destruction or disruption of our research and production facilities or our critical business or information technology systems would severely affect our ability to conduct normal business operations and, as a result, our operating results would be adversely affected.

Future strategic transactions or acquisitions may require us to seek additional financing, which we may not be able to secure on favorable terms, if at all.

We plan to continue a strategy of growth and development for our business. To this end, we actively evaluate various strategic transactions on an ongoing basis, including licensing or acquiring complementary products, technologies or businesses that would complement our existing portfolio of products and services. In order to complete such strategic transactions, we may need to seek additional financing to fund these investments and acquisitions. Should we need to do so, we may not be able to secure such financing, or obtain such financing on favorable terms because of the volatile nature of the biotechnology marketplace. In addition, future acquisitions may require the issuance or sale of additional equity, or equity-linked securities, which may result in additional dilution to our shareholders. Further, on October 19, 2020, we entered into a new credit agreement (the "New Credit Agreement"), which contains a number of restrictive covenants that impose significant restrictions on our ability to make acquisitions or certain other investments.

Because we rely heavily on third-party package-delivery services, a significant disruption in these services, damages or losses sustained during shipping or significant increases in prices could adversely affect our business, financial condition, results of operations, cash flows and prospects.

We ship a significant portion of our products to our customers through independent package delivery companies, such as FedEx, UPS and DHL. If one or more of these third-party package-delivery providers were to experience a major work stoppage, preventing our products from being delivered in a timely fashion or causing us to incur additional shipping costs we could not pass on to our customers, our costs could increase and our relationships with certain of our customers could be adversely affected. In addition, if one or more of these third-party package-delivery providers were to increase prices, and we were not able to find comparable alternatives or make adjustments in our delivery network, our profitability could be adversely affected. Furthermore, if one or more of these third-party package-delivery providers were to experience performance problems or other difficulties, it could negatively impact our operating results and our customers' experience. In the past, some of our products have sustained serious damage in transit such that they were no longer usable. Although we have taken steps to improve our packaging and shipping containers, there is no guarantee our products will not become damaged or lost in transit in the future. If our products are damaged or lost in transit, it may result in a substantial delay in the fulfillment of our customer's order and, depending on the type and extent of the damage, it may result in a substantial financial loss. If our products are not delivered in a timely fashion or are damaged or lost during the delivery process, our customers could become dissatisfied and cease using our products our services, which would adversely affect our business, financial condition, results of operations, cash flows and prospects.

If we are unable to continue to hire and retain skilled personnel, we will have trouble developing and marketing our products and services.

Our success depends largely upon the continued service of our management and scientific staff and our ability to attract, retain and motivate highly skilled technical, scientific, management and marketing personnel, who deliver high-quality and timely services to our customers and keep pace with cutting-edge technologies and developments in biologics. We also face significant competition in the hiring and retention of such personnel from other companies, other providers of outsourced biologics services, research and academic institutions, government and other organizations who have superior funding and resources. The loss of key personnel or our inability to hire and retain skilled personnel could materially adversely affect the development of our products and services and our business, financial condition, results of operations, cash flows and prospects.

We may enter into additional distribution arrangements and marketing alliances for certain products and services and any failure to successfully identify and implement these arrangements on favorable terms, if at all, may impair our ability to effectively distribute and market our products.

We may pursue additional arrangements regarding the sales and marketing and distribution of one or more of our products and services and our future revenue may depend, in part, on our ability to enter into and maintain arrangements with other companies having sales, marketing and distribution capabilities and the ability of such companies to successfully market and sell any such products and services. Any failure to enter into such arrangements and marketing alliances on favorable terms, if at all, could delay or impair our ability to distribute or market our products and services and could increase our costs of distribution and marketing. Any use of distribution arrangements and marketing alliances to commercialize our products and services will subject us to a number of risks, including the following:

- we may be required to relinquish important rights to our products;
- we may not be able to control the amount and timing of resources that our distributors or collaborators may devote to the distribution or marketing of our products;
- our distributors or collaborators may experience financial difficulties; and
- business combinations or significant changes in a collaborator's business strategy may adversely affect a collaborator's willingness or ability to complete its obligations under any arrangement.

Our success depends on the market acceptance of our life science reagents. Our reagents may not achieve or maintain significant commercial market acceptance.

Our commercial success is dependent upon our ability to continue to successfully market and sell our life science reagents. Our ability to achieve and maintain commercial market acceptance of our products and services and provide customers access to our life science reagents will depend on a number of factors, including:

- our ability to increase awareness of the capabilities of our technology and solutions;
- our customers' willingness to adopt new products, services and technologies;
- whether our products and services reliably provide advantages over legacy and other alternative technologies and are perceived by customers to be cost effective;
- our ability to execute on our strategy toscale-up our CleanCap® technology to meet increasing demand and provide channels to access our CleanCap® technology and life science reagents;
- the rate of adoption of our products and services by biopharmaceutical companies, academic institutions and others;
- the relative reliability and robustness of our products and services as a whole and the components of our life science offerings, including, for example, CleanCap®, our assays for detecting host cell proteins and research products for labeling and detecting proteins;
- our ability to develop new tools and solutions for customers;
- whether competitors develop and commercialize products and services that provide comparable features and benefits at scale;
- the impact of our investments in product innovation and commercial growth;
- negative publicity regarding our or our competitors' products resulting from defects or errors; and
- our ability to further validate our technology through research and accompanying publications.

We cannot assure you that we will be successful in addressing these criteria or other criteria that might affect the market acceptance of our products and services. If we are unsuccessful in achieving and maintaining market acceptance of our products and services, our business, financial condition, results of operations, cash flows and prospects could be adversely affected.

The market may not be receptive to our new products and services upon their introduction.

We expect a portion of our future revenue growth to come from introducing new nucleic acid products, including plasmid DNA. The commercial success of all of our products and services will depend upon their acceptance by the life science and biopharmaceutical industries. Some of the products and services that we are developing are based upon new technologies or approaches. As a result, there can be no assurance that these new products and services, even if successfully developed and introduced, will be accepted by customers. If customers do not adopt our new products, services and technologies, our results of operations may suffer and, as a result, the market price of our Class A common stock may decline.

It may be difficult for us to implement our strategies for revenue growth in light of competitive challenges.

We face significant competition across many of our product lines. In addition, consolidation trends in the pharmaceutical, biotechnology and diagnostics industries have served to create fewer customer accounts and to concentrate purchasing decisions for some customers, resulting in increased pricing pressure on us. Moreover, customers may believe that larger companies are better able to compete as sole source vendors, and therefore prefer to purchase from such businesses. Failure to anticipate and respond to competitors' actions may impact our future revenue and profitability.

The estimates of market opportunity and forecasts of market growth included in this prospectus may prove to be inaccurate, and even if the market in which we compete achieves the forecasted growth, our business could fail to grow at similar rates, if at all.

Addressable market estimates and growth forecasts are subject to significant uncertainty and are based on assumptions and estimates that may not prove to be accurate. These estimates and forecasts are based on a number of complex assumptions and third-party estimates and other business data, including assumptions and estimates relating to our ability to generate revenue from existing products and services and the development of new products and services. The estimates and forecasts in this prospectus relating to the size and expected growth of our markets may prove to be inaccurate. Even if the markets in which we compete meet the size estimates and growth forecasted in this prospectus, our business could fail to grow at the rate we anticipate, if at all.

Product liability lawsuits against us could cause us to incur substantial liabilities, limit sales of our existing products and limit commercialization of any products that we may develop.

Our business exposes us to the risk of product liability claims that are inherent in the development, production, distribution, and sale of biotechnology products. We face an inherent risk of product liability exposure related to the use of certain of our products in our customers' human clinical trials and product liability lawsuits may allege that our products or services identified inaccurate or incomplete information or otherwise failed to perform as designed. We may also be subject to liability for errors in, a misunderstanding of or inappropriate reliance upon, the information we provide in the ordinary course of our business activities. If any of our products harm people due to our negligence, willful misconduct, unlawful activities or material breach, or if we cannot successfully defend ourselves against claims that our products caused injuries, we could incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in the following, any of which could impact our business, financial condition, results of operations, cash flows and prospects:

- decreased demand for our products and any products that we may develop;
- injury to our reputation;
- costs to defend the related litigation;
- loss of revenue; and
- the inability to commercialize products that we may develop.

We maintain product liability insurance, but this insurance is subject to deductibles, limits and exclusions and may not fully protect us from the financial impact of defending against product liability claims or the potential loss of revenue that may result. Any product liability claim brought against us, with or without merit, could increase our insurance rates or prevent us from securing insurance coverage in the future.

We are subject to stringent privacy laws, information security laws, regulations, policies and contractual obligations related to data privacy and security and changes in such laws, regulations, policies and contractual obligations could adversely affect our business, financial condition, results of operations, cash flows and prospects.

We are subject to data privacy and protection laws and regulations that apply to the collection, transmission, storage and use of proprietary information and personally-identifying information, which among other things, imposes certain requirements relating to the privacy, security and transmission of certain individually identifiable information.

Numerous other federal and state laws, including state security breach notification laws, state health information privacy laws and federal and state consumer protection laws, govern the collection, use, disclosure and security of personal information. These laws continue to change and evolve and are increasing in breadth and impact. Failure to comply with any of these laws and regulations could result in enforcement action against us, including fines, imprisonment of company officials and public censure, claims for damages by affected individuals, damage to our reputation and loss of goodwill, any of which could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects. Additionally, if we are unable to properly protect the privacy and security of personal information, we could be found to have breached our contracts.

Many states in which we operate have laws that protect the privacy and security of personal information. For example, the California Consumer Privacy Act of 2018 ("CCPA"), which increases privacy rights for California residents and imposes obligations on companies that process their personal information, came into effect on January 1, 2020. Among other things, the CCPA requires covered companies to provide new disclosures to California consumers and provide such consumers new data protection and privacy rights, including the ability to opt-out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for certain data breaches that result in the loss of personal information. This law and others like it are as yet untested and may subject us to increased regulatory scrutiny, litigation, and overall risk. State laws are changing rapidly and there is discussion in Congress of a new federal data protection and privacy law to which we would become subject, if it is enacted.

Various foreign countries in which we operate also have, or are developing, laws that govern the collection, use, disclosure, security and cross-border transmission of personal information. The legislative and regulatory landscape for privacy and data protection continues to evolve, and there has been an increasing focus on privacy and data protection issues that have the potential to affect our business. For example, privacy requirements in the European Union (the "EU") govern the transfer of personal information from the European Economic Area to the United States. In the EU and the United Kingdom, the collection and use of personal data is governed by the provisions of the General Data Protection Regulation ("GDPR"), in addition to other applicable laws and regulations. The GDPR came into effect in May 2018, repealing and replacing the European Union Data Protection Directive, and imposing revised data privacy and security requirements on companies in relation to the processing of personal data of EU and United Kingdom data subjects. The GDPR, together with national legislation, regulations and guidelines of EU member states and the United Kingdom governing the processing of personal data, impose strict obligations with respect to, and restrictions on, the collection, use, retention, protection, disclosure, transfer and processing of personal data. The GDPR authorizes fines for certain violations of up to 4% of a company's total global annual turnover for the preceding financial year or €20 million, whichever is greater. Such fines are in addition to any civil litigation claims by data subjects. Brexit may also lead to further legislative and regulatory changes and increase our compliance costs. The United Kingdom has

transposed the GDPR into domestic law, with a United Kingdom version of the GDPR taking effect in January 2021, after the end of the Brexit transitional period. This could have the result of exposing us to two parallel data privacy regimes in Europe, each of which potentially authorizes significant fines for certain violations. Other jurisdictions outside the EU are similarly introducing or enhancing privacy and data security laws, rules and regulations, which could increase our compliance costs and the risks associated with noncompliance. We cannot guarantee that we are, or will be, in compliance with all applicable international regulations as they are enforced now or as they evolve.

It is possible that these laws may be interpreted and applied in a manner that is inconsistent with our practices and our efforts to comply with the evolving data protection rules may be unsuccessful. We must devote significant resources to understanding and complying with this changing landscape. Failure to comply with federal, state and international laws regarding privacy and security of personal information could expose us to penalties under such laws, orders requiring that we change our practices, claims for damages or other liabilities, regulatory investigations and enforcement action, litigation and significant costs for remediation, any of which could adversely affect our business. Even if we are not determined to have violated these laws, government investigations into these issues typically require the expenditure of significant resources and generate negative publicity, which have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

We may be unable to efficiently manage growth as a larger and more geographically diverse organization.

Our strategic acquisitions, the continued expansion of our commercial sales operations and our organic growth have increased the scope and complexity of our business. As a result, we will face challenges inherent in efficiently managing a more complex business with an increased number of employees over large geographic distances, including the need to implement appropriate systems, policies, benefits and compliance programs. Our inability to manage successfully the geographically more diverse and substantially larger combined organization could materially adversely affect our operating results.

Opportunistic acquisitions may pose risks and challenges.

We have completed six acquisitions and several investments since April 2016 and, going forward, we may opportunistically pursue strategic acquisitions. However, we may be unable to continue to identify or complete promising acquisitions for many reasons, including competition among buyers, the high valuations of businesses in our industry, the need for regulatory and other approvals and the availability of capital. There can be no assurance that we will engage in any additional acquisitions or that we will be able to do so on terms that will enable us to realize the anticipated benefits. In addition, acquisitions financed with borrowings could increase our leverage and interest expense, which could make us more vulnerable to business downturns.

Our internal computer systems, or those of our customers, collaborators or other contractors, have been and may in the future be subject to cyber-attacks or security breaches, which could result in a material disruption of our product development programs or otherwise adversely affect our business, financial condition, results of operations, cash flows and prospects.

Despite the implementation of security measures, our internal computer systems and those of our customers are vulnerable to damage from computer viruses and unauthorized access. Cyber-attacks are increasing in their frequency, sophistication and intensity, and have become increasingly difficult to detect. Cyber-attacks could include the deployment of harmful malware, ransomware, denial-of-service attacks, social engineering and other means to affect service reliability and threaten the confidentiality, integrity and availability of information. Cyber-attacks also could include phishing attempts or e-mail fraud to cause unauthorized payments or information to be transmitted to an unintended recipient. A material cyber-attack or security breach could cause interruptions in our operations and could result in a material disruption of our business operations, damage to our reputation, financial condition, results of operations, cash flows and prospects.

In the ordinary course of our business, we collect and store sensitive data, including, among other things, personally identifiable information about our employees, intellectual property, and proprietary business information. Any cyber-attack or security breach that leads to unauthorized access, use or disclosure of personal or proprietary information could harm our reputation, cause us not to comply with federal and/or state breach notification laws and foreign law equivalents and otherwise subject us to liability under laws and regulations that protect the privacy and security of personal information. In addition, we could be subject to risks caused by misappropriation, misuse, leakage, falsification or intentional or accidental release or loss of information maintained in the information systems and networks of our company and our vendors, including personal information of our employees, and company and vendor confidential data. In addition, outside parties have previously attempted and may in the future attempt to penetrate our systems or those of our vendors or fraudulently induce our personnel or the personnel of our vendors to disclose sensitive information in order to gain access to our data and/or systems or make unauthorized payments to third parties. Like other companies, we have on occasion experienced, and will continue to experience, data security incidents involving access to company data, unauthorized payments and threats to our data and systems, including malicious codes and viruses, phishing, business email compromise attacks, or other cyber-attacks. The number and complexity of these threats continue to increase over time. If a material breach of our information technology systems or those of our vendors occurs, the market perception of the effectiveness of our security measures could be harmed and our reputation and credibility could be damaged.

We could be required to expend significant amounts of money and other resources to respond to these threats or breaches and to repair or replace information systems or networks and could suffer financial loss or the loss of valuable confidential information. In addition, we could be subject to regulatory actions and/or claims made by individuals and groups in private litigation involving privacy issues related to data collection and use practices and other data privacy laws and regulations, including claims for misuse or inappropriate disclosure of data, as well as unfair or deceptive practices. Although we develop and maintain systems and controls designed to prevent these events from occurring, and we have a process to identify and mitigate threats, the development and maintenance of these systems, controls and processes is costly and requires ongoing monitoring and updating as technologies change and efforts to overcome security measures become increasingly sophisticated. Moreover, despite our efforts, the possibility of these events occurring cannot be eliminated entirely and there can be no assurance that any measures we take will prevent cyber-attacks or security breaches that could adversely affect our business, financial condition, results of operations, cash flows and prospects.

We are subject to export and import control laws and regulations that could impair our ability to compete in international markets or subject us to liability if we violate such laws and regulations.

We are subject to U.S. export controls and sanctions regulations that restrict the shipment or provision of certain products and services to certain countries, governments and persons. While we take precautions to prevent our products and services from being exported in violation of these laws, we cannot guarantee that the precautions we take will prevent violations of export control and sanctions laws. If we are found to be in violation of U.S. sanctions or export control laws, it could result in substantial fines and penalties for us and for the individuals working for us. We may also be adversely affected through other penalties, reputational harm, loss of access to certain markets, or otherwise. Complying with export control and sanctions regulations may be time consuming and may result in the delay or loss of sales opportunities or impose other costs. Any change in export or import regulations, economic sanctions or related legislation, or change in the countries, governments, persons or technologies targeted by such regulations, could result in our decreased ability to export or sell certain products and services to existing or potential customers in affected jurisdictions.

We are subject to risks related to Brexit.

On January 31, 2020, the United Kingdom (the "UK") left the EU, which is commonly referred to as "Brexit." Brexit creates an uncertain political and economic environment in the UK and potentially across other EU member states for the foreseeable future, including during any period while the terms of the future

relationship between the UK and EU are being negotiated and such uncertainties could impair or limit our ability to transact business in the member EU states. Additionally, there also is a risk that other countries may decide to leave the EU.

Further, Brexit could adversely affect European and worldwide economic or market conditions and could contribute to instability in global financial markets, and the value of the Pound Sterling currency or other currencies, including the Euro. We are exposed to the economic, market and fiscal conditions in the UK and the EU and to changes in any of these conditions. Consequently, no assurance can be given as to the impact of Brexit, or continued uncertainty regarding it, and, in particular, no assurance can be given that our operating results, financial condition and prospects would not be adversely impacted by the result.

Changes in political, economic or governmental regulations may reduce demand for our products and services or increase our expenses.

We compete in many markets in which we and our customers must comply with federal, state, local and international regulations, such as environmental, health and safety and food and drug regulations. We develop, configure and market our products and services to meet customer needs created by those regulations. The U.S. and international healthcare industry is subject to changing political, economic and regulatory influences that could significantly affect the drug development process, research and development costs and the pricing and reimbursement for pharmaceutical products. Any significant change in regulations could have an adverse effect on both our customers' business and our business, which could result in reduced demand for our products and services or increases in our expenses. For example, we provide products and services used for basic research, raw materials used by biopharmaceutical customers for further processing, and active pharmaceutical ingredients used for preclinical studies and clinical trials.

Changes in the FDA's regulation of the drug discovery and development process may have a negative impact on the ability of our customers to conduct and fund clinical trials, which could have a material adverse effect on the demand for the products and services we provide these customers. Additionally, the U.S. government and 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 limit our customers' profitability, they may decrease research and development spending, which could decrease the demand for our products and services and materially adversely affect our growth prospects. Any of these factors could harm our customers' businesses, which, in turn, could materially adversely hurt our business, financial condition, results of operations, cash flows and prospects.

We are subject to financial, operating, legal and compliance risk associated with global operations.

We engage in business globally, with approximately 40% and 41% of our revenue for the years ended December 31, 2018 and 2019, respectively, coming from outside the U.S. In addition, one of our strategies is to expand geographically, both through distribution and through direct sales. This subjects us to a number of risks, including international economic, political, and labor conditions; currency fluctuations; tax laws (including U.S. taxes on income earned by foreign subsidiaries); increased financial accounting and reporting burdens and complexities; unexpected changes in, or impositions of, legislative or regulatory requirements; failure of laws to protect intellectual property rights adequately; inadequate local infrastructure and difficulties in managing and staffing international operations; delays resulting from difficulty in obtaining export licenses for certain technology; tariffs, quotas and other trade barriers and restrictions; transportation delays; operating in locations with a higher incidence of corruption and fraudulent business practices; and other factors beyond our control, including terrorism, war, natural disasters, climate change and diseases.

The application of laws and regulations implicating global transactions is often unclear and may at times conflict. Compliance with these laws and regulations may involve significant costs or require changes in our business practices that result in reduced revenue and profitability. Non-compliance could also result in fines,

damages, criminal sanctions, prohibited business conduct, and damage to our reputation. We incur additional legal compliance costs associated with our global operations and could become subject to legal penalties in foreign countries if we do not comply with local laws and regulations, which may be substantially different from those in the U.S.

We may expand our operations in countries with developing economies, where it may be common to engage in business practices that are prohibited by anti-corruption and anti-bribery laws and regulations that apply to us, such as the U.S. Foreign Corrupt Practices Act (FCPA), the U.S. Travel Act, and the UK Bribery Act 2010, which prohibit improper payments or offers of payment to foreign governments and political parties by us for the purpose of obtaining or retaining business. Although we implement policies and procedures designed to ensure compliance with these laws, there can be no assurance that all of our employees, contractors, distributors and agents, including those based in foreign countries where practices which violate such U.S. laws may be customary, will comply with our internal policies. Any such non-compliance, even if prohibited by our internal policies, could have an adverse effect on our business and result in significant fines or penalties.

Our acquisitions expose us to risks that could adversely affect our business, and we may not achieve the anticipated benefits of acquisitions of businesses or technologies.

We have made in the past, and may make in the future, selected opportunistic acquisitions of complementary businesses, products, services or technologies. In April 2016, we acquired Vector Laboratories, Inc. (“Vector Laboratories”), which allowed our entry into the protein detection business. In September 2016, we acquired TriLink BioTechnologies, Incorporated (“TriLink BioTechnologies”), in December 2016 we acquired the assets of Solulink Incorporated (“Solulink”) and in December 2017 we acquired Glen Research Corporation (“Glen Research”), which together have formed our nucleic acid business and production capabilities. In October 2016 we acquired Cygnus Technologies, LLC (“Cygnus Technologies”) and in March 2020 we acquired MockV Solutions, Inc., which together constitute biologics safety testing business.

Any acquisition involves numerous risks, uncertainties and operational, financial, and managerial challenges, including the following, any of which could adversely affect our business, financial condition, results of operations, cash flows and prospects:

- difficulties in integrating new operations, systems, technologies, products, services and personnel of acquired businesses effectively;
- problems maintaining uniform procedures, controls and policies with respect to our financial accounting systems;
- lack of synergies or the inability to realize expected synergies and cost-savings, including enhanced revenue, technology, human resources, cost savings, operating efficiencies and other synergies;
- difficulties in managing geographically dispersed operations, including risks associated with entering foreign markets in which we have no or limited prior experience;
- underperformance of any acquired technology, product, or business relative to our expectations and the price we paid;
- negative near-term impacts on financial results after an acquisition, including acquisition-related earnings charges;
- the potential loss of key employees, customers, and strategic partners of acquired companies;
- declining employee morale and retention issues affecting employees of businesses that we acquire, which may result from changes in compensation, or changes in management, reporting relationships, future prospects or the direction of the acquired business;
- claims by terminated employees and shareholders of acquired companies or other third parties related to the transaction;

- the assumption or incurrence of additional debt obligations or expenses, or use of substantial portions of our cash;
- the issuance of equity or equity-linked securities to finance or as consideration for any acquisitions that dilute the ownership of our shareholders;
- the issuance of equity securities to finance or as consideration for any acquisitions may not be an option if the price of our Class A common stock is low or volatile which could preclude us from completing any such acquisitions;
- any collaboration, strategic alliance and licensing arrangement may require us to relinquish valuable rights to our technologies or products, or grant licenses on terms that are not favorable to us;
- disruption of our ongoing operations and diversion of management's attention and company resources from existing operations of the business;
- inconsistencies in standards, controls, procedures, and policies;
- the impairment of intangible assets as a result of technological advancements, or worse-than-expected performance of acquired companies;
- assumption of, or exposure to, historical liabilities of the acquired business, including unknown contingent or similar liabilities that are difficult to identify or accurately quantify, litigation-related liabilities and regulatory compliance or accounting issues, and potential litigation or regulatory action arising from a proposed or completed acquisition;
- the need to later divest acquired assets at a loss if an acquisition does not meet our expectations; and
- risks associated with acquiring intellectual property, including potential disputes regarding acquired companies' intellectual property. In addition, the successful integration of acquired businesses requires significant efforts and expense across all operational areas, including sales and marketing, research and development, manufacturing, finance, legal, and information technologies.

There can be no assurance that any of the acquisitions we have made, or that we may make, will be successful or will be, or will remain, profitable. Our failure to successfully address the foregoing risks may prevent us from achieving the anticipated benefits from any past or future acquisition in a reasonable time frame, or at all.

Our results of operations could be negatively affected by potential fluctuations in foreign currency exchange rates.

We conduct a significant portion of our business in international markets. We are exposed to the risk of an increase or decrease in the value of certain foreign currencies relative to the U.S. dollar, which could decrease the value of our revenue when measured in U.S. dollars. As a result, our results of operation may be influenced by the effects of future exchange rate fluctuations and such effects may have an adverse impact on the market price of our Class A common stock.

Our products could become subject to more onerous regulation by the FDA or other regulatory agencies in the future, which could increase our costs and delay or prevent commercialization of our products, thereby materially and adversely affecting our business, financial condition, results of operations, cash flows and prospects.

We make certain of our products available to customers asresearch-use-only ("RUO") products. RUO products are regulated by the FDA as medical devices, and include *in vitro* diagnostic products in the laboratory research phase of development that are being shipped or delivered for an investigation that is not subject to the FDA's investigational device exemption requirements. Although medical devices are subject to stringent FDA

oversight, products that are intended for RUO and are labeled as RUO are exempt from compliance with most FDA requirements, including premarket clearance or approval, manufacturing requirements, and others. A product labeled RUO but which is actually intended for clinical diagnostic use may be viewed by the FDA as adulterated and misbranded under the FDCA, and subject to FDA enforcement action. The FDA has indicated that when determining the intended use of a product labeled RUO, the FDA will consider the totality of the circumstances surrounding distribution and use of the product, including how the product is marketed and to whom. The FDA could disagree with our assessment that our products are properly marketed as RUO, or could conclude that products labeled as RUO are actually intended for clinical diagnostic use, and could take enforcement action against us, including requiring us to stop distribution of our products until we are in compliance with applicable regulations, which would reduce our revenue, increase our costs and adversely affect our business, prospects, results of operations and financial condition. In the event that the FDA requires us to obtain marketing authorization of our RUO products in the future, there can be no assurance that the FDA will grant any clearance or approval requested by us in a timely manner, or at all.

Our raw material products are manufactured following the voluntary quality standards of ISO 9001:2015. Our GMP-grade raw material products follow ISO 9001:2015 standards, additional voluntary GMP quality standards and customer specific requirements. We believe these raw material products, including our GMP-grade raw material products, are exempt from compliance with the FDCA and the cGMP regulations of the FDA, as our products are further processed by our customers and we do not make claims related to their safety or effectiveness. We provide API products to customers for use in preclinical studies through and including clinical trials. Our API products are manufactured following the principles detailed in the International Council for Harmonisation (ICH) Q7, Good Manufacturing Practice Guide for Active Pharmaceutical Ingredients (Section 19, APIs For Use in Clinical Trials) in order to comply with the applicable requirements of the FDCA, and the comparable GMP principles for Europe; European Community, Part II, Basic Requirements for Active Substances Used as Starting Materials (Section 19, APIs For Use in Clinical Trials). Manufacture of APIs for use in clinical trials is regulated under § 501(a)(2)(B) of the FDCA, but is not subject to the current GMP regulations in 21 CFR § 211 by operation of 21 CFR § 210. Our API products are provided to customers under customer contracts that outline quality standards and product specifications. As products advance through the clinical phases, requirements become more stringent and we work with customers to define and agree on requirements and risks associated with their product.

The FDA could disagree with our assessment that our products are exempt from current GMP regulations. In addition, the FDA could conclude that the raw material and API products we provide to our customers are actually subject to the pharmaceutical or drug quality-related regulations for manufacturing, processing, packing or holding of drugs or finished pharmaceuticals, and could take enforcement action against us, including requiring us to stop distribution of our products until we are in compliance with applicable regulations, which would reduce our revenue, increase our costs and adversely affect our business, prospects, results of operations and financial condition. In the event that the FDA requires us to comply with FDA regulations, for our raw material and API products in the future, including the FDA's current GMP regulations, there can be no assurance that the FDA will find our operations are in compliance in a timely manner, or at all.

Our ability to use net operating loss and tax credit carryforwards and certainbuilt-in losses to reduce future tax payments is limited by provisions of the Internal Revenue Code, and it is possible that certain transactions or a combination of certain transactions may result in material additional limitations on our ability to use our net operating loss and tax credit carryforwards.

Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, contain rules that limit the ability of a company that undergoes an ownership change, which is generally any change in ownership of more than 50% of its stock over a three-year period, to utilize its net operating loss and tax credit carryforwards and certain built-in losses recognized in years after the ownership change. These rules generally operate by focusing on ownership changes involving stockholders owning directly or indirectly 5% or more of the stock of a company and any change in ownership arising from a new issuance of stock by the company. Generally, if an ownership

change occurs, the yearly taxable income limitation on the use of net operating loss and tax credit carryforwards and certain built-in losses is equal to the product of the applicable long-term, tax-exempt rate and the value of the company's stock immediately before the ownership change. As a result, following any such ownership change, we might be unable to offset our taxable income with losses, or our tax liability with credits, before such losses and credits expire, in which event we could incur larger federal and state income tax liabilities than we would have had we not experienced an ownership change.

Our activities are and will continue to be subject to extensive government regulation, which is expensive and time consuming.

We are subject to various local, state, federal, foreign and transnational laws and regulations, and, in the future, any changes to such laws and regulations could adversely affect us.

We provide products and services used for basic research, raw materials and life science reagents used by biopharmaceutical customers for further processing, assays for biologics safety testing and active pharmaceutical ingredients used for preclinical studies and clinical trials. The quality of our products and services is critical to researchers looking to develop novel vaccines and therapies and for biopharmaceutical customers who use our products as raw materials or who are engaged in preclinical studies and clinical trials. Biopharmaceutical customers are subject to extensive regulations by the FDA and similar regulatory authorities in other countries for conducting clinical trials and commercializing products for therapeutic or diagnostic use. This regulatory scrutiny results in our customers imposing rigorous quality requirements on us as their supplier through supplier qualification processes and customer contracts.

Additionally, regulatory authorities and our customers may conduct scheduled or unscheduled periodic inspections of our facilities to monitor our regulatory compliance or compliance with our quality agreements with our customers. There are significant risks at each stage of the regulatory scheme for our customers.

Regulatory agencies may in the future take action against us or our customers for failure to comply with applicable regulations governing clinical trials and the development and testing of therapeutic products. Failure by us or by our customers to comply with the requirements of these regulatory authorities, including without limitation, remediating any inspectional observations to the satisfaction of these regulatory authorities, could result in warning letters, product recalls or seizures, monetary sanctions, injunctions to halt manufacture and distribution, restrictions on our operations, civil or criminal sanctions, or withdrawal of existing or denial of pending approvals, including those relating to products or facilities. In addition, such a failure could expose us to contractual or product liability claims, contractual claims from our customers, including claims for reimbursement for lost or damaged active pharmaceutical ingredients, as well as ongoing remediation and increased compliance costs, any or all of which could be significant.

We are also subject to a variety of federal, state, local and international laws and regulations that govern, among other things, the importation and exportation of products, the handling, transportation and manufacture of substances that could be classified as hazardous, and our business practices in the U.S. and abroad such as anti-corruption and anti-competition laws. Any noncompliance by us with applicable laws and regulations or the failure to maintain, renew or obtain necessary permits and licenses could result in criminal, civil and administrative penalties and could have an adverse effect on our results of operations.

We may be required to record a significant charge to earnings if our goodwill and other amortizable intangible assets, or other investments become impaired.

We are required under GAAP to test goodwill for impairment at least annually and to review our goodwill, amortizable intangible assets and other assets acquired through merger and acquisition activity for impairment when events or changes in circumstance indicate the carrying value may not be recoverable. Factors that could lead to impairment of goodwill, amortizable intangible assets and other assets acquired via acquisitions include

significant adverse changes in the business climate and actual or projected operating results (affecting our company as a whole or affecting any particular segment) and declines in the financial condition of our business. We may be required in the future to record additional charges to earnings if our goodwill, amortizable intangible assets or other investments become impaired. Any such charge would adversely impact our consolidated financial results.

Changes in accounting principles and guidance could result in unfavorable accounting charges or effects.

We prepare our consolidated financial statements in accordance with GAAP. These principles are subject to interpretation by the SEC and various bodies formed to create and interpret appropriate accounting principles and guidance. A change in these principles or guidance, or in their interpretations, may have a material effect on our reported results, as well as our processes and related controls, and may retroactively affect previously reported results. For example, during February 2016, the Financial Accounting Standards Board issued ASU 2016-02, Leases (Topic 842). The updated standard requires the recognition of a liability for lease obligations and a corresponding right-of-use asset on the balance sheet, and disclosures of certain information regarding leasing arrangements. We are currently assessing the timing and impact of adopting the updated provisions.

Our revenue recognition and other factors may impact our financial results in any given period and make them difficult to predict.

Under accounting standards update No. 2014-09 (Topic 606), *Revenue from Contracts with Customers*, ("ASC 606"), we recognize revenue when our performance obligations have been satisfied in an amount that reflects the consideration that we expect to receive in exchange for those performance obligations. Our revenue includes revenue from the sale of manufactured products, including products that can be purchased out of a catalog and custom manufactured products, and services, including custom antibody and assay development contracts, antibody affinity extraction and stability and feasibility studies, as well as certain licensing and royalty arrangements. The majority of our contracts include only one performance obligation, namely the delivery of products, both custom and catalog, and services. We also recognize revenue from other contracts that may include a combination of products and services, the provision of solely services, or from license fee arrangements which may be associated with the delivery of product. Our application of ASC 606 with respect to the nature of future contractual arrangements could impact the forecasting of our revenue for future periods, as both the mix of products and services we will sell in a given period, as well as the size of contracts, is difficult to predict. We adopted the requirements of ASC 606, effective January 1, 2019 using the modified retrospective method. Under the modified retrospective method, this guidance is applied to those contracts that were not completed as of January 1, 2019, with no restatement of contracts that were commenced and completed within fiscal years prior to January 1, 2019, and the prior period comparable financial information continues to be presented under the guidance of ASC 605, Revenue Recognition (ASC 605).

Furthermore, the presentation of our financial results requires us to make estimates and assumptions that may affect revenue recognition. In some instances, we could reasonably use different estimates and assumptions, and changes in estimates may occur from period to period. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Estimates—Revenue Recognition."

Given the foregoing factors, comparing our revenue and operating results on a period-to-period basis may not be meaningful, and our past results may not be indicative of our future performance.

Fluctuations in our effective tax rate may adversely affect our results of operations and cash flows.

We are subject to a variety of tax liabilities, including federal, state, foreign and other taxes such as income, sales/use, payroll, withholding, and*ad valorem* taxes. Changes in tax laws or their interpretations could decrease our net income, the value of any tax loss carryforwards, the value of tax credits recorded on our balance sheet

and our cash flows, and accordingly could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects. In addition, some of our tax liabilities are subject to periodic audits by the relevant taxing authority, which could increase our tax liabilities.

Our business is subject to a number of environmental risks.

Our manufacturing business involves the controlled use of hazardous materials and chemicals and is therefore subject to numerous environmental and safety laws and regulations and to periodic inspections for possible violations of these laws and regulations. In addition to these hazardous materials and chemicals, our facility in Burlingame, California also produces certain toxins for research use that can cause severe illness in humans. The costs of compliance with environmental and safety laws and regulations are significant. Any violations, even if inadvertent or accidental, of current or future environmental and safety laws or regulations and the cost of compliance with any resulting order or fine could adversely affect our operations.

Risks Related to Our Intellectual Property

If we are unable to obtain, maintain and enforce intellectual property protection for our current or future products, or if the scope of our intellectual property protection is not sufficiently broad, our ability to commercialize our products successfully and to compete effectively may be materially adversely affected.

Our success depends on our ability to obtain and maintain patent and other intellectual property protection in the United States and other countries with respect to our current and future proprietary products. We rely upon a combination of patents and trade secret protection to protect the intellectual property related to our technology, manufacturing processes, and products. Our commercial success depends in part on obtaining and maintaining patent and trade secret protection of our current and future products, if any, and the methods used to manufacture them, as well as successfully defending such patents and trade secrets against third-party challenges. Our ability to stop third parties from making, using, selling, offering to sell or importing our products is dependent upon the extent to which we have rights under valid and enforceable patents and other intellectual property that covers these activities.

The patent prosecution process is expensive and time consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner or in all jurisdictions where protection may be commercially advantageous. It is also possible that we may fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. In addition, we or our collaborators may only pursue, obtain or maintain patent protection in a limited number of countries. There is no assurance that all potentially relevant prior art relating to our patents and patent applications has been found. We may be unaware of prior art that could be used to invalidate or narrow the scope of an issued patent or prevent our pending patent applications from issuing as patents. Because patent applications in the United States, Europe and many other non-U.S. jurisdictions are typically not published until 18 months after filing, or in some cases not at all, because publications of discoveries in scientific literature lag behind actual discoveries, and because we cannot be certain that we or our licensors were the first to make the inventions claimed in any of our owned or any in-licensed issued patents or pending patent applications, or that we or our licensors were the first to file for protection of the inventions set forth in our patents or patent applications. As a result, we may not be able to obtain or maintain protection for certain inventions. Even if patents do successfully issue, such patents may not adequately protect our intellectual property, provide exclusivity for our current or future products, prevent others from designing around our claims or otherwise provide us with a competitive advantage. We cannot offer any assurances about which, if any, patents will issue, the breadth of any such patents or whether any issued patents will be found invalid or unenforceable or will be threatened by third parties. In addition, third parties may challenge the validity, enforceability, ownership, inventorship or scope of any of our patents. Any successful challenge to any of our patents could deprive us of rights necessary for the successful commercialization of our current or future products and could impair or eliminate our ability to collect future revenue and royalties with respect to such products. If any of our patent

applications with respect to our current or future products fail to result in issued patents, if their breadth or strength of protection is narrowed or threatened, or if they fail to provide meaningful exclusivity or competitive position, it could dissuade companies from collaborating with us or otherwise adversely affect our competitive position.

The patent positions of life science companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of claims allowed in life science patents has emerged to date in the United States. The standards applied by the United States Patent and Trademark Office (the "USPTO") and foreign patent offices in granting patents are not always applied uniformly or predictably, and can change. Additionally, the laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States, and many companies have encountered significant problems in protecting and defending such rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property rights, particularly those relating to biotechnology, which could make it difficult for us to stop the infringement, misappropriation, or other violation of our patents or other intellectual property, including the unauthorized reproduction of our manufacturing or other know-how or the marketing of competing products in violation of our intellectual property rights generally. Any of these outcomes could impair our ability to prevent competition from third parties, which may have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

Further, the existence of issued patents does not guarantee our right to practice the patented technology or commercialize products covered by such a patent. Third parties may have or obtain rights to patents which they may use to prevent or attempt to prevent us from practicing our patented technology or commercializing our patented products. If any of these other parties are successful in obtaining valid and enforceable patents, and establishing our infringement of those patents, we could be prevented from selling our products unless we were able to obtain a license under such third-party patents, which may not be available on commercially reasonable terms or at all. In addition, third parties may seek approval to market their own products similar to or otherwise competitive with our products. In these circumstances, we may need to defend or assert our patents, including by filing lawsuits alleging patent infringement. In any of these types of proceedings, a court or agency of competent jurisdiction may find our patents invalid or unenforceable. Our competitors and other third parties may also be able to circumvent our patents by developing similar or alternative products in a non-infringing manner. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

In addition, competitors may use our technologies in jurisdictions where we have not obtained or are unable to adequately enforce patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States and Europe. These products may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing with us. Proceedings to enforce our patent rights, whether or not successful, could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or held unenforceable, or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop, acquire or license.

Intellectual property that we own orin-license may be subject to a reservation of rights by one or more third parties. For example, one of our patents isco-owned with third parties and some of our patent rights in the future may be co-owned with third parties. If we are unable to obtain an exclusive license to any such third-partyco-owners' interest in such patent rights, such co-owners may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technology. In addition, we

may need the cooperation of any such co-owners of such patent rights in order to enforce such patent rights against third parties, and such cooperation may not be provided to us. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

Moreover, the research resulting in certain of our patents and technology was funded in part by the U.S. government. As a result, the U.S. government has certain rights to such patent rights and technology, which include march-in rights. When new technologies are developed with government funding, in order to secure ownership of such patent rights, the recipient of such funding is required to comply with certain government regulations, including timely disclosing the inventions claimed in such patent rights to the U.S. government and timely electing title to such inventions. Additionally, the U.S. government generally obtains certain rights in any resulting patents, including a nonexclusive license authorizing the government to use the invention or to have others use the invention on its behalf. Accordingly, we or our licensors have granted the U.S. government a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States, the inventions described in the patents and patent applications relating to such inventions. If the U.S. government decides to exercise these rights, it is not required to engage us as its contractor in connection with doing so. The government's rights may also permit it to disclose our confidential information to third parties and to exercise march-in rights to use or allow third parties to use such government-funded technology. The government can exercise its march-in rights if it determines that action is necessary because we fail to achieve practical application of the government-funded technology, or because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to U.S. industry. In addition, our rights in such inventions may be subject to certain requirements to manufacture products embodying such inventions in the United States. If we fail to comply with those requirements, we could lose our ownership of or other rights to any patents subject to such regulations. Any exercise by the government of any of the foregoing rights or by any third party of its reserved rights could have a material adverse effect on our competitive position, business, financial condition, results of operations, and prospects.

Furthermore, patents have a limited lifespan. In the United States, the natural expiration of a patent is generally 20 years after its effective filing date. Various extensions may be available, however, the life of a patent and the protection it affords is limited. Given the amount of time required for the development, testing, regulatory review and approval of new products, our patents protecting such candidates might expire before or shortly after such candidates are commercialized. If we encounter delays in obtaining regulatory approvals, the period of time during which we could market a product under patent protection could be further reduced. Even if patents covering our future products are obtained, once such patents expire, we may be vulnerable to competition from similar products. The launch of a similar version of one of our products would likely result in an immediate and substantial reduction in the demand for our product. For example, certain patents related to our SoluLINK products expired in 2020 and certain other patents related to such products are due to expire in 2021 and 2022. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

If we are unable to protect the confidentiality of our proprietary information, the value of our technology and products could be materially adversely affected.

We also may rely on trade secrets to protect our technology, especially where we do not believe patent protection is appropriate or obtainable. To maintain the confidentiality of trade secrets and other proprietary information, we enter into confidentiality agreements with our employees, consultants, contractors, collaborators, contract development and manufacturing organizations ("CDMOs"), contract research organizations ("CROs") and others upon the commencement of their relationships with us. These agreements require that all confidential information developed by the individual or entity or made known to the individual or entity by us during the course of the individual's or entity's relationship with us be kept confidential and not disclosed to third parties. Our agreements with employees as well as our personnel policies also generally provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property or that we

may obtain full rights to such inventions at our election. However, trade secrets are difficult to protect. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, collaborators, CDMOs, CROs and others may unintentionally or willfully disclose our information to competitors. We also face the risk that present or former employees could continue to hold rights to intellectual property used by us, demand the registration of intellectual property rights in their name, and seek payment of damages for our use of such intellectual property.

Enforcing a claim that a third party illegally obtained or is using any of our trade secrets is expensive and time consuming, and the outcome is unpredictable. We may not have adequate remedies in the event of unauthorized use or disclosure of our trade secrets or other proprietary information in the case of a breach of any such agreements and our trade secrets and other proprietary information could be disclosed to third parties, including our competitors. Many of our partners also collaborate with our competitors and other third parties. The disclosure of our trade secrets to our competitors, or more broadly, would impair our competitive position and may materially harm our business, financial condition, results of operations, cash flows and prospects. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our rights, and failure to maintain trade secret protection could adversely affect our competitive business position. The enforceability of confidentiality agreements may vary from jurisdiction to jurisdiction. Courts outside the United States are sometimes less willing to protect trade secrets. Moreover, our competitors may independently develop substantially equivalent or superior knowledge, methods and know-how, and the existence of our own trade secrets affords no protection against such independent discovery.

We may become involved in lawsuits to protect or enforce our patents, which could be expensive, time-consuming and unsuccessful and could result in a court or administrative body finding our patents to be invalid or unenforceable.

Even if the patent applications we own or license are issued, third parties may challenge or infringe upon our patents. To counter infringement, we may be required to file infringement claims, which can be expensive and time-consuming. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including novelty, non-obviousness (or inventive step), written description or enablement. In addition, patent validity challenges may, under certain circumstances, be based upon non-statutory obviousness-type double patenting, which, if successful, could result in a finding that the claims are invalid for obviousness-type double patenting or the loss of patent term if a terminal disclaimer is filed to obviate a finding of obviousness-type double patenting. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld information material to patentability from the USPTO, or made a misleading statement, during prosecution.

Third parties may raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, post-grant review, *inter partes* review, interference proceedings, derivation proceedings, and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). Such proceedings could result in the revocation or cancellation of or amendment to our patents in such a way that they no longer cover our current or future products or provide any competitive advantage. The outcome following legal assertions of invalidity and unenforceability is unpredictable. If a third party were to prevail on a legal assertion of invalidity or unenforceability, we could lose part or all of the patent protection on one or more of our current or future products, which could result in our competitors and other third parties using our technology to compete with us. Such a loss of patent protection could have a material adverse impact on our business, financial condition, results of operations, cash flows and prospects.

Interference proceedings, or other similar enforcement and revocation proceedings, provoked by third parties or brought by us may be necessary to determine the priority of inventions with respect to our patents or patent applications. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not

offer us a license on commercially reasonable terms. Our defense of litigation or interference proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. We may not be able to prevent, alone or with our licensors, infringement, misappropriation or other violation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States.

In an infringement proceeding, even one initiated by us, there is a risk that a court will decide that our patents are not valid and that we do not have the right to stop the other party from using the inventions they describe. There is also the risk that, even if the validity of such patents is upheld, the court will refuse to stop the other party on the ground that such other party's activities do not infringe our rights to these patents.

Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations. In addition, patent holding companies that focus solely on extracting royalties and settlements by enforcing patent rights may target us, especially as we gain greater visibility and market exposure as a public company.

An adverse outcome in a litigation or proceeding involving our patents could limit our ability to assert our patents against competitors, affect our ability to receive royalties or other licensing consideration from our licensees, and may curtail or preclude our ability to exclude third parties from making, using and selling similar or competitive products. Any of these occurrences could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

If we are sued for infringing, misappropriating, or otherwise violating intellectual property rights of third parties, such litigation could be costly and time consuming and could prevent or delay us from developing or commercializing our current or future products.

Our products may infringe on, or be accused of infringing on, one or more claims of an issued patent or may fall within the scope of one or more claims in a published patent application that may be subsequently issued and to which we do not hold a license or other rights.

Because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for technology covered by our issued patents or our pending applications, or that we were the first to invent the technology. Others, including our competitors, may have filed, and may in the future file, patent applications covering technology similar to ours. Any such patent application may have priority over our patent applications or patents, which could further require us to obtain rights to issued patents by others covering such technologies. If another party has filed a U.S. patent application on inventions similar to ours, we may have to participate in an interference proceeding declared by the USPTO to determine priority of invention in the United States. The costs of these proceedings could be substantial, and it is possible that such efforts would be unsuccessful if, unbeknownst to us, the other party had independently arrived at the same or similar invention prior to our own invention, resulting in a loss of our U.S. patent position with respect to such inventions.

Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our current or future products or the use of our current or future products. After issuance, the scope of patent claims remains subject to construction based on interpretation of the law, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending application may be incorrect. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. These third parties could bring

claims against us or our collaborators that would cause us to incur substantial expenses and, if successful against us, could cause us to pay substantial damages.

The life sciences industry has produced a proliferation of patents, and it is not always clear to industry participants, including us, which patents cover various types of products or methods of use. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. If we are sued for patent infringement, we would need to demonstrate that our products or methods of use either do not infringe the patent claims of the relevant patent and/or that the patent claims are invalid or unenforceable, and we may not be able to do this. Proving invalidity, in particular, is difficult since it requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. Third parties have, and may in the future have, U.S. and non-U.S. issued patents and pending patent applications that may cover our current or future products. Such a third party may claim that we or our manufacturing or commercialization partners are using inventions covered by the third party's patent rights and may go to court or a tribunal to stop us from engaging in our normal operations and activities, including making or selling our current or future products. In the event that any of these patent rights were asserted against us, we believe that we have defenses against any such action, including that such patents would not be infringed by our current or future products and/or that such patents are not valid. However, if any such patent rights were to be asserted against us and our defenses to such assertion were unsuccessful, unless we obtain a license to such patents, we could be liable for damages, which could be significant and include treble damages and attorneys' fees if we are found to willfully infringe such patents, and we could be precluded from commercializing any future products that were ultimately held to infringe such patents, any of which could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

If we are found to infringe the patent rights of a third party, or in order to avoid potential claims, we or our collaborators may choose or be required to seek a license from a third party and be required to pay license fees or royalties or both. These licenses may not be available on reasonable terms, or at all. In particular, any of our competitors that control intellectual property that we are found to infringe may be unwilling to provide us a license under any terms. Even if we or our collaborators were able to obtain a license, the rights may be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we could be prevented from commercializing a product, or be forced to cease some aspect of our business operations, if, as a result of actual or threatened patent infringement claims, we or our collaborators are unable to enter into licenses on acceptable terms. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent. Further, if a patent infringement suit is brought against us or our third-party service providers and if we are unable to successfully obtain rights to required third-party intellectual property, we may be required to expend significant time and resources to redesign our current or future products, or to develop or license replacement technology, all of which may not be feasible on a technical or commercial basis, and may delay or require us to abandon our development, manufacturing or sales activities relating to our current or future products. A finding of infringement could prevent us from commercializing our future products or force us to cease some of our business operations, which could harm our business. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

Intellectual property litigation and other proceedings could cause us to spend substantial resources and distract our personnel from their normal responsibilities.

Even if resolved in our favor, intellectual property litigation or other legal proceedings relating to our, our licensors' or other third parties' intellectual property claims may cause us to incur significant expenses and could distract our personnel from their normal responsibilities. Patent litigation and other proceedings may also absorb significant management time. If not resolved in our favor, litigation may require us to pay any portion of our opponents' legal fees. Such litigation or proceedings could substantially increase our operating losses and reduce

the resources available for development activities or any future sales, marketing, or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Our competitors or other third parties may be able to sustain the cost of such litigation and proceedings more effectively than we can because of their substantially greater resources. Uncertainties resulting from our participation in patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace. Furthermore, because of the substantial amount of discovery required in certain jurisdictions in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, the perceived value of our current or future products or intellectual property could be diminished. Accordingly, the market price of our Class A common stock may decline. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our business, financial condition, results of operations, and prospects.

If we fail to comply with our obligations under any license agreements, disagree over contract interpretation, or otherwise experience disruptions to our business relationships with our licensors, we could lose intellectual property rights that are necessary to our business.

We rely, in part, on intellectual property and technology which we havein-licensed. We may also need to obtain additional licenses in the future to advance our research or allow commercialization of our future products and it is possible that we may be unable to do so at a reasonable cost or on reasonable terms, if at all. Moreover, such licenses may not provide exclusive rights to use such intellectual property and technology in all relevant fields of use and in all territories in which we may wish to develop or commercialize our future products.

In addition, our existing license agreements impose, and any future license agreements we enter into may impose, various development, commercialization, funding, milestone, royalty, diligence, sublicensing, insurance, patent prosecution and enforcement or other obligations on us. Our license agreements, and any future license agreement we enter into, may also impose restrictions on our ability to license certain of our intellectual property to third parties or to develop or commercialize certain current or future products or technologies. In spite of our best efforts, our counterparties may conclude that we have breached our obligations under our agreements, or that we have used the intellectual property licensed to us in an unauthorized manner, in which case, we may be required to pay damages and the counterparty may have the right to terminate the agreement. Any of the foregoing could result in us being unable to develop, manufacture and sell products that are covered by the licensed intellectual property or technology, or enable a competitor to gain access to the licensed intellectual property or technology.

We might not have the necessary rights or the financial resources to develop, manufacture or market our current or future products without the rights granted under our license agreements, and the loss of sales or potential sales in current or future products covered by such license agreements could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

Disputes may arise regarding intellectual property subject to license agreements, including:

- the scope of rights granted under the license agreement and other interpretation related issues;
- the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the license agreement;
- the sublicensing of patent and other rights under our collaborative development relationships;
- our diligence obligations under the license agreement and what activities satisfy those diligence obligations;
- our financial obligations under the license agreement;

- the inventorship and ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners; and
- the priority of invention of patented technology.

In addition, the agreements under which we currently license intellectual property or technology to or from third parties are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology, or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations, and prospects. Moreover, if disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize the affected future products.

In some cases, we may not have primary control over prosecution, maintenance, enforcement and defense of patents and patent applications that we havein-licensed from third parties, and instead we rely on our licensors for these activities. We cannot be certain that such activities have been or will be conducted in compliance with applicable laws and regulations or in a manner consistent with the best interests of our business. If we do undertake any enforcement of our in-licensed patents or defense of any claims asserting the invalidity of such patents, such actions may be subject to the cooperation of our licensors or other third parties. If our licensors or other third parties fail to prosecute, maintain, enforce and defend intellectual property licensed to us, or lose their own rights to such intellectual property, the rights we have licensed may be impaired or eliminated and our ability to develop and commercialize any of our products that are subject to such rights could be adversely affected.

In-licensing or acquisition of third-party intellectual property is a competitive area and a number of more established companies are also pursuing strategies toin-license or acquire third-party intellectual property rights that we may consider attractive or necessary for our business. These companies may have a competitive advantage over us due to their size, cash resources and greater capabilities with respect to clinical development and commercialization. Furthermore, companies that perceive us as a competitor may be unwilling to assign or license rights to us. If we are unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have on reasonable terms or at all, we may have to abandon development of the relevant program or current or future product and our business, financial condition, results of operations, cash flows and prospects could suffer.

Changes to the patent law in the United States and other jurisdictions could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, thereby impairing our ability to protect our technologies and current or future products.

As is the case with other life sciences companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the life sciences industry involves both technological and legal complexity and is therefore costly, time consuming and inherently uncertain. Changes in either the patent laws or in interpretations of patent laws in the United States and other countries may increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents.

For example, the Leahy-Smith America Invents Act (the “America Invents Act”), was signed into law on September 16, 2011, and many of the substantive changes became effective on March 16, 2013. The America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations, and prospects. Specifically, the America Invents Act reforms United States patent law in part by changing the U.S. patent system from a “first to invent”

system to a "first inventor to file" system. Under a "first inventor to file" system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to the patent on an invention regardless of whether another inventor was the first to invent the invention. This will require us to be cognizant going forward of the time from invention to filing of a patent application and be diligent in filing patent applications. Circumstances may arise that could prevent us from promptly filing patent applications on our inventions and allow third parties to file patents claiming our inventions before we are able to do so. The America Invents Act also includes a number of significant changes that affect the way patent applications will be prosecuted and may also affect patent litigation. These include allowing third-party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by the USPTO administered post grant proceedings, including reexamination proceedings, *inter partes* review, post grant review and derivation proceedings. These adversarial proceedings at the USPTO review patent claims without the presumption of validity afforded to U.S. patents in lawsuits in U.S. federal courts, and use a lower burden of proof than used in litigation in U.S. federal courts. Therefore, it is generally considered easier for a competitor or third party to have a U.S. patent invalidated in a USPTO post-grant review or *inter partes* review proceeding than in a litigation in a U.S. federal court.

In addition, the patent positions of companies in the life sciences industry are particularly uncertain. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. This combination of events has created uncertainty with respect to the validity and enforceability of patents, once obtained. Depending on future actions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways. In addition, the complexity and uncertainty of European patent laws have also increased in recent years. Complying with these laws and regulations could have a material adverse effect on our existing patent portfolio and our ability to protect and enforce our intellectual property in the future.

Obtaining and maintaining our patent protection depends on compliance with various procedural, documentary, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for noncompliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and patent applications will be due to be paid to the USPTO and various government patent agencies outside the United States over the lifetime of our patents and patent applications and any patent rights we may own or license in the future. Additionally, the USPTO and various government patent agencies outside the United States require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. In certain cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with rules applicable to the particular jurisdiction. However, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. If we or our licensors fail to maintain the patents and patent applications covering or otherwise protecting our current or future products, it could have a material adverse effect on our business. In addition, to the extent that we have responsibility for taking any action related to the prosecution or maintenance of patents or patent applications in-licensed from a third party, any failure on our part to maintain thein-licensed intellectual property could jeopardize our rights under the relevant license and may have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

We may be subject to claims by third parties asserting that our employees, consultants, independent contractors or we have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property and proprietary technology.

Many of our employees were previously employed at universities or other life science, biotechnology or pharmaceutical companies, including our competitors or potential competitors. We try to ensure that our employees do not use the proprietary information or know-how of others in their work for us. We may, however,

be subject to claims that we or these employees have inadvertently or otherwise used or disclosed intellectual property, trade secrets or other proprietary information of any such employee's former employer or that patents and applications we have filed to protect inventions of these individuals, even those related to one or more of our current or future products, are rightfully owned by their former or concurrent employer. Litigation may be necessary to defend against these claims. Even if we are successful in defending ourselves, such litigation could result in substantial costs to us or be distracting to our management. If we fail to defend any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel or we could be required to obtain a license from such third party to commercialize our technology or products. Such a license may not be available on an exclusive basis or on commercially reasonable terms or at all.

In addition, while we typically require our employees, consultants and independent contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own, or such agreements may be breached or alleged to be ineffective, and the assignment may not be self-executing, which may result in claims by or against us related to the ownership of such intellectual property or may result in such intellectual property becoming assigned to third parties. If we fail in enforcing or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to our senior management and scientific personnel. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

We may not be able to protect our intellectual property and proprietary rights throughout the world.

Filing, prosecuting, and defending patents on current or future products in all countries throughout the world would be prohibitively expensive, and the laws of foreign countries may not protect our rights to the same extent as the laws of the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Third parties may use our technologies in jurisdictions where we have not obtained or are unable to adequately enforce patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but enforcement is not as strong as that in the United States. These products may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets, and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our intellectual property and proprietary rights generally. Proceedings to enforce our intellectual property and proprietary rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly, could put our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or any of our licensors is forced to grant a license to third

parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations, cash flows and prospects may be adversely affected.

We rely on confidentiality agreements that, if breached, may be difficult to enforce and could have a material adverse effect on our business and competitive position.

Our policy is to enter agreements relating to thenon-disclosure and non-use of confidential information with third parties, including our contractors, consultants, advisors and research collaborators, as well as agreements that purport to require the disclosure and assignment to us of the rights to the ideas, developments, discoveries and inventions of our employees and consultants while we employ them. However, these agreements can be difficult and costly to enforce. Moreover, to the extent that our contractors, consultants, advisors and research collaborators apply or independently develop intellectual property in connection with any of our projects, disputes may arise as to the proprietary rights to the intellectual property. If a dispute arises, a court may determine that the right belongs to a third party, and enforcement of our rights can be costly and unpredictable. In addition, we rely on trade secrets and proprietary know-how that we seek to protect in part by confidentiality agreements with our employees, contractors, consultants, advisors or others. Despite the protective measures we employ, we still face the risk that:

- these agreements may be breached;
- these agreements may not provide adequate remedies for the applicable type of breach; or
- our trade secrets or proprietary know-how will otherwise become known.

Any breach of our confidentiality agreements or our failure to effectively enforce such agreements would have a material adverse effect on our business and competitive position.

If our trademarks and trade names are not adequately protected, we may not be able to build name recognition in our markets of interest and our business, financial condition, results of operations, cash flows and prospects may be adversely affected.

Our trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names or may be forced to stop using these names or marks which we need for name recognition by potential partners or customers in our markets of interest. During trademark registration proceedings, we may receive rejections. Although we would be given an opportunity to respond to those rejections, we may be unable to overcome such rejections. In addition, in the USPTO and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademarks may not survive such proceedings. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business, financial condition, results of operations, cash flows and prospects may be adversely affected.

Intellectual property rights do not necessarily address all potential threats.

The degree of future protection afforded by our proprietary and intellectual property rights is uncertain because such rights offer only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- others may be able to develop products that are similar to, or better than, our current or future products in a way that is not covered by the claims of the patents we license or may own currently or in the future;
- we, or our licensing partners or current or future collaborators, might not have been the first to make the inventions covered by issued patents or pending patent applications that we license or may own currently or in the future;

- we, or our licensing partners or current or future collaborators, might not have been the first to file patent applications for certain of our or their inventions;
- our pending owned or in-licensed patent applications may not lead to issued patents;
- we may choose not to file a patent for certain trade secrets orknow-how, and a third party may subsequently file a patent covering such intellectual property;
- our competitors or other third parties might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- it is possible that there are prior public disclosures that could invalidate our or our licensors' patents;
- the patents of third parties or pending or future applications of third parties, if issued, may have an adverse effect on our business;
- any patents that we obtain may not provide us with any competitive advantages or may ultimately be found not to be owned by us, invalid or unenforceable; or
- we may not develop additional proprietary technologies that are patentable.

Should any of these events occur, they could significantly harm our business, financial conditions, results of operations, cash flows and prospects.

Risks Related to Our Indebtedness

Our existing indebtedness could adversely affect our business and growth prospects.

As of December 31, 2019, we had total current and long-term indebtedness outstanding of approximately $337.3 million, including term loans of $246.9 million and unamortized debt issuance costs of $9.6 million. Our indebtedness, or any additional indebtedness we may incur, could require us to divert funds identified for other purposes for debt service and impair our liquidity position. If we cannot generate sufficient cash flow from operations to service our debt, we may need to refinance our debt, dispose of assets or issue equity to obtain necessary funds. We do not know whether we will be able to take any of these actions on a timely basis, on terms satisfactory to us or at all.

Our indebtedness, the cash flow needed to satisfy our debt and the covenants contained in the New Credit Agreement have important consequences, including:

- limiting funds otherwise available for financing our capital expenditures by requiring us to dedicate a portion of our cash flows from operations to the repayment of debt and the interest on this debt;
- limiting our ability to incur or prepay existing indebtedness, pay dividends or distributions, dispose of assets, engage in mergers and consolidations, make acquisitions or other investments and make changes in the nature of the business, among other things;
- making us more vulnerable to rising interest rates, as certain of our borrowings, including borrowings under the New Credit Agreement, bear variable rates of interest; and
- making us more vulnerable in the event of a downturn in our business.

Our level of indebtedness may place us at a competitive disadvantage to our competitors that are not as highly leveraged. Fluctuations in interest rates can increase borrowing costs. Increases in interest rates may directly impact the amount of interest we are required to pay and reduce earnings accordingly. In addition, tax laws, including the disallowance or deferral of tax deductions for interest paid on outstanding indebtedness,

could have an adverse effect on our liquidity and our business, financial condition, results of operations, cash flows and prospects. Further, our New Credit Agreement contains customary affirmative and negative covenants and certain restrictions on operations that could impose operating and financial limitations and restrictions on us, including restrictions on our ability to enter into particular transactions and to engage in other actions that we may believe are advisable or necessary for our business.

We expect to use cash flow from operations to meet current and future financial obligations, including funding our operations, debt service requirements and capital expenditures. The ability to make these payments depends on our financial and operating performance, which is subject to prevailing economic, industry and competitive conditions and to certain financial, business, economic and other factors beyond our control.

Despite current indebtedness levels, we may incur substantially more indebtedness, which could further exacerbate the risks associated with our substantial indebtedness.

We may incur significant additional indebtedness in the future. We may also consider investments in joint ventures or acquisitions, which may increase our indebtedness. If new debt is added to our current indebtedness levels, the related risks that we face could intensify.

Variable rate indebtedness that we have incurred or may in the future incur will subject us to interest rate risk, which could cause our debt service obligations to increase significantly.

Certain of our borrowings, including certain borrowings under our New Credit Agreement, bear variable rates of interest. An increase in interest rates would increase our debt service obligations, which would have a negative impact on our net income and cash flows, including cash available for servicing our indebtedness.

The phase-out of the London Interbank Offered Rate ("LIBOR"), or the replacement of LIBOR with a different reference rate, may adversely affect interest rates.

Borrowings under our New Credit Agreement bear interest at rates determined using LIBOR as the reference rate. On July 27, 2017, the Financial Conduct Authority (the authority that regulates LIBOR) announced that it would phase out LIBOR by the end of 2021. It is unclear whether new methods of calculating LIBOR will be established such that it continues to exist after 2021, or if alternative rates or benchmarks will be adopted, and currently it appears highly likely that LIBOR will be discontinued or substantially modified by 2021. Changes in the method of calculating LIBOR, or the replacement of LIBOR with an alternative rate or benchmark, may adversely affect interest rates and result in higher borrowing costs. This could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects. We cannot predict the effect of the potential changes to LIBOR or the establishment and use of alternative rates or benchmarks. Furthermore, we may need to renegotiate our New Credit Agreement or incur other indebtedness, and changes in the method of calculating LIBOR, or the use of an alternative rate or benchmark, may negatively impact the terms of such indebtedness.

We may not be able to generate sufficient cash flow to service all of our indebtedness and may be forced to take other actions to satisfy our obligations under such indebtedness, which may not be successful.

Our ability to make scheduled payments or to refinance outstanding debt obligations depends on our financial and operating performance, which will be affected by prevailing economic, industry and competitive conditions and by financial, business and other factors beyond our control. We may not be able to maintain a sufficient level of cash flow from operating activities to permit us to pay the principal, premium, if any, and interest on our indebtedness. Any failure to make payments of interest and principal on our outstanding indebtedness on a timely basis would likely result in a reduction of our creditworthiness, which would also harm our ability to incur additional indebtedness.

If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay capital expenditures and acquisitions, sell assets, seek additional capital or seek to restructure or refinance our indebtedness. Any refinancing of our indebtedness could be at higher interest rates and may require us to comply with more onerous covenants. Refinancings may not be successful and may not permit us to meet our scheduled debt service obligations. In the absence of such cash flows and resources, we could face substantial liquidity problems and might be required to sell material assets or operations to attempt to meet our debt service obligations. The financing documents governing our New Credit Agreement include certain restrictions on our ability to conduct asset sales and/or use the proceeds from asset sales for certain purposes. We may not be able to consummate these asset sales to raise capital or sell assets at prices and on terms that we believe are fair and any proceeds that we do receive may not be adequate to meet any debt service obligations then due. If we cannot meet our debt service obligations, the holders of our indebtedness may accelerate such indebtedness and, to the extent such indebtedness is secured, foreclose on our assets. In such an event, we may not have sufficient assets to repay all of our indebtedness.

The terms of the financing documents governing our New Credit Agreement restrict our current and future operations, particularly our ability to respond to changes or to take certain actions.

The financing documents governing our New Credit Agreement contain a number of restrictive covenants that impose significant operating and financial restrictions on us and may limit our ability to engage in acts that may be in our long-term best interests, including restrictions on our ability to:

- incur additional indebtedness;
- incur liens;
- merge, dissolve, liquidate, amalgamate, consolidate or sell all or substantially all of our assets;
- declare or pay certain dividends, payments or distribution or repurchase or redeem certain capital stock;
- permit our subsidiaries to enter into agreements restricting their ability to pay dividends, make loans, incur liens and sell assets; and
- make certain investments.

These restrictions could limit, potentially significantly, our operational flexibility and affect our ability to finance our future operations or capital needs or to execute our business strategy.

We may be unable to refinance our indebtedness.

We may need to refinance all or a portion of our indebtedness before maturity. We cannot assure you that we will be able to refinance any of our indebtedness on commercially reasonable terms or at all. There can be no assurance that we will be able to obtain sufficient funds to enable us to repay or refinance our debt obligations on commercially reasonable terms, or at all.

Our failure to raise additional capital or generate cash flows necessary to expand our operations and invest in new technologies in the future could reduce our ability to compete successfully and harm our competitive position and results of operations.

We may need to raise additional funds, and we may not be able to obtain additional debt or equity financing on favorable terms or at all. If we raise additional equity financing, our security holders may experience significant dilution of their ownership interests. If we engage in additional debt financing, we may be required to accept terms that restrict our ability to incur additional indebtedness, force us to maintain specified liquidity or

other ratios or restrict our ability to pay dividends or make acquisitions. If we need additional capital and cannot raise it on acceptable terms, or at all, we may not be able to, among other things:

- develop and enhance our product offerings;
- continue to expand our organization;
- hire, train and retain employees;
- respond to competitive pressures or unanticipated working capital requirements; or
- pursue acquisition opportunities.

In addition, if we issue additional equity to raise capital, your interest in us will be diluted.

Risks Related to Our Organizational Structure

Our principal asset is our interest in Topco LLC, and, accordingly, we depend on distributions from Topco LLC to pay our taxes and expenses, including payments under the Tax Receivable Agreement. Topco LLC's ability to make such distributions may be subject to various limitations and restrictions.

We are a holding company and have no material assets other than our ownership of equity interests in Topco LLC. As such, we have no independent means of generating revenue or cash flow, and our ability to pay our taxes, satisfy our obligations under the Tax Receivable Agreement and pay operating expenses or declare and pay dividends, if any, in the future depends on the financial results and cash flows of Topco LLC and its subsidiaries and distributions we receive from Topco LLC. There can be no assurance that Topco LLC and its subsidiaries will generate sufficient cash flow to distribute funds to us or that applicable state law and contractual restrictions, including negative covenants in debt instruments of Topco LLC and its subsidiaries, will permit such distributions.

Topco LLC is treated as a partnership for U.S. federal income tax purposes and, as such, is not subject to any entity-level U.S. federal income tax. Certain wholly-owned subsidiaries of Topco LLC are taxed as corporations for U.S. federal and most applicable state, local income tax and foreign tax purposes. For U.S. federal income tax purposes, taxable income of Topco LLC is allocated to the LLC Unitholders, including us. Accordingly, we incur income taxes on our distributive share of any net taxable income of Topco LLC. Under the terms of the LLC Operating Agreement, Topco LLC is obligated to make tax distributions to LLC Unitholders, including us. In addition to tax and dividend payments, we also incur expenses related to our operations, including obligations to make payments under the Tax Receivable Agreement. Due to the uncertainty of various factors, we cannot estimate the likely tax benefits we may realize as a result of our purchase of LLC Units and LLC Unit exchanges, and the resulting amounts we are likely to pay out to LLC Unitholders pursuant to the Tax Receivable Agreement; however, we estimate that such payments may be substantial. Under the LLC agreement, tax distributions shall be made on a pro rata basis among the LLC Unitholders, and will be calculated without regard to any applicable basis adjustment under Section 743(b) of the Code.

We intend to cause Topco LLC to make cash distributions to the owners of LLC Units in amounts sufficient to (1) fund all or part of their tax obligations in respect of taxable income allocated to them and (2) cover our operating expenses, including payments under the Tax Receivable Agreement.

However, Topco LLC's ability to make such distributions may be subject to various limitations and restrictions, such as restrictions on distributions that would violate either any contract or agreement to which Topco LLC or its subsidiaries is then a party, including debt agreements, or any applicable law, or that would have the effect of rendering Topco LLC or its subsidiaries insolvent. In addition, recently enacted legislation that is effective for taxable years beginning after December 31, 2017 may impute liability for adjustments to a partnership's tax return on the partnership itself in certain circumstances, absent an election to the contrary.

Topco LLC may be subject to material liabilities pursuant to this legislation and related guidance if, for example, its calculations of taxable income are incorrect. If we do not have sufficient funds to pay tax or other liabilities or to fund our operations, we may have to borrow funds, which could materially adversely affect our liquidity and financial condition and subject us to various restrictions imposed by any such lenders. To the extent that we are unable to make payments under the Tax Receivable Agreement, such payments generally will be deferred and will accrue interest until paid. Nonpayment for a specified period, however, may constitute a breach of a material obligation under the Tax Receivable Agreement and therefore accelerate payments due under the Tax Receivable Agreement, unless, generally, such nonpayment is due to a lack of sufficient funds. See "—Risks Related to Our Class A Common Stock and This Offering," "Dividend Policy," "Organizational Structure—Tax Receivable Agreement" and "Organizational Structure—Amended and Restated Operating Agreement of Topco LLC."

Conflicts of interest could arise between our shareholders and MLSH 1, which may impede business decisions that could benefit our shareholders.

MLSH 1, which will be the only holder of LLC Units other than us upon consummation of this offering, has the right to consent to certain amendments to the LLC Operating Agreement, as well as to certain other matters. MLSH 1 may exercise these voting rights in a manner that conflicts with the interests of our shareholders. Circumstances may arise in the future when the interests of MLSH 1 conflict with the interests of our shareholders. As we control Topco LLC, we have certain obligations to MLSH 1 as an LLC Unitholder that may conflict with fiduciary duties our officers and directors owe to our shareholders. These conflicts may result in decisions that are not in the best interests of shareholders.

The Tax Receivable Agreement requires us to make cash payments to MLSH 1 and MLSH 2 in respect of certain tax benefits to which we may become entitled, and we expect that the payments we will be required to make will be substantial.

In connection with the consummation of this offering, we will enter into a Tax Receivable Agreement with MLSH 1 and MLSH 2. Pursuant to the Tax Receivable Agreement, we will be required to make cash payments to MLSH 1 and MLSH 2, collectively, equal to 85% of the tax benefits, if any, that we actually realize, or, in some circumstances, are deemed to realize, as a result of (i) certain increases in the tax basis of assets of Topco LLC and its subsidiaries resulting from purchases or exchanges of LLC Units, (ii) certain tax attributes of the Blocker Entities, Topco LLC and subsidiaries of Topco LLC that existed prior to this offering and (iii) certain other tax benefits related to our entering into the Tax Receivable Agreement, including tax benefits attributable to payments that we make under the Tax Receivable Agreement. Due to the uncertainty of various factors, we cannot precisely quantify the likely tax benefits we will realize as a result of the purchase of LLC Units and LLC Unit exchanges, and the resulting amounts we are likely to pay out to MLSH 1 and MLSH 2 pursuant to the Tax Receivable Agreement; however, we estimate that such payments may be substantial. See "Organizational Structure—Tax Receivable Agreement." Payments under the Tax Receivable Agreement will be based on the tax reporting positions that we determine, which tax reporting positions will be based on the advice of our tax advisors. Any payments made by us to MLSH 1 and MLSH 2 under the Tax Receivable Agreement will generally reduce the amount of overall cash flow that might have otherwise been available to us. To the extent that we are unable to make payments under the Tax Receivable Agreement, such payments generally will be deferred and will accrue interest until paid. Nonpayment for a specified period, however, may constitute a breach of a material obligation under the Tax Receivable Agreement and therefore accelerate payments due under the Tax Receivable Agreement, unless, generally, such nonpayment is due to a lack of sufficient funds. Furthermore, our future obligation to make payments under the Tax Receivable Agreement could make us a less attractive target for an acquisition, particularly in the case of an acquirer that cannot use some or all of the tax benefits that may be deemed realized under the Tax Receivable Agreement. The payments under the Tax Receivable Agreement are also not conditioned upon MLSH 1 maintaining a continued ownership interest in Topco LLC. See "Organizational Structure—Tax Receivable Agreement."

The actual amount and timing of any payments under the Tax Receivable Agreement will vary depending upon a number of factors, including the timing of exchanges by MLSH 1, the amount of gain recognized by MLSH 1, the amount and timing of the taxable income we generate in the future and the federal tax rates then applicable.

The amounts that we may be required to pay to MLSH 1 and MLSH 2 under the Tax Receivable Agreement may be accelerated in certain circumstances and may also significantly exceed the actual tax benefits that we ultimately realize.

The Tax Receivable Agreement provides that if (1) certain mergers, asset sales, other forms of business combination or other changes of control were to occur, (2) we breach any of our material obligations under the Tax Receivable Agreement or (3) at any time, we elect an early termination of the Tax Receivable Agreement, then the Tax Receivable Agreement will terminate and our obligations, or our successor's obligations, to make payments under the Tax Receivable Agreement would accelerate and become immediately due and payable. The amount due and payable in that circumstance is based on certain assumptions, including an assumption that we would have sufficient taxable income to fully utilize all potential future tax benefits that are subject to the Tax Receivable Agreement. See "Organizational Structure—Tax Receivable Agreement." We may need to incur debt to finance payments under the Tax Receivable Agreement to the extent our cash resources are insufficient to meet our obligations under the Tax Receivable Agreement as a result of timing discrepancies or otherwise.

As a result of a change in control, material breach or our election to terminate the Tax Receivable Agreement early, (1) we could be required to make cash payments to MLSH 1 and MLSH 2 that are greater than the specified percentage of the actual benefits we ultimately realize in respect of the tax benefits that are subject to the Tax Receivable Agreement and (2) we would be required to make an immediate cash payment equal to the anticipated future tax benefits that are the subject of the Tax Receivable Agreement discounted in accordance with the Tax Receivable Agreement, which payment may be made significantly in advance of the actual realization, if any, of such future tax benefits. In these situations, our obligations under the Tax Receivable Agreement could have a substantial negative impact on our liquidity and could have the effect of delaying, deferring or preventing certain mergers, asset sales, other forms of business combination, or other changes of control. There can be no assurance that we will be able to finance our obligations under the Tax Receivable Agreement.

Our organizational structure, including the Tax Receivable Agreement, confers certain benefits upon MLSH 1 and MLSH 2 that will not benefit the other common shareholders to the same extent as they will benefit MLSH 1 and MLSH 2.

Our organizational structure, including the Tax Receivable Agreement, confers certain benefits upon MLSH 1, as the only other LLC Unitholder, and MLSH 2 that will not benefit the other holders of our common stock to the same extent. We will enter into a Tax Receivable Agreement with MLSH 1 and MLSH 2, which will provide for the payment by us to MLSH 1 and MLSH 2, collectively, of 85% of the amount of tax benefits, if any, that we actually realize, or in some circumstances are deemed to realize, as a result of (i) certain increases in the tax basis of assets of Topco LLC and its subsidiaries resulting from purchases or exchanges of LLC Units, (ii) certain tax attributes of the Blocker Entities, Topco LLC and subsidiaries of Topco LLC that existed prior to this offering and (iii) certain other tax benefits related to our entering into the Tax Receivable Agreement, including tax benefits attributable to payments that we make under the Tax Receivable Agreement. Due to the uncertainty of various factors, we cannot estimate the likely tax benefits we will realize as a result of purchases of LLC Units and LLC Unit exchanges, and the resulting amounts we are likely to pay out to MLSH 1 and MLSH 2 pursuant to the Tax Receivable Agreement; however, we estimate that such payments may be substantial. See "Organizational Structure—Tax Receivable Agreement." Although we will retain 15% of the amount of such tax benefits, this and other aspects of our organizational structure may adversely impact the future trading market for the Class A common stock.

We may not be able to realize all or a portion of the tax benefits that are currently expected to result from the tax attributes covered by the Tax Receivable Agreement and from payments made under the Tax Receivable Agreement.

Our ability to realize the tax benefits that we currently expect to be available as a result of the attributes covered by the Tax Receivable Agreement, the payments made pursuant to the Tax Receivable Agreement, and the interest deductions imputed under the Tax Receivable Agreement all depend on a number of assumptions, including that we earn sufficient taxable income each year during the period over which such deductions are available and that there are no adverse changes in applicable law or regulations. Additionally, if our actual taxable income were insufficient or there were additional adverse changes in applicable law or regulations, we may be unable to realize all or a portion of the expected tax benefits and our cash flows and shareholders' equity could be negatively affected. See "Organizational Structure—Tax Receivable Agreement."

In certain circumstances, Topco LLC will be required to make distributions to us and MLSH 1 and the distributions may be substantial.

Topco LLC is treated as a partnership for U.S. federal income tax purposes and, as such, is not subject to U.S. federal income tax. Instead, taxable income is allocated to its members, including us. We intend to cause Topco LLC to make tax distributions quarterly to the LLC Unitholders (including us), in each case on a pro rata basis based on Topco LLC's net taxable income and without regard to any applicable basis adjustment under Section 743(b) of the Code. Funds used by Topco LLC to satisfy its tax distribution obligations will not be available for reinvestment in our business. Moreover, these tax distributions may be substantial, and will likely exceed (as a percentage of Topco LLC's income) the overall effective tax rate applicable to a similarly situated corporate taxpayer. As a result, it is possible that we will receive distributions significantly in excess of our tax liabilities and obligations to make payments under the Tax Receivable Agreement. While our Board may choose to distribute such cash balances as dividends on our Class A common stock, they will not be required to do so, and may in their sole discretion choose to use such excess cash for any purpose depending upon the facts and circumstances at the time of determination. See "Dividend Policy."

Unanticipated changes in effective tax rates or adverse outcomes resulting from examination of our income or other tax returns could adversely affect our operating results and financial condition.

We are subject to income taxes in the United States, Canada and the U.K. Our tax liabilities will be subject to the allocation of expenses in differing jurisdictions. Our future effective tax rates could be subject to volatility or adversely affected by a number of factors, including:

- changes in the valuation of our deferred tax assets and liabilities;
- expected timing and amount of the release of any tax valuation allowances;
- expiration of, or detrimental changes in, research and development tax credit laws; or
- changes in tax laws, regulations or interpretations thereof.

In addition, we may be subject to audits of our income, sales and other transaction taxes by U.S. federal, state and foreign authorities. Outcomes from these audits could have an adverse effect on our operating results and financial condition.

If we were deemed to be an investment company under the Investment Company Act of 1940, as amended (the "1940 Act"), applicable restrictions could make it impractical for us to continue our business as contemplated and could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

Under Sections 3(a)(1)(A) and (C) of the 1940 Act, a company generally will be deemed to be an "investment company" for purposes of the 1940 Act if it (1) is, or holds itself out as being, engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting or trading in securities or (2) is engaged,

or proposes to engage, in the business of investing, reinvesting, owning, holding or trading in securities and it owns or proposes to acquire investment securities having a value exceeding 40% of the value of its total assets (exclusive of U.S. government securities and cash items) on an unconsolidated basis. We do not believe that we are an "investment company," as such term is defined in either of those sections of the 1940 Act.

As the sole managing member of Topco LLC, we will control and manage Topco LLC. On that basis, we believe that our interest in Topco LLC is not an "investment security" under the 1940 Act. Therefore, we have less than 40% of the value of our total assets (exclusive of U.S. government securities and cash items) in "investment securities." However, if we were to lose the right to manage and control Topco LLC, interests in Topco LLC could be deemed to be "investment securities" under the 1940 Act.

We intend to conduct our operations so that we will not be deemed to be an investment company. However, if we were deemed to be an investment company, restrictions imposed by the 1940 Act, including limitations on our capital structure and our ability to transact with affiliates, could make it impractical for us to continue our business as contemplated and could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

Risks Related to Our Class A Common Stock and This Offering

GTCR controls us, and its interests may conflict with ours or yours in the future.

Immediately following this offering, investment entities affiliated with GTCR will control approximately % of the voting power of our outstanding common stock, or % if the underwriters exercise in full their option to purchase additional shares, which means that, based on its percentage voting power controlled after the offering, GTCR will control the vote of all matters submitted to a vote of our shareholders. This control will enable GTCR to control the election of the members of the Board and all other corporate decisions. Even when GTCR ceases to control a majority of the total voting power, for so long as GTCR continues to own a significant percentage of our common stock, GTCR will still be able to significantly influence the composition of our Board and the approval of actions requiring shareholder approval. Accordingly, for such period of time, GTCR will have significant influence with respect to our management, business plans and policies, including the appointment and removal of our officers, decisions on whether to raise future capital and amending our charter and bylaws, which govern the rights attached to our common stock. In particular, for so long as GTCR continues to own a significant percentage of our common stock, GTCR will be able to cause or prevent a change of control of us or a change in the composition of our Board and could preclude any unsolicited acquisition of us. The concentration of ownership could deprive you of an opportunity to receive a premium for your shares of Class A common stock as part of a sale of us and ultimately might affect the market price of our Class A common stock.

In addition, in connection with this offering, we will enter into a Director Nomination Agreement with GTCR that provides GTCR the right to designate: (i) all of the nominees for election to our Board for so long as GTCR controls % or more of the voting power of our stock entitled to vote generally in the election of directors; (ii) a number of directors (rounded up to the nearest whole number) equal to % of the total directors for so long as GTCR controls at least % and less than % of the voting power; (iii) a number of directors (rounded up to the nearest whole number) equal to % of the total directors for so long as GTCR controls at least % and less than % of the voting power; (iv) a number of directors (rounded up to the nearest whole number) equal to % of the total directors for so long as GTCR controls at least % and less than % of the voting power; and (v) one director for so long as GTCR controls at least % and less than % of the voting power. The Director Nomination Agreement will also provide that GTCR may assign such right to a GTCR affiliate. The Director Nomination Agreement will prohibit us from increasing or decreasing the size of our Board without the prior written consent of GTCR. See "Certain Relationships and Related Party Transactions—Director Nomination Agreement" for more details with respect to the Director Nomination Agreement.

GTCR and its affiliates engage in a broad spectrum of activities, including investments in our industry generally. In the ordinary course of their business activities, GTCR and its affiliates may engage in activities where their interests conflict with our interests or those of our other shareholders, such as investing in or advising businesses that directly or indirectly compete with certain portions of our business or are suppliers or customers of ours. Our certificate of incorporation to be effective at or prior to the consummation of this offering will provide that none of GTCR, any of its 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 or her director and officer capacities) or its 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. GTCR 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. In addition, GTCR may have an interest in pursuing acquisitions, divestitures and other transactions that, in its judgment, could enhance its investment, even though such transactions might involve risks to you or may not prove beneficial.

Upon listing of our shares of Class A common stock on The Nasdaq Global Select Market, we will be a "controlled company" within the meaning of the rules of NASDAQ and, as a result, we will qualify for, and intend to rely on, exemptions from certain corporate governance requirements. You will not have the same protections as those afforded to shareholders of companies that are subject to such governance requirements.

After completion of this offering, GTCR will continue to control a majority of the voting power of our outstanding common stock. As a result, we will be a "controlled company" within the meaning of the corporate governance standards of NASDAQ. Under these rules, a company of which more than 50% of the voting power for the election of directors 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 consist of independent directors;
- the requirement that we have a nominating and corporate governance committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities;
- 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
- the requirement for an annual performance evaluation of the nominating and corporate governance and compensation committees.

Following this offering, we intend to utilize these exceptions. As a result, we may not have a majority of independent directors on our Board, our compensation and nominating and corporate governance committees may not consist entirely of independent directors and our compensation and nominating and corporate governance committees may not be subject to annual performance evaluations. Accordingly, you will not have the same protections afforded to shareholders of companies that are subject to all of the corporate governance requirements of NASDAQ.

We may allocate the net proceeds from this offering in ways that you and other shareholders may not approve.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section titled "Use of Proceeds." Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment, and the failure by our management to apply these funds effectively could harm our business. Pending their use, we may invest the net proceeds from this offering in short- and intermediate-term interest-bearing obligations, investment-grade instruments, certificates of deposit or

direct or guaranteed obligations of the United States government. These investments may not yield a favorable return to our shareholders. If we do not invest or apply the net proceeds from this offering in ways that enhance shareholder value, we may fail to achieve expected results, which could cause our stock price to decline.

As a result of becoming a public company, we will be obligated to develop and maintain proper and effective internal control over financial reporting in order to comply with Section 404 of the Sarbanes-Oxley Act. We may not complete our analysis of our internal control over financial reporting in a timely manner, or these internal controls may not be determined to be effective, which may adversely affect investor confidence in us and, as a result, the value of our Class A common stock.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with GAAP. We are in the very early stages of the costly and challenging process of compiling the system and processing documentation necessary to perform the evaluation needed to comply with Section 404 of the Sarbanes-Oxley Act. We may not be able to complete our evaluation, testing and any required remediation prior to becoming a public company or in a timely manner thereafter. If we are unable to assert that our internal control over financial reporting is effective, we could lose investor confidence in the accuracy and completeness of our financial reports, which would cause the price of our Class A common stock to decline, and we may be subject to investigation or sanctions by the SEC.

We will be required, pursuant to Section 404 of the Sarbanes-Oxley Act, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting as of the end of the fiscal year that coincides with the filing of our second annual report on Form 10-K. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. We will also be required to disclose changes made in our internal control and procedures on a quarterly basis. However, our independent registered public accounting firm will not be required to report on the effectiveness of our internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act until the later of the year following our first annual report required to be filed with the SEC, or the date we are no longer an "emerging growth company" as defined in the JOBS Act if we take advantage of the exemptions contained in the JOBS Act. At such time, our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our controls are documented, designed or operating.

Additionally, the existence of any material weakness or significant deficiency would require management to devote significant time and incur significant expense to remediate any such material weaknesses or significant deficiencies and management may not be able to remediate any such material weaknesses or significant deficiencies in a timely manner. The existence of any material weakness in our internal control over financial reporting could also result in errors in our financial statements that could require us to restate our financial statements, cause us to fail to meet our reporting obligations and cause shareholders to lose confidence in our reported financial information, all of which could materially and adversely affect our business and stock price. To comply with the requirements of being a public company, we may need to undertake various costly and time-consuming actions, such as implementing new internal controls and procedures and hiring accounting or internal audit staff, which may adversely affect our business, financial condition, results of operations, cash flows and prospects.

We are an "emerging growth company" and we have elected and expect to elect to comply with reduced public company reporting requirements, which could make our Class A common stock less attractive to investors.

We are an "emerging growth company," as defined in the JOBS Act. For as long as we continue to be an emerging growth company, we are eligible for certain exemptions from various public company reporting requirements. These exemptions include, but are not limited to, (i) not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, (ii) reduced disclosure obligations regarding

executive compensation in our periodic reports, proxy statements and registration statements, (iii) exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved and (iv) not being required to provide audited financial statements for the year ended December 31, 2017 or five years of Selected Consolidated Financial Data in this prospectus. We could be an emerging growth company for up to five years after the first sale of our Class A common stock pursuant to an effective registration statement under the Securities Act, which fifth anniversary will occur in 2025. 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 revenue exceeds $1.07 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period, we would cease to be an emerging growth company prior to the end of such five-year period. We have made certain elections with regard to the reduced disclosure obligations regarding executive compensation in this prospectus and may elect to take advantage of other reduced disclosure obligations in future filings. As a result, the information that we provide to holders of our common stock may be different than you might receive from other public reporting companies in which you hold equity interests. We cannot predict if investors will find our Class A common stock less attractive as a result of reliance on these exemptions. If some investors find our Class A common stock less attractive as a result of any choice we make to reduce disclosure, there may be a less active trading market for our Class A common stock and the market price for our Class A common stock may be more volatile.

The JOBS Act also permits an emerging growth company like us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. We are electing to take advantage of this extended transition period for complying with new or revised accounting standards provided for by the JOBS Act. We will therefore comply with new or revised accounting standards when they apply to private companies. As a result, our financial statements may not be comparable with companies that comply with public company effective dates for accounting standards.

The requirements of being a public company may strain our resources and distract our management, which could make it difficult to manage our business, particularly after we are no longer an "emerging growth company."

As a public company, we will incur legal, accounting and other expenses that we did not previously incur. We will become subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and the Sarbanes-Oxley Act, the listing requirements of NASDAQ and other applicable securities rules and regulations. Compliance with these rules and regulations will increase our legal and financial compliance costs, make some activities more difficult, time-consuming or costly and increase demand on our systems and resources, particularly after we are no longer an "emerging growth company." The Exchange Act requires that we file annual, quarterly and current reports with respect to our business, financial condition, results of operations, cash flows and prospects. The Sarbanes-Oxley Act requires, among other things, that we establish and maintain effective internal controls and procedures for financial reporting. Furthermore, the need to establish the corporate infrastructure demanded of a public company may divert our management's attention from implementing our growth strategy, which could prevent us from improving our business, financial condition, results of operations, cash flows and prospects. We have made, and will continue to make, changes to our internal controls and procedures for financial reporting and accounting systems to meet our reporting obligations as a public company. However, the measures we take may not be sufficient to satisfy our obligations as a public company. In addition, 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 substantial costs to maintain the same or similar coverage. These additional obligations could have a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

In addition, changing laws, regulations and standards relating to corporate governance and public disclosure are creating uncertainty for public companies, increasing legal and financial compliance costs and making some

activities more time consuming. These laws, regulations and standards are subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of our management's time and attention from revenue-generating activities to compliance activities. If our efforts to comply with new laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to their application and practice, regulatory authorities may initiate legal proceedings against us and there could be a material adverse effect on our business, financial condition, results of operations, cash flows and prospects.

Provisions of our corporate governance documents could make an acquisition of us more difficult and may prevent attempts by our shareholders to replace or remove our current management, even if beneficial to our shareholders.

Our certificate of incorporation and bylaws to be effective at or prior to the consummation of this offering and the Delaware General Corporation Law (the "DGCL") contain provisions that could make it more difficult for a third party to acquire us, even if doing so might be beneficial to our shareholders. Among other things:

- these provisions allow us to authorize the issuance of undesignated preferred stock, the terms of which may be established and the shares of which may be issued without shareholder approval, and which may include supermajority voting, special approval, dividend, or other rights or preferences superior to the rights of shareholders;
- these provisions provide for a classified board of directors with staggered three-year terms;
- these provisions provide that, at any time when GTCR controls, in the aggregate, less than % in voting power of our stock 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 % in voting power of all the then-outstanding shares of our stock entitled to vote thereon, voting together as a single class;
- these provisions prohibit shareholder action by written consent from and after the date on which GTCR controls, in the aggregate, less than % in voting power of our stock entitled to vote generally in the election of directors;
- these provisions provide that for as long as GTCR controls, in the aggregate, at least % in voting power of our stock entitled to vote generally in the election of directors, any amendment, alteration, rescission or repeal of our bylaws by our shareholders will require the affirmative vote of a majority in voting power of the outstanding shares of our capital stock and at any time when GTCR controls, in the aggregate, less than % in voting power of all outstanding shares of our stock entitled to vote generally in the election of directors, any amendment, alteration, rescission or repeal of our bylaws by our shareholders will require the affirmative vote of the holders of at least % in voting power of all the then-outstanding shares of our stock entitled to vote thereon, voting together as a single class; and
- these provisions establish advance notice requirements for nominations for elections to our Board or for proposing matters that can be acted upon by shareholders at shareholder meetings; provided, however, at any time when GTCR controls, in the aggregate, at least % in voting power of our stock entitled to vote generally in the election of directors, such advance notice procedure will not apply to GTCR.

We will opt out of Section 203 of the DGCL, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with any interested shareholder for a period of three years following the date on which the shareholder became an interested shareholder. However, our certificate of incorporation to be effective at or prior to the consummation of this offering will contain a provision that provides us with protections similar to Section 203, and will prevent us from engaging in a business combination

with a person (excluding GTCR and any of its direct or indirect transferees and any group as to which such persons are a party) who acquires at least % of our common stock for a period of three years from the date such person acquired such common stock, unless board or shareholder approval is obtained prior to the acquisition. See "Description of Capital Stock—Anti-Takeover Provisions." These provisions could discourage, delay or prevent a transaction involving a change in control of our company. These provisions could also discourage proxy contests and make it more difficult for you and other shareholders to elect directors of your choosing and cause us to take other corporate actions you desire, including actions that you may deem advantageous, or negatively affect the trading price of our Class A common stock. In addition, because our Board is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our shareholders to replace current members of our management team.

These and other provisions in our certificate of incorporation, bylaws and Delaware law could make it more difficult for shareholders or potential acquirers to obtain control of our Board or initiate actions that are opposed by our then-current Board, including actions to delay or impede a merger, tender offer or proxy contest involving our company. The existence of these provisions could negatively affect the price of our Class A common stock and limit opportunities for you to realize value in a corporate transaction.

For information regarding these and other provisions, see "Description of Capital Stock."

Our certificate of incorporation will designate the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation that may be initiated by our shareholders, which could limit our shareholders' ability to obtain a favorable judicial forum for disputes with us.

Pursuant to our certificate of incorporation, which we will adopt at or prior to the consummation of this offering, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for any claims in state court for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our shareholders, (3) any action asserting a claim against us arising pursuant to any provision of the DGCL, our certificate of incorporation or our bylaws or (4) any other action asserting a claim against us that is governed by the internal affairs doctrine; provided that for the avoidance of doubt, the forum selection provision that identifies the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation, including any "derivative action," will not apply to suits to enforce a duty or liability created by the Securities Act, the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Our certificate of incorporation will further provide that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to the provisions of our certificate of incorporation described above. See "Description of Capital Stock—Forum Selection." The forum selection provision in our certificate of incorporation may have the effect of discouraging lawsuits against us or our directors and officers and may limit our shareholders' ability to obtain a favorable judicial forum for disputes with us. If the enforceability of our forum selection provision were to be challenged, we may incur additional costs associated with resolving such challenge. While we currently have no basis to expect any such challenge would be successful, if a court were to find our forum selection provision to be inapplicable or unenforceable, we may incur additional costs associated with having to litigate in other jurisdictions, which could have an adverse effect on our business, financial condition, results of operations, cash flows and prospects and result in a diversion of the time and resources of our employees, management and board of directors.

If you purchase shares of Class A common stock in this offering, you will suffer immediate and substantial dilution of your investment.

The initial public offering price of our Class A common stock is substantially higher than the net tangible book value per share of our Class A common stock. Therefore, if you purchase shares of our Class A common stock in this offering, you will pay a price per share that substantially exceeds our net tangible book value per share after this offering. Based on an assumed initial public offering price of $ per share, the mid-point of

the price range set forth on the cover page of this prospectus, you will experience immediate dilution of $ per share, representing the difference between our pro forma net tangible book value per share at September 30, 2020 after giving effect to this offering and the initial public offering price. In addition, purchasers of Class A common stock in this offering will have contributed % of the aggregate price paid by all purchasers of our Class A common stock but will own only approximately % of our Class A common stock outstanding after this offering. See "Dilution" for more detail.

An active, liquid trading market for our Class A common stock may not develop, which may limit your ability to sell your shares.

Prior to this offering, there was no public market for our Class A common stock. Although we intend to apply to have our Class A common stock approved for listing on The Nasdaq Global Select Market under the trading symbol "MRVI," an active trading market for our Class A common stock may never develop or be sustained following this offering. The initial public offering price will be determined by negotiations between us and the underwriters and may not be indicative of market prices of our Class A common stock that will prevail in the open market after the offering. A public trading market having the desirable characteristics of depth, liquidity and orderliness depends upon the existence of willing buyers and sellers at any given time, such existence being dependent upon the individual decisions of buyers and sellers over which neither we nor any market maker has control. The failure of an active and liquid trading market to develop and continue would likely have a material adverse effect on the value of our Class A common stock. The market price of our Class A common stock may decline below the initial public offering price, and you may not be able to sell your shares of our Class A common stock at or above the price you paid in this offering, or at all. An inactive market may also impair our ability to raise capital to continue to fund operations by issuing additional shares of our Class A common stock or other equity or equity-linked securities and may impair our ability to acquire other companies or technologies by using any such securities as consideration.

Our operating results and stock price may be volatile, and the market price of our Class A common stock after this offering may drop below the price you pay.

Our quarterly operating results are likely to fluctuate in the future. In addition, securities markets worldwide have experienced, and are likely to continue to experience, significant price and volume fluctuations, including as a result of the COVID-19 pandemic. This market volatility, as well as general economic, market or political conditions, could subject the market price of our Class A common stock to wide price fluctuations regardless of our operating performance. Our operating results and the trading price of our Class A common stock may fluctuate in response to various factors, including:

- market conditions in our industry or the broader stock market;
- actual or anticipated fluctuations in our quarterly financial and operating results;
- introduction of new products or services by us or our competitors;
- issuance of new or changed securities analysts' reports or recommendations;
- sales, or anticipated sales, of large blocks of our stock;
- additions or departures of key personnel;
- regulatory or political developments;
- litigation and governmental investigations;
- changing economic conditions;
- investors' perception of us;
- events beyond our control such as weather, war and health crises such as theCOVID-19 pandemic; and
- any default on our indebtedness.

These and other factors, many of which are beyond our control, may cause our operating results and the market price and demand for our Class A common stock to fluctuate substantially. Fluctuations in our quarterly operating results could limit or prevent investors from readily selling their shares of Class A common stock and may otherwise negatively affect the market price and liquidity of our shares of Class A common stock. In addition, in the past, when the market price of a stock has been volatile, holders of that stock have sometimes instituted securities class action litigation against the company that issued the stock. If any of our shareholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit. Such a lawsuit could also divert the time and attention of our management from our business, which could significantly harm our profitability and reputation.

A significant portion of our total outstanding shares of Class A common stock are restricted from immediate resale but may be sold into the market in the near future. This could cause the market price of our Class A common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our Class A common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares of Class A common stock intend to sell shares, could reduce the market price of our Class A common stock. After this offering, we will have outstanding shares of Class A common stock based on the number of shares outstanding as of September 30, 2020. This includes shares of Class A common stock that we are selling in this offering, which may be resold in the public market immediately. Following the consummation of this offering, substantially all of the shares that are not being sold in this offering will be subject to a 180-day lock-up period provided under lock-up agreements executed in connection with this offering described in "Underwriters" and restricted from immediate resale under the federal securities laws as described in "Shares Eligible for Future Sale." All of these shares of Class A common stock will, however, be able to be resold after the expiration of the lock-up period, as well as pursuant to customary exceptions thereto or upon the waiver of thelock-up agreement by the representatives on behalf of the underwriters. We also intend to register shares of Class A common stock that we may issue under our equity compensation plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to the lock-up agreements. As restrictions on resale end, the market price of our stock could decline if the holders of currently restricted shares of Class A common stock sell them or are perceived by the market as intending to sell them.

Because we have no current plans to pay regular cash dividends on our Class A common stock following this offering, you may not receive any return on investment unless you sell your Class A common stock for a price greater than that which you paid for it.

We do not anticipate paying any regular cash dividends on our Class A common stock following this offering. Any decision to declare and pay dividends in the future will be made at the discretion of our Board and will depend on, among other things, our results of operations, financial condition, cash requirements, contractual restrictions and other factors that our Board may deem relevant. In addition, our ability to pay dividends is, and may be, limited by covenants of existing and any future outstanding indebtedness we or our subsidiaries incur, including under our New Credit Agreement. Therefore, any return on investment in our Class A common stock is solely dependent upon the appreciation of the price of our Class A common stock on the open market, which may not occur. See "Dividend Policy" for more detail.

If securities or industry analysts do not publish research or reports about our business, if they publish unfavorable research or reports, or adversely change their recommendations regarding our Class A common stock or if our results of operations do not meet their expectations, our stock price and trading volume could decline.

If a trading market for our Class A common stock develops, the trading market will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not have any control over these analysts. As a newly public company, we may be slow to attract research coverage. In the

event we obtain securities or industry analyst coverage, if any of the analysts who cover us provide inaccurate or unfavorable research, issue an adverse opinion regarding our stock price or if our results of operations do not meet their expectations, our stock price could decline. Moreover, if one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

We may issue shares of preferred stock in the future, which could make it difficult for another company to acquire us or could otherwise adversely affect holders of our Class A common stock, which could depress the price of our Class A common stock.

Our certificate of incorporation will authorize us to issue one or more series of preferred stock. Our Board will have the authority to determine the preferences, limitations and relative rights of the shares of preferred stock and to fix the number of shares constituting any series and the designation of such series, without any further vote or action by our shareholders. Our preferred stock could be issued with voting, liquidation, dividend and other rights superior to the rights of our Class A common stock. The potential issuance of preferred stock may delay or prevent a change in control of us, discouraging bids for our Class A common stock at a premium to the market price, and materially adversely affect the market price and the voting and other rights of the holders of our Class A common stock.

FORWARD-LOOKING STATEMENTS

This prospectus contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 that are subject to risks and uncertainties. All statements other than statements of historical fact included in this prospectus are forward-looking statements. Forward-looking statements give our current expectations and projections relating to our financial condition, results of operations, plans, objectives, future performance and business. You can identify forward-looking statements by the fact that they do not relate strictly to historical or current facts. These statements may include words such as "anticipate," "estimate," "expect," "project," "plan," "intend," "believe," "may," "will," "should," "can have," "likely" and other words and terms of similar meaning in connection with any discussion of the timing or nature of future operating or financial performance or other events. For example, all statements we make relating to our estimated and projected costs, expenditures, cash flows, growth rates and financial results, our plans and objectives for future operations, growth or initiatives, strategies or the expected outcome or impact of pending or threatened litigation are forward-looking statements. All forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those that we expected, including:

- our history of losses, the risk that we may continue to incur losses in the future and our ability to generate sufficient revenue to achieve or maintain profitability;
- the fluctuation of our operating results, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide;
- our dependence on a limited number of customers for a high percentage of our revenue;
- the use of certain of our products in the production of vaccines and therapies that represent relatively new and still-developing modes of treatment, which may experience unforeseen adverse events, negative clinical outcomes or increased regulatory scrutiny;
- the impact of COVID-19 and any pandemic, epidemic or outbreak of infectious disease;
- changes in economic conditions;
- our dependence on customers' spending on and demand for outsourced nucleic acid production, biologics safety testing and protein detection research products and services;
- competition with life science, pharmaceutical and biotechnology companies who are substantially larger than we are and potentially capable of developing new approaches that could make our products, services and technologies obsolete;
- the ability of our products and services to perform as expected and the reliability of the technology on which our products and services are based;
- the complexity of our products and the fact that they are subject to quality control requirements;
- our reliance on a limited number of suppliers or, in some cases, sole suppliers, for some of our raw materials and our inability to find replacements or immediately transition to alternative suppliers;
- our dependence on a stable and adequate supply of quality raw materials from our suppliers, and the risk of adverse impacts from price increases or interruptions of such supply;
- disruptions at our sites;
- our ability to manufacture in specific quantities;
- natural disasters, geopolitical unrest, war, terrorism, public health issues such as COVID-19 or other catastrophic events that could disrupt the supply, delivery or demand of products and services;
- our ability to secure additional financing for future strategic transactions;
- our reliance on third-party package delivery services and adverse impacts arising from significant disruptions of these services, damages or losses sustained during shipping or significant increases in prices;

- our ability to continue to hire and retain skilled personnel;
- our ability to successfully identify and implement distribution arrangements and marketing alliances;
- the market acceptance of our life science reagents;
- the market receptivity to our new products and services upon their introduction;
- our ability to implement our strategies for revenue growth;
- the accuracy of our estimates of market opportunity and forecasts of market growth included in this prospectus;
- product liability lawsuits;
- the application of privacy laws, security laws, regulations, policies and contractual obligations related to data privacy and security;
- our ability to efficiently manage our growth;
- the success of any opportunistic acquisitions;
- the integrity of our internal computer systems;
- the impact of export and import control laws and regulations;
- risks related to Brexit;
- changes in political, economic or governmental regulations;
- financial, operating, legal and compliance risks associated with global operations;
- risks associated with our acquisitions;
- impacts from foreign currency exchange rates;
- the risk that our products could become subject to more onerous regulation in the future;
- our ability to use net operating loss and tax credit carryforwards;
- the fact that our activities are and will continue to be subject to extensive government regulation;
- the risk that we may be required to record a significant charge to earnings if our goodwill or other amortizable intangible assets become impaired;
- unfavorable accounting charges or effects driven by changes in accounting principles or guidance;
- impacts on our financial results from our revenue recognition and other factors;
- fluctuations in our effective tax rate;
- environmental risks;
- our ability to obtain, maintain and enforce intellectual property protection for our current and future products;
- our ability to protect the confidentiality of our proprietary information;
- risks associated with lawsuits to protect our patents or with respect to the infringement, misappropriations or other violations of intellectual property rights of third parties;
- risks associated with failures to comply with our obligations under license agreements;
- potential changes in patent law in the United States and other jurisdictions;
- our ability to obtain and maintain our patent protection;

- impact of claims by third parties that we or our employees, consultants or independent contractors have infringed, misappropriated or otherwise violated their intellectual property;
- our ability to protect our intellectual property and proprietary rights throughout the world;
- our reliance on confidentiality agreements;
- our ability to protect our trademarks and trade names;
- threats not related to intellectual property; and
- other risks addressed under the heading “Risk Factors” herein.

We derive many of our forward-looking statements from our operating budgets and forecasts, which are based on many detailed assumptions. While we believe that our assumptions are reasonable, we caution that it is very difficult to predict the impact of known factors, and it is impossible for us to anticipate all factors that could affect our actual results. Important factors that could cause actual results to differ materially from our expectations, or cautionary statements, are disclosed under the sections entitled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this prospectus. All written and oral forward-looking statements attributable to us, or persons acting on our behalf, are expressly qualified in their entirety by these cautionary statements as well as other cautionary statements that are made from time to time in our other SEC filings and public communications. You should evaluate all forward-looking statements made in this prospectus in the context of these risks and uncertainties.

We caution you that the important factors referenced above may not contain all of the factors that are important to you. In addition, we cannot assure you that we will realize the results or developments we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our operations in the way we expect. The forward-looking statements included in this prospectus are made only as of the date hereof. We undertake no obligation to update or revise any forward-looking statement as a result of new information, future events or otherwise, except as otherwise required by law.

MARKET AND INDUSTRY DATA

Unless otherwise indicated, information in this prospectus concerning economic conditions, our industry, our markets and our competitive position is based on a variety of sources, including information from independent industry analysts and publications, as well as our own estimates and research. This information involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. While we are responsible for all disclosure in this prospectus, and we believe the information presented in this prospectus is generally reliable, forecasts, assumptions, expectations, beliefs, estimates and projects involve risk and uncertainties and are subject to change based on various factors, including those described under “Forward-Looking Statements” and “Risk Factors.”

USE OF PROCEEDS

We estimate, based upon an assumed initial public offering price of $ per share (which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus), we will receive net proceeds from this offering of approximately $ million (or $ million if the underwriters exercise their option to purchase additional shares in full, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use such net proceeds as follows:

- $ million to acquire newly-issued LLC Units (or LLC Units if the underwriters exercise their option to purchase additional shares in full) in Topco LLC and $ million to acquire outstanding LLC Units (or LLC Units if the underwriters exercise their option to purchase additional shares in full) from MLSH 1, in each case at a purchase price per LLC Unit equal to the initial public offering price per share of Class A common stock in this offering, less underwriting discounts and commissions; and
- $ million to pay MLSH 2 as consideration for the Blocker Mergers.

In turn, Topco LLC intends to apply the balance of the proceeds it receives from us (including any additional proceeds it may receive from us if the underwriters exercise their option to purchase additional shares of Class A common stock) to pay expenses incurred in connection with this offering and the Organizational Transactions and for general corporate purposes.

Pending use of the net proceeds from this offering described above, we may invest the net proceeds in short- and intermediate-term interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the United States government.

Assuming no exercise of the underwriters' option to purchase additional shares, each $1.00 increase or decrease in the assumed initial public offering price of $ per share (which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus) would increase or decrease the net proceeds to us from this offering by approximately $ million, assuming the number of shares of Class A common stock offered, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each 1,000,000 increase or decrease in the number of shares of Class A common stock offered in this offering would increase or decrease the net proceeds to us from this offering by approximately $ million, assuming that the initial public offering price per share for the offering remains at $ (which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus), and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

DIVIDEND POLICY

We currently intend to retain all available funds and any future earnings to fund the development and growth of our business and to repay indebtedness and, therefore, we do not anticipate paying any cash dividends in the foreseeable future. Additionally, because we are a holding company, our ability to pay dividends on our Class A common stock may be limited by restrictions on the ability of our subsidiaries to pay dividends or make distributions to us. Any future determination to pay dividends will be at the discretion of our Board, subject to compliance with covenants in current and future agreements governing our and our subsidiaries' indebtedness, including our New Credit Agreement, and will depend on our results of operations, financial condition, capital requirements and other factors that our Board deems relevant.

Under the terms of the LLC Operating Agreement, Topco LLC is obligated to make tax distributions to current and future unitholders, including us and shall be made on a pro rata basis among the LLC Unitholders based on Topco LLC's net taxable income and without regard to any applicable basis adjustment under Section 743(b) of the Code. These tax distributions may be substantial, and will likely exceed (as a percentage of Topco LLC's income) the overall effective tax rate applicable to a similarly situated corporate taxpayer. As a result, it is possible that we will receive distributions significantly in excess of our tax liabilities and obligations to make payments under the Tax Receivable Agreement. While our Board may choose to distribute such cash balances as dividends on our Class A common stock (subject to the limitations set forth in the preceding paragraph), they will not be required to do so, and may in its sole discretion choose to use such excess cash for any purpose depending upon the facts and circumstances at the time of determination.

CAPITALIZATION

The following table describes our cash and consolidated capitalization as of September 30, 2020:

- of Topco LLC and its subsidiaries on an actual historical basis;
- of Maravai LifeSciences Holdings, Inc. on a pro forma basis, after giving effect to the Organizational Transactions; and
- of Maravai LifeSciences Holdings, Inc. on a pro forma as adjusted basis, after giving effect to the Organizational Transactions and our sale of shares of Class A common stock in this offering at an assumed initial public offering price of $ per share (which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus) after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us (assuming no exercise of the underwriters' option to purchase additional shares).

You should read this table in conjunction with the unaudited condensed consolidated financial statements and the related notes, "Use of Proceeds," "Organizational Structure," "Unaudited Pro Forma Condensed Consolidated Financial Information" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this prospectus.

	As of September 30, 2020 (unaudited)		
(dollars in thousands, except share data and par value)	**Historical Topco LLC**	**Pro Forma for the Organizational Transactions**	**Pro Forma As Adjusted for the Organizational Transactions and the Offering**
Cash	$	$	$
Indebtedness:			
Credit Facilities(1)	$	$	$
Common units			
Class A common stock, $0.01 par value per share, million shares authorized; no shares issued and outstanding, on an actual basis; shares authorized, no shares issued and outstanding, on a pro forma basis; million shares authorized; shares issued and outstanding, on a pro forma as adjusted basis	—	—	
Class B common stock, $0.01 par value per share, million shares authorized; no shares issued and outstanding, on an actual basis; shares authorized; no shares issued and outstanding, on a pro forma basis; shares authorized; shares issued and outstanding, on a pro forma as adjusted basis	—	—	
Retained earnings (deficit)	—	—	
Total member's/shareholders' equity (deficit)			
Non-controlling interests(2)			
Total capitalization	$	$	$

(1) Includes (a) a first lien credit agreement entered into on August 2, 2018 and providing for a $250.0 million first lien term loan facility and a $50.0 million revolving credit facility and (b) a second lien credit agreement providing for a $100.0 million second lien term loan facility On October 19, 2020, we entered into the New Credit Agreement, which provides for a $600.0 million term loan and a $180.0 million revolving credit facility. The proceeds from the borrowings under the New Credit Agreement were used in part to repay the existing credit facilities, make a distribution to MLSH 1 and repurchase minority interests in one of our subsidiaries.

(2) On a pro forma as adjusted basis, includes the Topco LLC interests not owned by us, which represents % of Topco LLC's LLC Units. MLSH 1 will hold the non-controlling economic interest in Topco LLC. Maravai LifeSciences Holdings, Inc. will hold % of the economic interest in Topco LLC.

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 cover page of this prospectus) would increase or decrease each of cash, total shareholders' equity and total capitalization on a pro forma basis by approximately $ million, assuming the number of shares of Class A common stock offered, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each 1,000,000 increase or decrease in the number of shares of Class A common stock offered in this offering would increase or decrease each of cash, total shareholders' equity and total capitalization on a pro forma basis by approximately $ million, based on an assumed initial public offering price of $ per share, which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The number of shares of Class A common stock to be outstanding after the completion of this offering, excludes shares of Class A common stock that may be issuable upon exercise of redemption and exchange rights held by MLSH 1 and shares of Class A common stock reserved for future issuance under the 2020 Plan.

DILUTION

Because MLSH 1 does not own any Class A common stock or other economic interests in Maravai LifeSciences Holdings, Inc., we have presented dilution in pro forma net tangible book value per share after this offering assuming that MLSH 1 had all of its LLC Units redeemed or exchanged for newly-issued shares of Class A common stock on a one-for-one basis (rather than for cash and based upon an assumed offering price of $ per share, which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus) and the cancellation for no consideration of all of its shares of Class B common stock (which are not entitled to receive distributions or dividends, whether cash or stock, from Maravai LifeSciences Holdings, Inc.) in order to more meaningfully present the dilutive impact to the investors in this offering. We refer to the assumed redemption or exchange of all LLC Units for shares of Class A common stock as described in the previous sentence as the "Assumed Redemption."

Dilution results from the fact that the initial public offering price per share of the Class A common stock is substantially in excess of the pro forma net tangible book value per share of Class A common stock after this offering. Net tangible book value (deficit) per share represents the amount of our total tangible assets less total liabilities, divided by the number of shares of Class A common stock outstanding. If you invest in our Class A common stock, your ownership interest will be immediately diluted to the extent of the difference between the initial public offering price per share of our Class A common stock and the pro forma net tangible book value per share of our Class A common stock after this offering.

Pro forma net tangible book value per share is determined at any date by subtracting our total liabilities from the total book value of our tangible assets and dividing the difference by the number of shares of Class A common stock, after giving effect to the Organizational Transactions, including the sale of shares of Class A common stock in this offering at the assumed initial public offering price of $ per share, which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus, and the Assumed Redemption. Our pro forma net tangible book value (deficit) as of September 30, 2020 was $ million, or $ per share of Class A common stock. This represents an immediate increase in our net tangible book value to MLSH 1 and MLSH 2 of $ per share and an immediate dilution to new investors in this offering of $ per share. We determine dilution by subtracting the pro forma net tangible book value per share after this offering from the amount of cash that a new investor paid for a share of Class A common stock. The following table illustrates this dilution:

Assumed initial public offering price per share		$
Pro forma net tangible book value (deficit) per share as of September 30, 2020 before this offering[1]	$	
Increase in net tangible book value per share attributable to the investors in this offering	$	
Pro forma net tangible book value (deficit) per share after this offering		$
Dilution in net tangible book value per share to the investors in this offering		$

(1) The computation of pro forma net tangible book value per share as of September 30, 2020 before this offering is set forth below:

(in thousands, except per share data)	
Book value of tangible assets	$
Less: total liabilities	$
Pro forma net tangible book value[a]	$
Shares of Class A common stock outstanding[a]	
Pro forma net tangible book value per share	$

(a) Gives pro forma effect to the Organizational Transactions (other than this offering) and the Assumed Redemption.

A $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus, would increase or decrease pro forma net tangible book value by $ million, or $ per share, and would increase or decrease the dilution per share to the investors in this offering by $ based on the assumptions set forth above.

The following table summarizes as of September 30, 2020, after giving effect to the Organizational Transactions (including this offering), the number of shares of Class A common stock purchased from us, the total consideration paid and the average price per share paid by MLSH 1 and MLSH 2 and by the purchasers in this offering, based upon an assumed initial public offering price of $ per share (the midpoint of the estimated public offering price range set forth on the cover page of this prospectus) and before deducting estimated underwriting discounts and commissions and offering expenses, after giving effect to the Assumed Redemption:

	Shares of Class A Common Stock Purchased		Total Consideration		
	Number	Percent	Amount	Percent	Average Price Per Share
Existing owners		%	$	%	$
Investors in this offering					
Total		100%	$	100%	$

The discussion and tables above assume no exercise of the underwriters' option to purchase additional shares. In addition, the discussion and tables above exclude shares of Class B common stock, because holders of the Class B common stock are not entitled to distributions or dividends, whether cash or stock, from Maravai LifeSciences Holdings, Inc. If the underwriters' option to purchase additional shares is exercised in full, after giving effect to the Assumed Redemption, MLSH 1 and MLSH 2 would own approximately % and the investors in this offering would own approximately % of the total number of shares of our Class A common stock outstanding after this offering. If the underwriters exercise their option to purchase additional shares in full, after giving effect to the Assumed Redemption, the pro forma net tangible book value (deficit) per share after this offering would be $ per share, and the dilution in the pro forma net tangible book value (deficit) per share to the investors in this offering would be $ per share.

The tables and calculations above are based on the number of shares of Class A common stock outstanding as of September 30, 2020 (after giving effect to the Organizational Transactions), and exclude an aggregate of shares of Class A common stock reserved for issuance under our 2020 Plan that we expect to adopt in connection with this offering. To the extent that any new options or other equity incentive grants are issued in the future with an exercise price or purchase price below the initial public offering price, new investors will experience further dilution.

We may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent additional capital is raised through the sale of equity or equity-linked securities, the issuance of these securities could result in further dilution to our shareholders.

SELECTED CONSOLIDATED FINANCIAL DATA

The following tables present, as of the dates and for the periods indicated, the selected consolidated financial data for Topco LLC and its subsidiaries. Topco LLC is the predecessor of Maravai LifeSciences Holdings, Inc. for financial reporting purposes. The selected consolidated statement of operations data for each of the years ended December 31, 2018 and 2019 and the selected consolidated balance sheet data as of December 31, 2018 and 2019 presented below have been derived from the audited consolidated financial statements and notes of Topco LLC and its subsidiaries, included elsewhere in this prospectus. The selected condensed consolidated statement of operations data for each of the nine months ended September 30, 2019 and 2020 and the selected condensed consolidated balance sheet data as of September 30, 2020 presented below have been derived from the unaudited condensed consolidated financial statements and notes of Topco LLC and its subsidiaries, included elsewhere in this prospectus. In the opinion of management, such unaudited condensed consolidated financial statements and notes include all adjustments, consisting only of normal and recurring adjustments, necessary for a fair presentation of such financial data. The results of operations for the periods presented below are not necessarily indicative of the results to be expected for any future period and the results for any interim period are not necessarily indicative of the results that may be expected for a full fiscal year.

The information set forth below should be read together with the "Prospectus Summary—Summary Historical and Pro Forma Consolidated Financial Data," "Use of Proceeds," "Capitalization," "Unaudited Pro Forma Condensed Consolidated Financial Data," and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and the accompanying notes included elsewhere in this prospectus.

The selected consolidated financial data of Maravai LifeSciences Holdings, Inc. have not been presented as Maravai LifeSciences Holdings, Inc. is a newly incorporated entity, has had no business transactions or activities to date and had no material assets or liabilities during the periods presented in this section.

	Historical Topco LLC				Pro Forma Maravai LifeSciences Holdings, Inc.	
	Year Ended December 31,		Nine Months Ended September 30,		Year Ended December 31,	Nine Months Ended September 30,
Consolidated Statement of Operations Data:	**2018**	**2019**	**2019**	**2020**	**2019**	**2020**
			(Unaudited)		(Unaudited)	
	(in thousands, except per share and per unit data)					
Revenue	$ 123,833	$ 143,140	$	$	$	$
Operating Expenses:						
Cost of revenue	60,765	66,849				
Research and development	4,499	3,627				
Selling, general and administrative	41,194	48,354				
Change in estimated fair value of contingent consideration	939	322				
Total operating expenses	107,397	119,152				
Income from operations	16,436	23,988				
Other income (expense):						
Interest expense	(27,399)	(29,959)				
Loss on extinguishment of debt	(5,622)	—				
Other income	87	118				
Loss before income taxes	(16,498)	(5,853)				
Income tax expense (benefit)	417	(652)				
Net loss	$ (16,915)	$ (5,201)	$	$	$	$
Net loss attributable to noncontrolling interests	(12,443)	(731)				
Net loss attributable to Topco LLC member	$ (4,472)	$ (4,470)	$	$	$	$
Net loss per common unit attributable to Topco LLC member—basic and diluted	$ (17,727)	$ (8,481)	$	$	$	$
Weighted-average common units outstanding	1,000	1,000				
Per Share Data[1]:						
Pro forma weighted average shares of Class A common stock outstanding:						
Basic						
Diluted						
Pro forma net loss available to Class A common stock per share:						
Basic					$	$
Diluted					$	$
Selected Other Data:						
Adjusted EBITDA[2]	$ 53,000	$ 62,014	$	$	$	$
Adjusted Free Cash Flow[3]	$ 49,193	$ 42,101	$	$	$	$

	Historical Topco LLC			
	As of December 31,		As of September 30,	
	2018	2019	2019	2020
Consolidated Balance Sheet Data (at period end):			(Unaudited)	
Cash	$ 21,866	$ 24,700	$	$
Working capital(4)	17,883	30,990		
Total assets	539,676	577,796		
Long-term debt, less current portion	335,550	334,783		
Total liabilities	391,660	433,169		
Total member's/shareholders' equity	148,016	144,627		

(1) See the unaudited pro forma consolidated statement of operations in "Unaudited Pro Forma Consolidated Financial Information" for the description of the assumptions underlying the pro forma net loss per share calculations.

(2) Adjusted EBITDA is a supplemental measure of operating performance that is not prepared in accordance with GAAP and that does not represent, and should not be considered as, an alternative to net loss, as determined in accordance with GAAP. For a reconciliation of Adjusted EBITDA to net loss, the most directly comparable GAAP measure, see "Prospectus Summary—Summary Historical Financial and Other Data."

(3) Adjusted Free Cash Flow is a supplemental measure of operating performance that is not prepared in accordance with GAAP and that does not represent, and should not be considered as, an alternative to net loss, as determined in accordance with GAAP. For a reconciliation of Adjusted Free Cash Flow, see "Prospectus Summary—Summary Historical Financial and Other Data."

(4) We define working capital as current assets less current liabilities.

UNAUDITED PRO FORMA CONDENSED CONSOLIDATED FINANCIAL INFORMATION

The unaudited pro forma condensed consolidated balance sheet as of September 30, 2020 and the unaudited pro forma condensed consolidated statements of income for the nine months ended September 30, 2020 and the year ended December 31, 2019 present our financial position and results of operations after giving pro forma effect to:

(1) The Organizational Transactions described under "Organizational Structure," as if such transactions occurred on September 30, 2020 for the unaudited pro forma consolidated balance sheet and on January 1, 2019 for the unaudited pro forma consolidated statements of income;

(2) The effects of the Tax Receivable Agreement, as described under "Certain Relationships and Related Party Transactions—Tax Receivable Agreement;"

(3) A provision for corporate income taxes on the income attributable to Maravai LifeSciences Holdings, Inc. at a tax rate of %, inclusive of all U.S. federal, state, local and foreign income taxes; and

(4) This offering and the application of the estimated net proceeds from this offering as described under "Use of Proceeds."

Our historical consolidated financial information has been derived from the consolidated financial statements of Topco LLC and its subsidiaries and accompanying notes to the consolidated financial statements included elsewhere in this prospectus. Maravai LifeSciences Holdings, Inc. was formed on August 25, 2020 and has no material assets or results of operations until the completion of this offering. Therefore, its historical financial information is not included in the unaudited pro forma condensed consolidated financial information.

The unaudited pro forma condensed consolidated financial information has been prepared on the basis that we will be taxed as a corporation for U.S. federal and state income tax purposes and, accordingly, will become a taxpaying entity subject to U.S. federal, state and foreign income taxes. The presentation of the unaudited pro forma consolidated financial information is prepared in conformity with Article 11 of Regulation S-X and is based on currently available information and certain estimates and assumptions. The unaudited pro forma condensed consolidated financial information has been adjusted to give effect to events that are (i) directly attributable to the Organizational Transactions, (ii) factually supportable and (iii) with respect to the consolidated statements of operations, expected to have a continuing impact on the results of operations. See the accompanying notes to the Unaudited Pro Forma Condensed Consolidated Financial Information for a discussion of assumptions made.

The unaudited pro forma condensed consolidated financial information is not necessarily indicative of financial results that would have been attained had the described transactions occurred on the dates indicated above or that could be achieved in the future. The unaudited pro forma condensed consolidated financial information also does not give effect to the potential impact of any anticipated synergies, operating efficiencies or cost savings that may result from the transactions or any integration costs that result from the Organizational Transactions or any costs that do not have a continuing impact. Future results may vary significantly from the results reflected in the unaudited pro forma condensed consolidated statements of income and should not be relied on as an indication of our results after the consummation of this offering and the other transactions contemplated by such unaudited pro forma condensed consolidated financial information. However, our management believes that the assumptions provide a reasonable basis for presenting the significant effects of the transactions as contemplated and that the pro forma adjustments give appropriate effect to those assumptions and are properly applied in the unaudited pro forma condensed consolidated financial information.

As a public company, we will be implementing additional procedures and processes for the purpose of addressing the standards and requirements applicable to public companies. We expect to incur additional annual expenses related to these steps and, among other things, additional directors' and officers' liability insurance, director fees, costs to comply with the reporting requirements of the SEC, transfer agent fees, hiring of additional

accounting, legal and administrative personnel, increased auditing and legal fees and similar expenses. We have not included any pro forma adjustments relating to these costs.

For purposes of the unaudited pro forma condensed consolidated financial information, we have assumed that we will issue shares of Class A common stock at a price per share equal to the midpoint of the estimated public offering price range set forth on the cover of this prospectus, and, as a result, immediately following the completion of this offering, the ownership percentage represented by LLC Units not held by us will be %, and the net income attributable to LLC Units not held by us will accordingly represent % of our net income. Except as otherwise indicated, the unaudited pro forma consolidated financial information presented assumes no exercise by the underwriters of their option to purchase additional shares of Class A common stock.

As described in greater detail under "Certain Relationships and Related Party Transactions—Tax Receivable Agreement," in connection with the consummation of this offering, we will enter into the Tax Receivable Agreement with MLSH 1 and MLSH 2 that will provide for the payment by Maravai LifeSciences Holdings, Inc. to MLSH 1 and MLSH 2, collectively, of 85% of the amount of cash savings, if any, in U.S. federal, state and local income taxes (computed using simplifying assumptions to address the impact of state and local taxes) we actually realize (or under certain circumstances are deemed to realize in the case of an early termination payment by us, a change in control or a material breach by us of our obligations under the Tax Receivable Agreement, as discussed below) as a result of (i) certain increases in the tax basis of assets of Topco LLC and its subsidiaries resulting from purchases or exchanges of LLC Units, (ii) certain tax attributes of the Blocker Entities, Topco LLC and subsidiaries of Topco LLC that existed prior to this offering and (iii) certain other tax benefits related to our entering into the Tax Receivable Agreement, including tax benefits attributable to payments that we make under the Tax Receivable Agreement.

We expect to benefit from the remaining 15% of cash savings, if any, that we realize. As a result of the Organizational Transactions and the purchase of currently outstanding LLC Units from MLSH 1 with a portion of the net proceeds from this offering, we are recording a liability under the Tax Receivable Agreement of $ as described in more detail below. Due to the uncertainty in the amount and timing of future exchanges of LLC Units by LLC Unitholders and purchases of LLC Units from LLC Unitholders, the unaudited pro forma consolidated financial information assumes that no future exchanges or purchases of LLC Units have occurred and therefore no increases in tax basis in the Topco LLC assets or other tax benefits that may be realized thereunder have been assumed in the unaudited pro forma consolidated financial information. However, if MLSH 1 were to exchange or sell us all of its units, we would recognize a deferred tax asset of approximately $ million and a liability under the Tax Receivable Agreement of approximately $ million, assuming: (i) all exchanges or purchases occurred on the same day; (ii) a price of $ per share (the midpoint of the price range set forth on the cover page of this prospectus); (iii) a constant corporate tax rate of %; (iv) that we will have sufficient taxable income to fully utilize the tax benefits and (v) no material changes in tax law. These amounts are estimates and have been prepared for illustrative purposes only. The actual amount of deferred tax assets and related liabilities that we will recognize will differ based on, among other things, the timing of the exchanges, the price per share of our Class A common stock at the time of the exchange, and the tax rates then in effect.

For each 5% increase (decrease) in the amount of LLC Units exchanged by or purchased from MLSH 1 and MLSH 2 (or their transferees of LLC Units or other assignees), our deferred tax asset would increase (decrease) by approximately $ million and the related liability would increase (decrease) by approximately $ million, assuming that the price per share and corporate tax rate remain the same. For each $1.00 increase (decrease) in the assumed share price of $ per share, our deferred tax asset would increase (decrease) by approximately $ million and the related liability would increase (decrease) by approximately $ million, assuming that the number of LLC Units exchanged by or purchased from MLSH 1 and MLSH 2 (or their transferees of LLC Units and other assignees) and the corporate tax rate remain the same. These amounts are estimates and have been prepared for illustrative purposes only. The actual amount

of deferred tax assets and liability under the Tax Receivable Agreement that we will recognize will differ based on, among other things, the timing of the exchanges and purchases, the price of our shares of Class A common stock at the time of the exchange or purchase, and the tax rates then in effect.

The unaudited pro forma condensed consolidated financial information should be read together with "Organizational Structure," "Capitalization," "Selected Consolidated Financial Data," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the audited consolidated financial statements of Maravai Topco Holdings, LLC and subsidiaries and related notes thereto as well as the interim unaudited condensed consolidated financial statements of Maravai Topco Holdings, LLC and subsidiaries and related notes thereto included elsewhere in this prospectus.

UNAUDITED PRO FORMA CONDENSED CONSOLIDATED BALANCE SHEET
AS OF SEPTEMBER 30, 2020

(In thousands, except per share data)	Maravai Topco Holdings, LLC As Reported	Organizational Transactions and Offering Adjustments		Maravai LifeSciences Holdings, Inc. Pro Forma
Assets				
Current assets:				
Cash			(1)(2)	
Accounts receivable, net				
Inventory				
Prepaid expenses and other current assets				
Total current assets				
Property and equipment, net				
Goodwill				
Intangible assets, net				
Deferred tax asset			(3)(4)	
Other assets			(5)	
Total assets				
Liabilities and member's/stockholders' equity				
Current liabilities:				
Accounts payable			(5)	
Accrued expenses				
Deferred revenue				
Other current liabilities				
Current portion of long-term debt				
Total current liabilities				
Long-term debt, less current portion				
Deferred tax liabilities				
Facility financing obligations, less current portion				
Payable to related parties pursuant to the Tax Receivable Agreement			(4)	
Other long-term liabilities				
Total liabilities				
Member's equity:				
Class A common stock, par value $0.01 per share			(1)(6)	
Class B common stock, par value $0.01 per share			(2)	
Additional paid in capital			(8)	
Contributed capital				
Accumulated deficit				
Accumulated other comprehensive loss				
Total Topco LLC member's equity				
Noncontrolling interests			(7)	
Total member's / stockholder's equity				
Total liabilities and member's / stockholder's equity				

NOTES TO UNAUDITED PRO FORMA CONDENSED CONSOLIDATED BALANCE SHEET

(1) We estimate that the proceeds to us from this offering will be approximately $ million (or $ million if the underwriters exercise in full their option to purchase additional shares of Class A common stock), based on an assumed initial public offering price of $ per share, which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus, after deducting $ of assumed underwriting discounts and commissions and estimated offering expenses. We intend to use the net proceeds from this offering to (i) acquire LLC Units, together with an equal number of shares of Class B common stock, from existing LLC Unitholders, (ii) pay MLSH 2 $ million as consideration for the Blocker Mergers, and (iii) pay expenses incurred in connection with this offering. The remaining proceeds received from the sale of these shares will be used for general corporate purposes. For more information, see "Use of Proceeds."

(2) Reflects the issuance of Class B common stock to LLC Unitholders, on a one-to-one basis with the number of LLC Units they own, in exchange for cash consideration of $ million equal to the par value of the Class B common stock issued, as described in greater detail under "Organizational Structure."

(3) Maravai LifeSciences Holdings, Inc. is subject to U.S. federal, state, local and foreign income taxes and will file consolidated income tax returns for U.S. federal and certain state, local and foreign jurisdictions. This adjustment reflects the recognition of deferred taxes in connection with the Organizational Transactions assuming the federal rates currently in effect and the highest statutory rates apportioned to each state, local and foreign jurisdiction.

We have recorded a pro forma deferred tax asset adjustment net of valuation allowance of $ million. The net deferred tax asset includes (i) $ million related to temporary differences in the book basis as compared to the tax basis of Maravai LifeSciences Holdings, Inc.'s investment in Topco LLC, (ii) $ million related to tax benefits from future deductions attributable to payments under the Tax Receivable Agreement, as described further in note (4), (iii) $ million related to the book versus tax basis differences inside the corporations or limited liability companies owned by Topco LLC and (iv) $ million related to the tax loss carryforwards and credits from the merged Blocker Entities. A valuation allowance of $ million has been recorded for those deferred tax assets Maravai LifeSciences Holdings, Inc. has determined are not more likely than not to be realized. Maravai LifeSciences Holdings, Inc. has determined it is more likely than not the remaining $ million of deferred tax assets will result in ordinary income tax deductions that will be realized based on projections of future taxable income. Maravai LifeSciences Holdings, Inc. will continue to assess all positive and negative evidence and will adjust the valuation allowance to the extent it is more likely than not its assessment changes.

(4) Prior to the completion of this offering, we will enter into a Tax Receivable Agreement with MLSH 1 and MLSH 2. The agreement provides for the payment to MLSH 1 and MLSH 2, collectively, of 85% of the benefits, if any, that we realize as a result of (i) certain increases in the tax basis of assets of Topco LLC and its subsidiaries resulting from purchases or exchanges of LLC Units, (ii) certain tax attributes of the Blocker Entities, Topco LLC and subsidiaries of Topco LLC that existed prior to this offering and (iii) certain other tax benefits related to our entering into the Tax Receivable Agreement, including tax benefits attributable to payments that we make under the Tax Receivable Agreement. The Tax Receivable Agreement will be accounted for as a contingent liability due to related parties, with amounts accrued when considered probable and reasonably estimable. We will record a $ million liability based on the Company's estimate of the aggregate amount that it will pay to MLSH 1 and MLSH 2 under the tax receivable agreement as a result of the Organizational Transactions. As mentioned in note (1) above, we will record an increase of $ million in deferred tax assets, net of a valuation allowance of $ million, related to tax benefits from future deductions attributable to payments under the tax receivable agreement as a result of the Organizational Transactions. Additionally, we will record a decrease to additional paid-in capital of $ million, which is equal to the difference between the increase in deferred tax assets and the increase in liabilities due to existing owners under the tax receivable agreement as a result of the Organizational Transactions.

No adjustment has been made to reflect future exchanges by LLC Unitholders (or their transferees of LLC Units or other assignees) of LLC Units for cash or shares of our Class A common stock, as applicable.

(5) We are deferring certain costs associated with this offering. These costs primarily represent legal, accounting and other costs directly associated with this offering and are recorded in other assets in our combined consolidated balance sheet. Upon completion of this offering, these deferred costs will be charged against the proceeds from this offering with a corresponding reduction to additional paid-in capital.

(6) As part of the Organizational Transactions, the Blocker Entities will merge with and into Maravai LifeSciences Holdings, Inc. by providing existing owners of the Blocker Entities with shares of Class A common stock in exchange for full ownership interest in the Blocker Entities. As a result of the mergers, Maravai LifeSciences Holdings, Inc. will obtain LLC Units.

(7) As a result of the Organizational Transactions, the limited liability company agreement of Topco LLC will be amended and restated to, among other things, designate Maravai LifeSciences Holdings, Inc. as the sole managing member of Maravai Topco Holdings, LLC. As sole managing member, Maravai LifeSciences Holdings, Inc. will exclusively operate and control the business and affairs of Maravai Topco Holdings, LLC. The LLC Units owned by LLC Unitholders will be considered noncontrolling interests in the consolidated financial statements of Maravai LifeSciences Holdings, Inc. The adjustment to non-controlling interest of $ million reflects the proportional interest in the pro forma consolidated total equity of Maravai Topco Holdings, LLC owned by MLSH 1 and MLSH 2.

(8) The following table is a reconciliation of the adjustments impacting additionalpaid-in-capital:

Net proceeds from offering of Class A common stock	$
Purchase of LLC Units from MLSH 1	
Net adjustment from recognition of deferred tax asset and payable to related parties pursuant to the Tax Receivable Agreement	
Reclassification of costs incurred in this offering from other assets to additionalpaid-in capital	
Contributed capital reclassification	
Adjustment for non-controlling interest	
Net additional paid-in capital pro forma adjustment	$

UNAUDITED PRO FORMA CONDENSED CONSOLIDATED STATEMENT OF INCOME FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2020

(In thousands, except per share data)	Maravai Topco Holdings, LLC As Reported	Organizational Transactions and Offering Adjustments		Maravai LifeSciences Holdings, Inc. Pro Forma
Revenue				
Expenses:				
Cost of revenue			(1)	
Research and development			(1)	
Selling, general and administrative			(1)	
Change in estimated fair value of contingent consideration				
Total operating expenses				
Income from operations				
Other income (expense):				
Interest expense				
Other income				
Loss before income taxes				
Income tax (benefit) expense			(2)	
Net loss				
Net loss attributable to noncontrolling interests			(3)	
Net loss attributable to the Topco LLC member				
Pro Forma Earnings Per Share				
Basic			(4)	
Diluted			(4)	
Pro Forma Number of Shares Used in Computing Earnings per Share				
Basic			(4)	
Diluted			(4)	

UNAUDITED PRO FORMA CONDENSED CONSOLIDATED STATEMENT OF INCOME
FOR THE YEAR ENDED DECEMBER 31, 2019

(In thousands, except per share data)	Maravai Topco Holdings, LLC As Reported	Organizational Transactions and Offering Adjustments		Maravai LifeSciences Holdings, Inc. Pro Forma
Revenue	**$ 143,140**			
Operating Expenses:				
Cost of revenue	66,849		(1)	
Research and development	3,627		(1)	
Selling, general and administrative	48,354		(1)	
Change in estimated fair value of contingent consideration	322			
Total operating expenses	119,152			
Income from operations	23,988			
Other income (expense):				
Interest expense	(29,959)			
Other income	118			
Loss before income taxes	(5,853)			
Income tax benefit	(652)		(2)	
Net loss	$ (5,201)			
Net loss attributable to noncontrolling interests	(731)		(3)	
Net loss attributable to the Topco LLC member	$ (4,470)			
Net loss per common unit attributable to Topco LLC member – basic and diluted	$ (1,572)			
Weighted-average common units outstanding	1,000			
Pro Forma Earnings Per Share				
Basic			(4)	
Diluted			(4)	
Pro Forma Number of Shares Used in Computing Earnings per Share				
Basic			(4)	
Diluted			(4)	

NOTES TO UNAUDITED PRO FORMA CONDENSED CONSOLIDATED STATEMENTS OF INCOME

(1) Reflects the issuance of stock options to purchase shares of Class A common stock granted to employees in connection with the offering, under the 2020 Plan. The foregoing amounts are based on an assumed initial public offering price of $ per share (which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus). The pro forma expense is based on such assumed initial public offering price of $ per share and was $ million for the nine months ended September 30, 2020 and $ million for the year ended December 31, 2019, respectively. Such options are expected to vest as follows: . Equity compensation up to $ million per year would be recognized as recurring compensation expense over the service period.

(2) Following the Organizational Transactions and offering, Maravai LifeSciences Holdings, Inc. will be subject to U.S. federal income taxes, in addition to state, local and foreign taxes. As a result, the pro forma statements of income reflect an adjustment to our provision for corporate income taxes to reflect a pro forma tax rate, which includes a provision for U.S. federal income taxes and assumes the highest statutory rates apportioned to each state, local and foreign jurisdiction. Topco LLC has been, and will continue to be, treated as a partnership for U.S. federal and state income tax purposes. As such, Topco LLC's profits and losses will flow through to its partners, including Maravai LifeSciences Holdings, Inc., and are generally not subject to tax at the Topco LLC level.

The pro forma adjustments for income tax expense represent tax expense (benefit) on income that will be taxable in jurisdictions after our Organizational Transactions that previously had not been taxable. The adjustment is calculated as pro forma income before income taxes multiplied by the ownership percentage of the controlling interest and multiplied by the pro forma tax rate.

	For the Year Ended December 31, 2019	For the Nine Months Ended September 30, 2020
Pro forma income before taxes	$	$
Historical net loss attributable to noncontrolling interest	$	$
Pro forma income before taxes attributable to Topco LLC	$	$
Ownership percentage of the controlling interest	$	$
Pro forma income before taxes attributable to the controlling interest	$	$
Pro forma tax rate	$	$
Pro forma income tax expense	$	$
Historical income tax expense	$	$
Pro forma income tax expense adjustment	$	$

(3) Following the Organizational Transactions, Maravai LifeSciences Holdings, Inc. will become the sole managing member of Topco LLC, and upon consummation of this offering, Maravai LifeSciences Holdings, Inc. will initially own approximately % of the economic interest in Topco LLC but will have % of the voting power and control the management of Topco LLC. The ownership percentage held by the noncontrolling interest will be approximately %. Net income attributable to the noncontrolling interest will represent approximately % of net income.

(4) The weighted average number of shares underlying the basic earnings per share calculation reflects only the shares of Class A common stock outstanding after the offering as they are the only outstanding shares which participate in distributions or dividends by Maravai LifeSciences Holdings, Inc. The net proceeds from the sale of shares of Class A common stock in the IPO will be used to (i) acquire LLC Units, together with an equal number of shares of Class B common stock, from existing LLC Unitholders, (ii) pay MLSH 2 $ million as consideration for the Blocker Mergers, and (iii) pay expenses incurred in connection with this offering. The remaining shares of Class A

common stock to be sold in the offering are not included in the pro forma basic and diluted net income per share calculations as the proceeds received from the sale of these shares will be used for general corporate purposes, see "Use of Proceeds." Pro forma diluted earnings per share is computed by adjusting pro forma net income attributable to Maravai LifeSciences Holdings, Inc. and the weighted average shares of Class A common stock outstanding to give effect to potentially dilutive securities that qualify as participating securities using the treasury stock method, as applicable. Shares of Class B common stock are not participating securities and therefore are not included in the calculation of pro forma basic earnings per share.

LLC Units, together with an equal number of shares of Class B common stock, may be exchanged, at our option, for shares of our Class A common stock or, at our election, for cash. After evaluating the potential dilutive effect under the if-converted method, the outstanding LLC Units for the assumed exchange of non-controlling interests were determined to be and thus were the computation of diluted earnings per share.

The diluted weighted average share calculation assumes that certain equity awards were issued and outstanding at the beginning of the period. The following table sets forth a reconciliation of the numerators and denominators used to compute pro forma basic and diluted earnings per share.

	For the Year Ended December 31, 2019	For the Nine Months Ended September 30, 2020
Earnings per share of Class A common stock		
Numerator:		
Net income attributable to Maravai LifeSciences Holdings, Inc.'s shareholders (basic and diluted)	$	$
Denominator:		
Weighted average of shares of Class A common stock outstanding (basic)		
Incremental shares of Class A common stock attributable to dilutive instruments		
Weighted average of shares of Class A common stock outstanding (diluted)		
Basic earnings per share	$	$
Diluted earnings per share	$	$

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

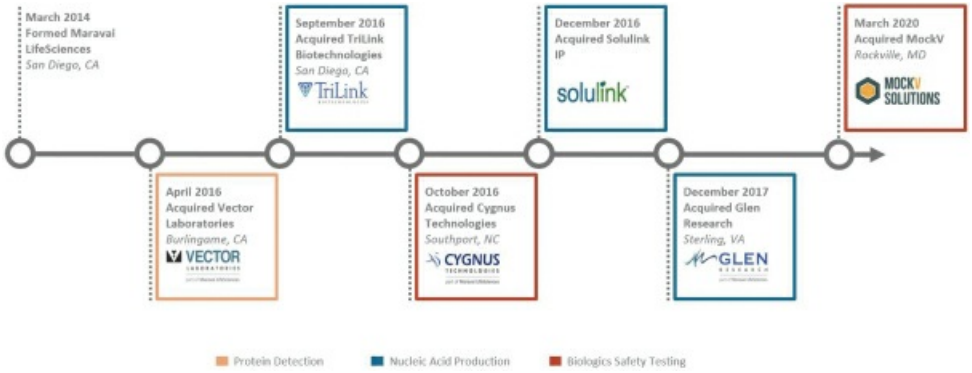
You should read the following discussion and analysis of financial condition and results of operations together with the section titled "Selected Consolidated Financial Data" and our consolidated financial statements and related notes included elsewhere in this prospectus. This discussion and analysis reflects our historical results of operations and financial position, and, except as otherwise indicated below, does not give effect to the Organizational Transactions or to the completion of this offering. See "Organizational Structure." This discussion and other parts of this prospectus contain forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed in or implied by these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section titled "Risk Factors." Please also see the section titled "Forward Looking Statements."

The following discussion contains references to calendar year 2018 and calendar year 2019, which represents the consolidated and combined financial results of our predecessor Maravai Topco Holdings, LLC ("Topco LLC") and subsidiaries for the years ended December 31, 2018 and December 31, 2019, respectively. Unless we state otherwise or the context otherwise requires, the terms "we," "us," "our," and "Maravai" refer to and similar references refer: (1) on or following the consummation of the Organizational Transactions, including this offering, to Maravai LifeSciences Holdings, Inc. and its consolidated subsidiaries, including Topco LLC, and (2) prior to the consummation of the Organizational Transactions, including this offering, to Topco LLC and its consolidated subsidiaries.

Overview

We are a leading life sciences company providing critical products to enable the development of drug therapies, diagnostics, novel vaccines and support research on human diseases. Our more than 5,000 customers as of August 31, 2020 include the top 20 global biopharmaceutical companies ranked by research and development expenditures according to industry consultants, and many other emerging biopharmaceutical and life sciences research companies, as well as leading academic research institutes and *in vitro* diagnostics companies. Our products address the key phases of biopharmaceutical development and include complex nucleic acids for diagnostic and therapeutic applications, antibody-based products to detect impurities during the production of biopharmaceutical products, and products to detect the expression of proteins in tissues of various species.

We have and will continue to build a transformative life sciences products company by acquiring businesses and accelerating their growth through capital infusions and industry expertise. Biomedical innovation is dependent on a reliable supply of reagents in the fields of nucleic acid production, biologics safety testing and protein labeling. From inventive startups to the world's leading biopharmaceutical, vaccine, diagnostics and gene and cell therapy companies, these customers turn to us to solve their complex discovery challenges and help them streamline and scale their supply chain needs beginning from research and development through clinical trials to commercialization.



Our primary customers are biopharmaceutical companies who are pursuing novel research and product development programs. Our customers also include a range of government, academic and biotechnology institutions.

As of August 31, 2020, we employed a team of over 300 employees, approximately 10% of whom have advanced degrees. We primarily utilize a direct sales model for our sales to our customers in North America. Our international sales, primarily in Europe and Asia Pacific, are sold through a combination of third-party distributors as well as via a direct sales model. For the year ended December 31, 2018, approximately 59.9% of our revenue was derived from customers in North America as compared to 58.7% for the year ended December 31, 2019.

We generated revenue of $123.8 million and $143.1 million for the years ended December 31, 2018 and 2019, respectively. Total revenue by segment was $60.0 million in nucleic acid production, $38.5 million in biologics safety testing and $25.3 million in protein detection for the year ended December 31, 2018, compared to $72.6 million, $44.4 million, and $26.1 million, respectively, for the year ended December 31, 2019.

Our research and development efforts are geared towards meeting our customers' needs. We incurred research and development expenses of $4.5 million and $3.6 million for the years ended December 31, 2018 and 2019, respectively. We intend to continue to invest in research and development and new products and technologies to support our customers' needs for the foreseeable future.

We focus a substantial portion of our resources supporting our core business segments. We are actively pursuing opportunities to expand our customer base both domestically and internationally by fostering strong relationships with both existing and new customers and distributors. Our management team has experience working with biopharmaceutical, vaccine, diagnostics and gene and cell therapy companies as well as academic and research scientists. We also intend to continue making investments in our overall infrastructure and business segments to support our growth. We incurred aggregate selling, general, and administrative expenses of $41.2 million and $48.4 million for the years ended December 31, 2018 and 2019, respectively.

Since our inception in 2016, we have incurred net losses in each year. Our net losses were $16.9 million and $5.2 million for the years ended December 31, 2018 and 2019, respectively. We expect our expenses will increase substantially in connection with our ongoing activities, as we:

- attract, hire and retain qualified personnel;
- invest in processes and infrastructure to enable manufacturing automation;
- support research and development to introduce new products and services;
- market and sell new and existing products and services;

- protect and defend our intellectual property;
- acquire businesses or technologies to support the growth of our business; and
- function as a public company.

Key Factors Affecting Our Results of Operations and Future Performance

We believe that our financial performance has been, and in the foreseeable future will continue to be, primarily driven by a number of factors as described below, each of which presents growth opportunities for our business. These factors also pose important challenges that we must successfully address in order to sustain our growth and improve our results of operations. Our ability to successfully address these challenges is subject to various risks and uncertainties, including those described under the heading "Risk Factors."

Drug Development Pipelines

Our financial performance has largely been driven by our customers accelerating their drug development pipelines for cell, gene and RNA therapies. A key factor to our future success will be, our ability to provide good manufacturing practices ("GMP") grade nucleic acids and associated pre-clinical and non-GMP compounds to these customers. Our GMP-grade nucleic acids are manufactured following certain voluntary GMP quality standards and customer specific requirements. We believe these products, including "GMP-grade" materials, are exempt from compliance with the current GMP regulations of the Food and Drug Administration ("FDA"). See "Business—Government Regulation." The mRNA and gene editing therapeutics that many of our customers are developing are early in their lifecycle. We expect to see an increase in demand for our GMP-grade nucleic acids to the extent that our customers have success in their early-phase clinical trials of these therapeutics. New U.S. Food and Drug Administration ("FDA") policies, and plans for maximizing the use of expedited programs, may advance the development of cell and gene therapies. Additionally, the COVID-19 pandemic has both fostered increased interest in mRNA as a therapeutic modality for this virus and directed significant resources to developing a base of knowledge for mRNA.

Demand for Outsourced GMP-grade RNA

We believe that growing numbers of RNA therapeutics companies expect to outsource production ofpre-clinical and GMP-grade RNA to trusted business partners. Companies are often driven to outsource due to the complex nature of the manufacturing process, faster speeds to market, recent availability of high-quality contract development and manufacturing organizations ("CDMO") partners, an influx of inexperienced and virtual biopharmaceutical companies, the need for redundancy of clinical and commercial supply and recent moves to onshore critical supply chains. We offer a number of products and services to meet this demand for outsourced pre-clinical and GMP-grade RNA.

Demand for Outsourced Biologics Safety Testing Products and Assay Development Services

We believe that many biopharmaceutical companies rely on outsourced providers for their biologics safety testing productsand assay development needs. Once process development has been completed, biopharmaceutical companies avoid changing biologics safety testing products or providers for fear of affecting the regulatory approval pathway of their therapeutic products. This supports revenue growth for the biologics safety testing products that have been adopted by these companies. We also have long-standing relationships with many of our customers, which are bolstered by the regulatory demands on our customers and the "designed-in" nature of our products and services. A successful partnership with a customer related to the development of their drug leads to repeat business as customers become comfortable with our products. The drug approval process is smoother when regulatory bodies are familiar with an impurity detection product vendor and most biopharmaceutical customers are not willing to risk a regulatory issue related to biologics safety testing for their drug program on an unproven vendor. It is therefore critical to our success that our products and services be "designed-in" at the outset, especially to the most promising product candidates.

COVID-19 and Other Public Health Crises

In late 2019, COVID-19 surfaced in Wuhan, China. Since then, COVID-19 has spread to multiple other regions and countries, including the San Francisco Bay Area, where our protein detection business is located and the San Diego, California and Washington, D.C. areas, where our nucleic acid production business is located and the Wilmington, North Carolina area, where our biologics safety testing products business is located. The COVID-19 pandemic is evolving, and to date has led to the implementation of various responses, including government imposed shelter-in-place orders, quarantines, travel restrictions and other public health safety measures, as well as reported adverse impacts on healthcare resources, facilities and providers, in California, across the United States and in many other countries throughout the world. In response to the spread of COVID-19, and in accordance with direction from state and local government authorities, we have restricted access to our facilities mostly to personnel and third parties who must perform critical activities that must be completed on-site, limited the number of such personnel that can be present at our facilities at any one time, and requested that some of our personnel work remotely. In the event that government authorities were to further modify current restrictions, our employees conducting research and development, or manufacturing activities may not be able to access our laboratory or manufacturing space, and our core activities may be significantly limited or curtailed, possibly for an extended period of time.

As a result of the COVID-19 pandemic, or similar pandemics and outbreaks, we have and may in the future experience severe disruptions, including:

- interruption of or delays in receiving products and supplies from the third parties we rely on to, among other things, manufacture components of our products, due to staffing shortages, production slowdowns or stoppages and disruptions in delivery systems, which may impair our ability to manufacture and sell our products and provide our services;
- limitations on our business operations by the local, state, or federal government that could impact our ability to manufacture, sell or deliver our products and services;
- on-site visit limitations and prohibitions imposed by customers that could impact our ability to engage in pre-sales activities, and to provide post-sale activities, such as training and service and support;
- delays in customers' purchasing decisions and negotiations with customers and potential customers;
- business disruptions caused by workplace, laboratory and office closures and an increased reliance on employees working from home, travel limitations, cyber security and data accessibility limits, or communication or mass transit disruptions; and
- limitations on employee resources that would otherwise be focused on the conduct of our activities, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people.

Any of these factors could severely impact our research and development activities, manufacturing business operations and sales, or delay necessary interactions with local regulators, third-party vendors and other important contractors and customers. These and other factors arising from the COVID-19 pandemic could worsen in countries that are already afflicted with COVID-19, could continue to spread to additional countries, or could return to countries where the pandemic has been partially contained, and could further adversely impact our ability to conduct our business generally and have a material adverse impact on our consolidated operations and financial condition and results. For example, our protein detection segment experienced a decline in sales during the second quarter of 2020 relative to the same period in 2019 due to stay-at-home orders in the San Francisco Bay Area and the closure of many academic laboratories that are the main customers of this segment and the reduced operations of other customers. Prolonged closures or shutdowns as a result of the COVID-19 pandemic would continue to affect sales of our protein detection segment adversely.

The extent to which the pandemic may negatively impact our consolidated operations and results of operations or those of our third-party manufacturers, suppliers, partners or customers will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the ultimate geographic spread of the disease, the duration of the pandemic, the extent of travel restrictions, additional or modified government actions, new information that will emerge concerning the severity and impact of COVID-19 and actions to contain the pandemic or treat its impact, such as social distancing, quarantines, lock-downs or business closures.

We have responded to the pandemic by leveraging our deep product portfolio and general scientific expertise to develop robustCOVID-19-related product and service offerings providing critical support for the development of therapeutics, vaccines and diagnostics. Our ongoing efforts to utilize our portfolio of products and services to enable solutions for this evolving pandemic may offset the impact of our customer site closures.

We remain fully operational as we abide by localCOVID-19 safety regulations across the world. To achieve this, we have many employees working remotely and have adopted significant protective measures for our employees on site, including staggered shifts, social distancing and hygiene best practices recommended by the Centers for Disease Control and Prevention (the "CDC") and local public health officials. In addition, we have taken additional steps to monitor and strengthen our supply chain to maintain an uninterrupted supply of our critical products and services.

Organizational Transactions

Maravai LifeSciences Holdings, Inc. was incorporated in August 2020 and formed for the purpose of this offering and has engaged to date only in activities in contemplation of this offering. Maravai LifeSciences Holdings, Inc. will be a holding company and its sole material asset will be a controlling ownership interest in Topco LLC. For more information regarding our reorganization and holding company structure, see "Organizational Structure—Organizational Transactions." Upon completion of this offering, all of our business will be conducted through Topco LLC and its consolidated subsidiaries, and the financial results of Topco LLC and its consolidated subsidiaries will be included in the consolidated financial statements of Maravai LifeSciences Holdings, Inc.

Topco LLC has been treated as a pass-through entity for U.S. federal and state income tax purposes and accordingly has not been subject to U.S. federal or state income tax. Certain wholly owned subsidiaries of Topco are taxed as corporations for U.S. federal and most applicable state, local income tax and foreign tax purposes. After consummation of this offering, Topco LLC will continue to be treated as a pass-through entity for U.S. federal and state income tax purposes and certain subsidiaries will continue to be taxed as corporations for U.S. federal and most applicable state, local income tax and foreign tax purposes. As a result of its ownership of LLC Units in Topco LLC, Maravai LifeSciences Holdings, Inc. will become subject to U.S. federal, state and local income taxes with respect to its allocable share of any taxable income of Topco LLC and will be taxed at the prevailing corporate tax rates. In addition to tax expenses, we also will incur expenses related to our operations and we will be required to make payments under the Tax Receivable Agreement with MLSH 1 and MLSH 2. Due to the uncertainty of various factors, we cannot estimate the likely tax benefits we will realize as a result of LLC Unit exchanges, and the resulting amounts we are likely to pay out to LLC Unitholders pursuant to the Tax Receivable Agreement; however, we estimate that such payments may be substantial. We intend to cause Topco LLC to make distributions in an amount sufficient to allow us to pay our tax obligations and operating expenses, including distributions to fund any ordinary course payments due under the Tax Receivable Agreement. See ''Organizational Structure—Amended and Restated Operating Agreement of Topco LLC'' and ''Organizational Structure—Tax Receivable Agreement."

How We Assess Our Business

We consider a variety of financial and operating measures in assessing the performance of our business. The key measures we use to determine how our business is performing are revenue and Adjusted EBITDA.

Adjusted EBITDA is a non-GAAP financial measure that we define as net loss adjusted for interest expense, provision for income taxes, depreciation, amortization and unit-based compensation expenses. Adjusted EBITDA reflects further adjustments to eliminate the impact of certain items, including certain non-cash and other items, that we do not consider representative of our ongoing operating performance. We also present Adjusted Free Cash Flow, which is a non-GAAP measure that we define as Adjusted EBITDA less capital expenditures.

Management uses Adjusted EBITDA to evaluate the financial performance of our business and the effectiveness of our business strategies. We present Adjusted EBITDA and Adjusted Free Cash Flow because we believe they are frequently used by analysts, investors and other interested parties to evaluate companies in our industry and they facilitate comparisons on a consistent basis across reporting periods. Further, we believe they are helpful in highlighting trends in our operating results because they exclude items that are not indicative of our core operating performance. Adjusted EBITDA is also used in the financial covenants for the New Credit Agreement.

Adjusted EBITDA and Adjusted Free Cash Flow have limitations as analytical tools and you should not consider them in isolation, or as substitutes for analysis of our results as reported under GAAP. We may in the future incur expenses similar to the adjustments in the presentation of Adjusted EBITDA. In particular, we expect to incur meaningful share-based compensation expense in the future. Other limitations include that Adjusted EBITDA and Adjusted Free Cash Flow do not reflect:

- all expenditures or future requirements for capital expenditures or contractual commitments;
- changes in our working capital needs;
- provision for income taxes, which may be a necessary element of our costs and ability to operate;
- the costs of replacing the assets being depreciated, which will often have to be replaced in the future;
- the non-cash component of employee compensation expense; and
- the impact of earnings or charges resulting from matters we consider not to be reflective, on a recurring basis, of our ongoing operations.

In addition, Adjusted EBITDA and Adjusted Free Cash Flow may not be comparable to similarly titled measures used by other companies in our industry or across different industries.

Components of Results of Operations

Revenue

Our revenue consists of both product and services revenue and, to a much lesser extent, revenue from royalties attributable to the out-licensing of our proprietary biological assets intellectual property that we may develop. We generated total consolidated revenue of $123.8 million and $143.1 million for the years ended December 31, 2018 and 2019, respectively, through the following segments: (i) nucleic acid production, (ii) biologics safety testing and (iii) protein detection.

Nucleic Acid Production Segment

Our nucleic acid production segment focuses on the manufacturing and sale of highly modified nucleic acids products to support the needs of customers' research, therapeutic and vaccine programs. This segment also provides research products for labeling and detecting proteins in cells and tissue samples.

Biologics Safety Testing Segment

Our biologics safety testing segment focuses on manufacturing and selling biologics safety and impurity tests and assay development services that are utilized by our customers in their biologic drug manufacturing activities.

Protein Detection Segment

Our protein detection segment products, which include a portfolio of labeling and visual detection reagents, are purchased by our scientific research customers for their tissue-based protein detection and characterization needs.

Costs of Revenue

Cost of revenue associated with our products and services primarily consists of manufacturing related costs incurred in the production process, including personnel and related costs, unit-based compensation from awards issued by our parent and sole member, MLSH 1, and by one of our subsidiaries, inventory write-downs, costs of materials, labor and overhead, packaging and delivery costs and allocated costs, including facilities, information technology, depreciation, and amortization of intangibles. Cost of revenue associated with our services primarily consists of personnel and related costs, unit-based compensation from awards issued by our parent and sole member, cost of materials and allocated costs, including facilities and information technology costs. Costs of services were not material to the years ended December 31, 2018 and 2019.

We expect cost of revenue to increase in future periods as our revenue grows.

Operating Expenses

Research and development. Research and development costs primarily consist of salaries, benefits, incentive compensation, unit-based compensation from awards issued by MLSH 1 and one of our subsidiaries, cost of supplies, and allocated facilities costs for employees engaged in research and development of products and services. We expense all research and development costs in the period in which they are incurred. Payment made prior to the receipt of goods or services to be used in research and development are recognized as prepaid assets until the goods are received or services are rendered.

We plan to continue to support our research and development efforts, including meeting our customers' customizable needs.

Selling, general and administrative. Our selling, general and administrative expenses primarily consist of salaries, benefits and unit-based compensation costs from awards issued by MLSH 1 and also one of our subsidiaries for employees in our commercial sales functions, marketing, executive, accounting and finance, legal and human resource functions as well as travel expenses, professional services fees, such as consulting, audit, tax and legal fees, general corporate costs and allocated costs, including facilities, information technology and amortization of intangibles.

We expect that our selling, general and administrative expenses will continue to increase after this offering, primarily due to increased headcount to support anticipated growth in the business, costs incurred in increasing our presence globally and increases in marketing activities to drive awareness and adoption of our products and services, and due to incremental costs associated with operating as a public company.

Other Income (Expense)

Other income (expense) consists primarily of interest related to borrowings under our long-term debt obligations. We also include foreign currency exchange gains and losses. During the year ended December 31, 2018, other income (expense) included the loss on extinguishment of debt, see Note 7 of Notes to Consolidated Financial Statements.

Non-Controlling Interest

Topco LLC's historical consolidated financial statements include a non-controlling interest related to a minority interest in one of our subsidiaries.

In connection with the Organizational Transactions, Maravai LifeSciences Holdings, Inc. will be appointed as the sole managing member of Topco LLC pursuant to the New LLC Agreement. Because we will manage and operate the business and control the strategic decisions and day-to-day operations of Topco LLC and will also have a substantial financial interest in Topco LLC, we will consolidate the financial results of Topco LLC, and a portion of our net income (loss) will be allocated to the non-controlling interest to reflect the entitlement of the non-controlling interest holders to Topco LLC's net income (loss). We will hold approximately % of the outstanding LLC Units of Topco LLC (or approximately % of the outstanding LLC Units of Topco LLC if the underwriters exercise their option to purchase additional shares in full), and the outstanding LLC Units of Topco LLC will be held by MLSH 1.

Income Tax Expense (Benefit)

Topco LLC is currently, and will through consummation of the Organizational Transactions, be treated as a partnership for U.S. federal and most applicable state and local income tax purposes. As a partnership, its taxable income or loss is passed through to and included in the tax returns of its members, including us. Certain wholly owned subsidiaries of Topco LLC are organized and treated as corporations for U.S. federal and most applicable state, local income tax and foreign tax purposes. Accordingly, the consolidated financial statements of Topco LLC included in this prospectus include a tax provision for federal, state, local and foreign income taxes.

For a description of the Tax Receivable Agreement, see "Organizational Structure—Tax Receivable Agreement."

Future Public Company Expenses

We expect our operating expenses to increase when we become a public company following this offering. We expect our accounting, legal and personnel-related expenses and directors' and officers' insurance costs reported within selling, general and administrative to increase as we establish more comprehensive compliance and governance functions, maintain and review internal controls over financial reporting in accordance with the Sarbanes-Oxley Act and prepare and distribute periodic reports as required by the rules and regulations of the SEC. As a result, our historical results of operations may not be indicative of our results of operations in future periods.

Results of Operations for the Years Ended December 31, 2018 and 2019

The results of operations presented below should be reviewed in conjunction with the consolidated financial statements and notes included elsewhere in the prospectus. The following tables set forth our results of operations for the periods presented:

	Year ended December 31,		Change		Percentage of Revenue	
in thousands except unit and per unit amounts	2018	2019	$	%	2018	2019
Revenue	$ 123,833	$ 143,140	$ 19,307	15.6%	100.0%	100.0%
Operating expenses:						
Cost of revenue(1)	60,765	66,849	6,084	10.0%	49.1%	46.7%
Research and development(1)	4,499	3,627	(872)	(19.4%)	3.6%	2.5%
Selling, general and administrative(1)	41,194	48,354	7,160	17.4%	33.3%	33.8%
Change in estimated fair value of contingent consideration	939	322	(617)	(65.7%)	0.8%	0.2%
Total operating costs and expenses	107,397	119,152	11,755	10.9%	86.7%	83.2%
Income from operations	16,436	23,988	7,552	45.9%	13.3%	16.8%
Other income (expense)	(32,934)	(29,841)	3,093	(9.4%)	(26.6%)	(20.8%)
Loss before income taxes	(16,498)	(5,853)	10,645	(64.5%)	(13.3%)	(4.1%)
Income tax expense (benefit)	417	(652)	(1,069)	(256.4%)	0.3%	(0.5%)
Net loss	$ (16,915)	$ (5,201)	$ 11,714	(69.3%)	(13.7%)	(3.6%)
Net loss attributable to noncontrolling interest	(12,443)	(731)	11,712	(94.1%)		
Net loss attributable to the Maravai Topco Holdings, LLC member	(4,472)	(4,470)	2	0.0%		
Net loss per common unit attributable to Maravai Topco Holdings, LLC member—basic and diluted	$ (17,727)	$ (8,481)				
Weighted average common units outstanding	1,000	1,000				
Non-GAAP measure:						
Adjusted EBITDA	$ 53,000	$ 62,014	9,014	17.0%	42.8%	43.3%
Adjusted Free Cash Flow	$ 49,193	$ 42,101	$ (7,092)	(14.4)%	39.7%	29.4%

(1) Amounts include unit-based compensation as follows:

	Year ended December 31,		Change	
in thousands	2018	2019	$	%
Cost of revenue	$ 38	$ 22	(16)	(42.1%)
Research and development	297	211	(86)	(29.0%)
Selling, general and administrative	1,786	1,446	(340)	(19.0%)
Total unit-based compensation expense	$2,121	$1,679	$(442)	(20.8%)

Revenue

Consolidated revenue by segment were as follows:

in thousands	Year ended December 31, 2018	Year ended December 31, 2019	Change $	Change %	Percentage of Revenue 2018	Percentage of Revenue 2019
Revenue						
Nucleic acid production	$ 60,057	$ 72,602	$ 12,545	20.9%	48.5%	50.7%
Biologics safety testing	38,492	44,416	5,924	15.4%	31.1%	31.0%
Protein detection	25,284	26,122	838	3.3%	20.4%	18.3%
Total revenue	$ 123,833	$ 143,140	$ 19,307	15.6%	100.0%	100.0%

Total revenue was $123.8 million for the year ended December 31, 2018 compared to $143.1 million for the year ended December 31, 2019, representing an increase of $19.3 million, or 15.6%.

Nucleic acid production revenue increased from $60.1 million for the year ended December 31, 2018 to $72.6 million for the year ended December 31, 2019, representing an increase of $12.5 million, or 20.9%. The increase in nucleic acid production was driven by increased demand for highly modified RNA products, particularly mRNA, as well as increased demand for our proprietary CleanCap® analogs, which principally serve the growing mRNA vaccine and therapeutic markets.

Biologics safety testing revenue increased from $38.5 million for the year ended December 31, 2018 to $44.4 million for the year ended December 31, 2019, representing an increase of $5.9 million, or 15.4%. The increase was driven by a continued increase in the number of bioproduction programs and customers that use our catalog of HCP ELISA kits.

Protein detection revenue increased from $25.3 million for the year ended December 31, 2018 to $26.1 million for the year ended December 31, 2019, representing an increase of $0.8 million, or 3.3%. The increase was driven by strong sales for lectins and glycobiology reagents, histology reagents and blocking reagents.

Adjusted EBITDA and Segment Information

Management has determined that adjusted earnings before interest, tax, depreciation, and amortization is the profit or loss measure used to make resource allocation decisions and evaluate segment performance. Adjusted EBITDA assists management in comparing the segment performance on a consistent basis for purposes of business decision-making by removing the impact of certain items that management believes do not directly reflect the core operations and, therefore, are not included in measuring segment performance. Corporate costs are managed on a standalone basis and not allocated to segments.

Following is financial information relating to the operating segments (in thousands):

As of and for the year ended December 31, 2018	Nucleic Acid Production	Biologics Safety Testing	Protein Detection	Corporate	Total
Revenue	$ 60,057	$ 38,492	$ 25,284	$ —	$ 123,833
Adjusted EBITDA	$ 16,751	$ 31,199	$ 13,846	$ (8,796)	$ 53,000

As of and for the year ended December 31, 2019	Nucleic Acid Production	Biologics Safety Testing	Protein Detection	Corporate	Total
Revenue	$ 72,602	$ 44,416	$ 26,122	$ —	$ 143,140
Adjusted EBITDA	$ 22,229	$ 36,371	$ 14,603	$ (11,189)	$ 62,014

There was no inter-segment activity for any of the periods presented and all of the revenue for each segment is from external customers.

We do not allocate assets to our reportable segments as they are not included in the review performed by our Chief Operating Decision Maker for purposes of assessing segment performance and allocating resources. Excluding approximately $0.3 million associated with a building in the United Kingdom, all of our long-lived assets are located within the United States.

A reconciliation of Adjusted EBITDA to net loss, the most directly comparable GAAP measure, is set forth below (in thousands):

	Year Ended December 31,	
	2018	2019
Net Loss	$ (16,915)	$ (5,201)
Add:		
Amortization	20,122	20,274
Depreciation	2,225	3,810
Interest expense	27,399	29,959
Income tax (benefit) expense	417	(652)
EBITDA	33,248	48,190
Acquisition contingent consideration[a]	939	322
Loss on extinguishment of debt[b]	5,622	—
Acquisition integration costs[c]	7,529	6,170
Amortization of purchase accounting inventory step-up[d]	2,967	1,856
Unit-based compensation[e]	2,121	1,679
GTCR management fees[f]	574	523
Merger and acquisition related expenses[g]	—	3,274
Adjusted EBITDA	$ 53,000	$ 62,014

(a) Refers to the change in fair value and settlement of earnout payments related to a 2017 acquisition.
(b) Refers to non-operating cash expense incurred on extinguishment of debt.
(c) Refers to incremental costs incurred to execute and integrate completed acquisitions.
(d) Refers to a non-cash charge related to the amortization expense of the step-up of inventory from purchase price accounting.
(e) Refers to non-cash expense associated with unit-based compensation.
(f) Refers to cash fees paid to GTCR, pursuant to the advisory services agreement that will terminate in connection with this offering.
(g) Refers to diligence, legal, accounting, tax and consulting fees incurred associated with an acquisition that was not consummated.

Adjusted Free Cash Flow

Adjusted Free Cash Flow, which is a non-GAAP measure that we define as Adjusted EBITDA less capital expenditures, is set forth below (in thousands):

	Year Ended December 31,	
	2018	2019
Adjusted EBITDA	$ 53,000	$ 62,014
Capital expenditures[a]	$ (3,807)	$ (19,913)
Adjusted Free Cash Flow	$ 49,193	$ 42,101

(a) We define capital expenditures as purchases of property and equipment and intangible assets, including patents, which are included in cash flows from investing activities, and accounts payable and accrued expenses.

Costs of Revenue

	Year ended December 31,		Change		Percentage of Revenue	
in thousands	2018	2019	$	%	2018	2019
Cost of revenue	$60,765	$66,849	$6,084	10.0%	49.1%	46.7%

Cost of revenue increased by $6.0 million from $60.8 million for the year ended December 31, 2018 to $66.8 million for the year ended December 31, 2019, or 10.0%. The increase in cost of revenue was primarily attributable to increases in direct product costs, personnel costs, and supplies and materials costs, as margins were generally consistent.

Research and Development

	Year ended December 31,		Change		Percentage of Revenue	
in thousands	2018	2019	$	%	2018	2019
Research and development	$4,499	$3,627	$(872)	(19.4%)	3.6%	2.5%

Research and development expenses decreased by $0.9 million from $4.5 million for the year ended December 31, 2018 compared to $3.6 million for the year ended December 31, 2019, or 19.4%. The decrease was primarily attributable to a $0.6 million decrease in personnel costs due to a reduction in headcount and a $0.3 million decrease in facilities and information technology allocation.

Selling, General and Administrative

	Year ended December 31,		Change		Percentage of Revenue	
in thousands	2018	2019	$	%	2018	2019
Selling, general and administrative	$41,194	$48,354	$7,160	17.4%	33.3%	33.8%

Selling, general and administrative expenses were $41.2 million for the year ended December 31, 2018 compared to $48.4 million for the year ended December 31, 2019, representing an increase of $7.2 million, or 17.4%. The increase was due to a $2.5 million increase in personnel costs as we increased our headcount, a $0.9 million increase in facility and information technology costs to support our increased headcount, a $2.4 million increase in reimbursable expenses passed through from GTCR associated with certain business development activities (See “Related Party Transactions”) offset partially by a decrease in professional services costs of $1.1 million. Professional services in 2018 included nonrecurring noncapitalized costs in connection with our debt refinancing and with certain system implementations.

Other Income (Expense)

in thousands	Year ended December 31, 2018	Year ended December 31, 2019	Change $	Change %	Percentage of Revenue 2018	Percentage of Revenue 2019
Other income (expense)						
Interest expense	$(27,399)	$(29,959)	$(2,560)	9.3%	(22.1%)	(20.9%)
Loss on extinguishment of debt	(5,622)	—	5,622	(100.0%)	(4.5%)	0.0%
Other income	87	118	31	35.6%	0.1%	0.1%
Total other income (expense)	$(32,934)	$(29,841)	$ 3,093	(9.4%)	(26.6%)	(20.8%)

Other income (expense) was $32.9 million for the year ended December 31, 2018 compared to $29.8 million for the year ended December 31, 2019, representing a decrease of $3.1 million, or 9.4%. The decrease was primarily attributable due to a $2.6 million increase in interest expense offset by a non-recurring loss on extinguishment of debt of $5.6 million recorded for the year ended December 31, 2018 in connection with the entry into the First Lien Credit Agreement and Second Lien Credit Agreement to refinance existing indebtedness.

Relationship with Our Sponsor

We have utilized GTCR, who upon completion of this offering will control the vote of all matters submitted to a vote of our shareholders, for certain services pursuant to an advisory services agreement. Under this agreement, GTCR provides us with financial and management consulting services in the areas of corporate strategy, budgeting for future corporate investments, acquisition and divestiture strategies and debt and equity financings. The advisory services agreement provides that we pay a $0.1 million quarterly management fee to GTCR for these services. We also reimburse GTCR for out-of-pocket expenses incurred while providing these services. The advisory services agreement also provides that certain of our subsidiaries pay placement fees to GTCR of 1.0% of the gross amount of debt or equity financings. The advisory services agreement will terminate in connection with this offering.

We paid GTCR $0.6 million in each of the years ended December 31, 2018 and 2019 for services in connection with the advisory services agreement. Following this offering, we may continue to engage GTCR from time to time, subject to compliance with our related party transactions policy.

During the year ended December 31, 2018, $52.0 million of capital distributions were made to the Class A unit holders of MLSC Holdings, LLC, including GTCR. No distributions were made to the Class A unit holders of MLSC Holdings, LLC during the year ended December 31, 2019.

Liquidity and Capital Resources

Overview

We have experienced losses in each fiscal year since our inception. However, we had positive cash flows from operations for the year ended December 31, 2019. For the year ended December 31, 2019, we had a consolidated net loss of $5.2 million and had an accumulated deficit of $42.4 million as of December 31, 2019.

We have relied on revenue derived from product and services sales and equity and debt financings to fund our operations to date, including our most recent $310.6 million refinancing of our 2017 Combined Debt Agreements (see Note 7 to the Consolidated Financial Statements) in 2018 which was used to repay our legacy credit facility, senior subordinated notes and term loan and make a $52.0 million distribution to our member. As of December 31, 2018, we had cash of $21.9 million and an accumulated deficit of $38.2 million as compared to cash of $24.7 million and $42.4 million of accumulated deficit as of December 31, 2019.

Our principal uses of cash have been to fund operations, acquisitions and capital expenditures, as well as make distributions to our member, interest payments and mandatory principal payments on our long-term debt.

Based on our current business plan, we believe the net proceeds from this offering, together with our existing cash and anticipated cash flows from operations will be sufficient to meet our working capital and capital expenditure needs over at least the next 12 months following the date of this prospectus.

We plan to utilize our existing cash on hand, together with cash generated from operations, primarily to fund our commercial and marketing activities associated with our products and services, continued research and development initiatives, and ongoing investments into our manufacturing facilities to create efficiencies and build capacity.

To the extent revenue from sales in our three business segments continue to grow, we expect our accounts receivable and inventory balances to increase. Any increase in accounts receivable and inventory may not be completely offset by increases in accounts payable and accrued expenses, which could result in greater working capital requirements. Moreover, following the closing of this offering, we expect to incur additional costs associated with operating as a public company, including expenses related to legal, accounting, regulatory, exchange listing and SEC compliance matters.

Our future capital requirements will depend on many factors including, but not limited to, our ability to successfully develop and launch new products and services, and to achieve a level of sales adequate to support our cost structure. If we are unable to execute on our business plan and adequately fund operations, or if the business plan requires a level of spending in excess of cash resources, we may seek additional equity, equity-linked or debt financing. If additional financings are required from outside sources, we may not be able to raise additional capital on terms acceptable to us or at all. If we are unable to raise additional capital when desired, our business, financial condition, results of operations and prospects could be adversely affected.

As a result of its ownership of LLC Units in Topco LLC, Maravai LifeSciences Holdings, Inc. will become subject to U.S. federal, state and local income taxes with respect to its allocable share of any taxable income of Topco LLC and will be taxed at the prevailing corporate tax rates. In addition to tax expenses, we also will incur expenses related to our operations and we will be required to make payments under the Tax Receivable Agreement with MLSH 1 and MLSH 2. Due to the uncertainty of various factors, we cannot precisely quantify the likely tax benefits we will realize as a result of LLC Unit exchanges and the resulting amounts we are likely to pay out to LLC Unitholders pursuant to the Tax Receivable Agreement; however, we estimate that such payments may be substantial. Assuming no changes in the relevant tax law, and that we earn sufficient taxable income to realize all tax benefits that are subject to the Tax Receivable Agreement, we expect that future payments under the Tax Receivable Agreement relating to the purchase by Maravai LifeSciences Holdings, Inc. of LLC Units from MLSH 1 in connection with this offering to be approximately $ million (or approximately $ million if the underwriters exercise their option to purchase additional shares, the proceeds of which will be used by Maravai LifeSciences Holdings, Inc. to acquire additional LLC Units from MLSH 1) and to range over the next 15 years from approximately $ million to $ million per year (or range from approximately $ million to $ million per year if the underwriters exercise their option to purchase additional shares) and decline thereafter. As a result, we expect that aggregate payments under the Tax Receivable Agreement over this 15-year period will range from approximately $ million to $ million (or range from approximately $ million to $ million if the underwriters exercise their option to purchase additional shares). These estimates are based on an initial public offering price of $ per share of Class A common stock, which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus. Future payments in respect of subsequent exchanges or financings would be in addition to these amounts and are expected to be substantial. The foregoing numbers are merely estimates and the actual payments could differ materially. We expect to fund these payments using cash on hand and cash generated from operations. See “Organizational Structure—Amended and Restated Operating Agreement of Topco LLC” and “Organizational Structure—Tax Receivable Agreement.”

Sources of Liquidity

Since our inception, we have financed our operations primarily from the issuance of capital units, borrowings under long-term debt agreements and, to a lesser extent, cash flow from operations.

First and Second Lien Credit Agreement

In August of 2018, Maravai Intermediate Holdings, LLC ("Intermediate"), a wholly-owned subsidiary of ours, along with its subsidiaries Vector Laboratories, TriLink Biotechnologies and Cygnus Technologies (together with Intermediate, the "Borrowers") entered into a first lien credit agreement (the "First Lien Credit Agreement") with leading institutions for term loan borrowings (the "First Lien Term Loan") totaling $250.0 million and a second lien credit agreement (the "Second Lien Credit Agreement") for term loan borrowings (the "Second Lien Term Loan") totaling $100.0 million, to refinance a combined debt agreement entered into in 2017, including repayment of all outstanding senior secured credit facilities and senior subordinated notes outstanding and to allow for a $52.0 million distribution to our members. The First Lien Credit Agreement also provided for a revolving credit facility (the "Revolving Credit Facility") of $50.0 million for letters of credit and loans to be used for working capital and other general corporate financing purposes. Borrowings under the First Lien Credit Agreement and the Second Lien Credit Agreement were unconditionally guaranteed by Topco LLC and the existing and future material domestic subsidiaries of Topco LLC (subject to certain exceptions as specified in the respective guaranty agreements, and are secured by a lien and security interest in substantially all of the assets of existing and future material domestic subsidiaries of Topco LLC that are loan parties.

The First Lien Term Loan became repayable in quarterly payments of $0.6 million beginning December 31, 2018. Borrowings under the First Lien Credit Agreement bore interest (a) in the case of the First Lien Term Loans, at the Borrowers' option, either at (i) the Base Rate plus the applicable margin of 3.25% per annum or (ii) the Adjusted Eurocurrency Rate plus the margin of 4.25% per annum and (b) in the case of the Revolving Credit Facility, at the Borrowers' option, either at (i) the Base Rate plus the applicable margin of 3.25% per annum with a stepdown to 3.00% based on Intermediate's first lien net leverage ratio or (ii) the Adjusted Eurocurrency Rate plus the margin of 4.25% per annum with a stepdown to 4.00% based on Intermediate's first lien net leverage ratio. The Base Rate is defined as the greatest of (i) the rate last quoted by The Wall Street Journal as the "Prime Rate" in the United States, (ii) the Federal Funds Rate plus 0.50% per annum, (iii) the Adjusted Eurocurrency Rate for a one month interest period plus 1.00% per annum, (iv) solely with respect to the initial term loans, 2.00% per annum and (v) for any loans that are not initial term loans, 1.00% per annum. The "Adjusted Eurocurrency Rate" is defined as the greater of (a) with respect to the initial term loans, the greater of (i) the Eurocurrency Rate for such interest period multiplied by the Statutory Reserve Rate (as such term is defined in the First Lien Credit Agreement) and (ii) 1.00% and (b) with respect to the Revolving Credit Facility, the Eurocurrency Rate for such interest period (which, if negative, will be deemed to be 0.00%) multiplied by the Statutory Reserve Rate. The "Eurocurrency Rate" is defined as the London Inter-bank Offered Rate ("LIBOR") as displayed by Reuters (which, if negative, will be deemed to be 0.00%) or, if LIBOR is unavailable, a rate based on historical LIBOR as determined by the administrative agent under the First Lien Credit Agreement.

As of December 31 2018 and 2019, the interest rate on the First Lien Term Loan was 6.8125% and 6.0625%, respectively.

Accrued interest under the First Lien Credit Agreement was payable (a) quarterly in arrears with respect to Base Rate loans, (b) at the end of each interest rate period (or at each three-month interval in the case of loans with interest periods greater than three months) with respect to Eurocurrency Rate loans, (c) on the date of any repayment or prepayment and (d) at maturity (whether by acceleration or otherwise). An annual commitment fee was applied to the daily unutilized amount under the Revolving Credit Facility at 0.50% per annum, with one stepdown to 0.375% per annum based on Intermediate's first lien net leverage ratio.

Borrowings under the Second Lien Credit Agreement bore interest, at the Borrowers' option, either at (a) the Base Rate plus the applicable margin of 7.00% per annum or (b) the Adjusted Eurocurrency Rate plus the

margin of 8.00% per annum. The "Base Rate" is defined as the greatest of (i) the last rate quoted by The Wall Street Journal as the "Prime Rate" in the United States, (ii) the Federal Funds Rate plus 0.50% per annum, (iii) the Adjusted Eurocurrency Rate for a one month interest period plus 1.00% per annum, (iv) solely with respect to the initial term loans, 2.00% per annum and (v) for any loans that are not initial term loans, 1.00% per annum. The "Adjusted Eurocurrency Rate" is defined as (a) with respect to the initial term loans, the greater of (i) the Eurocurrency Rate for such interest period multiplied by the Statutory Reserve Rate, and (ii) 1.00% and (b) with respect to the Revolving Credit Facility, the Eurocurrency Rate for such interest period (which, if negative, will be deemed to be 0.0%) multiplied by the Statutory Reserve Rate. The "Eurocurrency Rate" is defined as LIBOR displayed by Reuters (which, if negative, will be deemed to be 0.0%) or, if LIBOR is unavailable, a rate based on historical LIBOR as determined by the administrative agent under the Second Lien Credit Agreement.

As of December 31, 2018 and 2019, the interest rate on the Second Lien Term Loan was 10.37888% and 9.73975%, respectively.

The Borrowers were in compliance with all of their covenants under the First Lien Credit Agreement and Second Lien Credit Agreement as of December 31, 2018 and 2019 and there were no events of default for the year ended December 31, 2019.

New Credit Agreement

On October 19, 2020, Maravai Intermediate Holdings, LLC ("Intermediate"), a wholly-owned subsidiary of ours, along with its subsidiaries Vector Laboratories, TriLink BioTechnologies and Cygnus Technologies (together with Intermediate, the "Borrowers") entered into the New Credit Agreement with lending institutions for term-loan borrowings (the "New Term Loan") totaling $600.0 million to refinance our outstanding senior secured credit facilities and to allow for a distribution to our members. The New Credit Agreement also provided for a revolving credit facility (the "New Revolving Credit Facility") of $180.0 million for letters of credit and loans to be used for working capital and other general corporate financing purposes. Borrowings under the New Credit Agreement are unconditionally guaranteed by Topco LLC, a wholly owned subsidiary of ours, along with the existing and future material domestic subsidiaries of Topco LLC (subject to certain exceptions) as specified in the respective guaranty agreements, and are secured by a lien and security interest in substantially all of the assets of existing and future material domestic subsidiaries of Topco LLC that are loan parties.

The New Term Loan becomes repayable in quarterly payments of $1.5 million beginning on March 31, 2021, with all remaining outstanding principal due on October 19, 2027. The New Term Loan includes prepayment provisions that allow the Borrowers, at their option, to repay all or a portion of the principal amount at any time. The New Revolving Credit Facility allows the Borrowers to repay and borrow from time to time until October 19, 2025, at which time all amounts borrowed must be repaid. Subject to certain exceptions and limitations, we are required to repay borrowings under the New Term Loan and New Revolving Credit Facility with the proceeds of certain occurrences, such as the incurrence of debt, certain equity contributions, and certain asset sales or dispositions.

Borrowings under the New Credit Agreement bear interest (a) initially, at the Borrowers' option, either (i) at the Base Rate plus 3.25% per annum or (ii) the Adjusted Eurocurrency Rate plus 4.25% per annum and (b) after delivery of the compliance certificate for the fiscal quarter ending March 31, 2021, at the Borrowers' option, either at (i) the Base Rate plus the applicable margin of 3.25% per annum with a stepdown to 3.00% based on Intermediate's first lien net leverage ratio or (ii) the Adjusted Eurocurrency Rate plus the margin of 4.25% per annum with a stepdown to 4.00% based on Intermediate's first lien net leverage ratio. The Base Rate is defined as the greatest of (i) the rate last quoted by The Wall Street Journal as the "Prime Rate" in the United States, (ii) the NYFRB Rate plus 0.50% per annum, (iii) the Adjusted Eurocurrency Rate for a one month interest period plus 1.00% per annum, (iv) solely with respect to the initial term loans, 2.00% per annum and (v) for any loans that are not initial term loans, 1.00% per annum. The "Adjusted Eurocurrency Rate" is defined as the greater of (a) with respect to the initial term loans the greater of (i) the Eurocurrency Rate for such interest period multiplied by the Statutory Reserve Rate (as such term is defined in the New Credit Agreement), and (ii) 1.00% and (b) with respect to the revolving loans, the greater of (i) the Eurocurrency Rate for such interest period

multiplied by the Statutory Reserve Rate (as such term is defined in the New Credit Agreement), and (ii) 0%. The "Eurocurrency Rate" is defined as the London Inter-bank Offered Rate ("LIBOR") as displayed by Reuters (which if negative will be deemed to be 0.00%) or, if LIBOR is unavailable, a rate based on historical LIBOR, as determined by the administrative agent under the New Credit Agreement.

Accrued interest under the New Credit Agreement is payable (a) quarterly in arrears with respect to Base Rate loans, (b) at the end of each interest rate period (or at each three-month interval in the case of loans with interest periods greater than three months) with respect to Eurocurrency Rate loans, (c) on the date of any repayment or prepayment and (d) at maturity (whether by acceleration or otherwise). An annual commitment fee is applied to the daily unutilized amount under the New Revolving Credit Facility at 0.375% per annum, with one stepdown to 0.25% per annum based on Intermediate's first lien net leverage ratio.

Debt Covenants

The New Credit Agreement includes a financial covenant that requires that, if as of the end of any fiscal quarter the aggregate amount of letters of credit obligations and borrowings under the New Revolving Credit Facility outstanding as of the end of such fiscal quarter (excluding cash collateralized letters of credit obligations and letter of credit obligations in an aggregate amount not in excess of $5.0 million at any time outstanding and for the first four fiscal quarters ending after October 19, 2020, borrowings of revolving credit loans made on October 19, 2020) exceed 35% of the aggregate amount of all Revolving Credit Commitments in effect as of such date, then the net leverage ratio of Intermediate shall not be greater than 8.00 to 1.00.

The New Credit Agreement also contains negative and affirmative covenants in addition to the financial covenant, including covenants that restrict our ability to, among other things, incur or prepay certain indebtedness, pay dividends or distributions, dispose of assets, engage in mergers and consolidations, make acquisitions or other investments, and make changes in the nature of the business. The New Credit Agreement contains certain objective events of default, including, without limitation, nonpayment of principal, interest or other obligations, violation of the covenants, insolvency, court ordered judgments, and change of control. The New Credit Agreement also requires Intermediate to provide audited consolidated financial statements to the lenders no later than 120 days after year-end.

The New Credit Agreement also requires mandatory prepayments upon certain excess cash flow, subject to certain step-downs and threshold levels as defined and set forth in the terms of the New Credit Agreement to commence with the fiscal year ending December 31, 2021.

Interest Rate Cap Agreements

As of December 31, 2018 and 2019, we held four interest rate cap agreements with a financial institution to manage our variable interest rate risk on a portion of our borrowings under our First Lien Credit Agreement and Second Lien Credit Agreement. As of December 31, 2018 and 2019, the fair value and change in fair value of these interest rate cap agreements was not material.

Cash Flows

The following table summarizes our cash flows for the periods presented:

	Year Ended December 31,	
(in thousands)	**2018**	**2019**
Net cash (used in) provided by:		
Operating activities	$ (186)	$ 24,115
Investing activities	(3,451)	(17,148)
Financing activities	(9,167)	(4,167)
Effects of exchange rate changes on cash	(69)	34
Net (decrease) increase in cash	$ (12,873)	$ 2,834

Operating Activities

Net cash provided by operating activities for the year ended December 31, 2019 was $24.1 million, which was primarily attributable to a net loss of $5.2 million, non-cash depreciation and amortization of $24.1 million, non-cash amortization of deferred financing costs of $1.7 million, non-cash unit-based compensation of $1.7 million, a net cash inflow from the change in our operating assets and liabilities of $2.3 million, partially offset by a decrease in deferred income taxes of $1.2 million. The net change in our operating assets and liabilities reflects a decrease in accounts receivable of $1.9 million, a decrease in prepaid expenses and other current assets of $2.0 million, offset by an increase in accounts payable and accrued liabilities of $6.0 million.

Net cash used in operating activities for the year ended December 31, 2018 was $0.2 million, which was primarily attributable to a net loss of $16.9 million,non-cash depreciation and amortization of $22.3 million, non-cash amortization of deferred financing costs of $1.5 million, non-cash unit-based compensation of $2.1 million, non-cash loss on debt refinancing of $5.6 million, an increase in deferred income taxes of $0.3 million, partially offset by a net cash outflow from the change in our operating assets and liabilities of $15.8 million. The net change in our operating assets and liabilities reflects a decrease of approximately $15.9 million, which was primarily attributable to the payment of an earn-out liability associated with the compensatory cost of a legacy acquisition of a business of $14.5 million.

Investing Activities

Net cash used in investing activities for the year ended December 31, 2019 was $17.1 million, which was primarily attributable to purchases of property and equipment of $17.1 million due to higher capital expenditures related to the buildout of our manufacturing facility in San Diego, California.

Net cash used in investing activities for the year ended December 31, 2018 was $3.5 million, primarily attributable to purchases of property and equipment of $3.5 million.

Financing Activities

Net cash used in financing activities for the year ended December 31, 2019 was $4.2 million, which was primarily attributable to principal repayments of long-term debt of $2.5 million and payment of contingent consideration of $1.3 million.

Net cash used in financing activities for the year ended December 31, 2018 was $9.2 million, which was primarily attributable to net proceeds of $310.6 million from long term debt borrowings offset by the repayment of the previous long term debt agreement of $255.0 million, a distribution to our member of $52.1 million, financing costs incurred of $6.7 million, and payment of contingent consideration of $5.8 million.

Contractual Obligations and Commitments

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

	Payments due by period				
(in thousands)	**Total**	**Less than 1 year**	**1 to 3 Years**	**3 to 5 Years**	**More than 5 years**
Capital lease commitments(1)	$ 148	$ 74	$ 73	$ 1	$ —
Lease facility financing obligations(2)	44,105	2,116	7,954	8,880	25,155
Operating leases(3)	11,390	1,130	2,244	2,437	5,579
Debt obligations(4)	346,875	2,500	5,000	5,000	334,375
Total	$ 402,518	$ 5,820	$ 15,271	$ 16,318	$ 365,109

(1) Represents capital lease commitments. See Note 6 of Notes to Consolidated Financial Statements.

(2) Represents lease facility financing obligations. See Note 6 of Notes to Consolidated Financial Statements.
(3) Represents operating leases including the ground lease for our San Diego Facility and Southport Facility. See Note 6 of Notes to Consolidated Financial Statements.
(4) Represents long-term debt principal maturities, excluding interest. See Note 7 of Notes to Consolidated Financial Statements.

The First Lien Credit Agreement required mandatory prepayments upon certain excess cash flow, subject to certain step-downs and threshold levels as defined and set forth in the terms of the First Lien Credit Agreement, commencing with the fiscal year ended December 31, 2019. As of December 31, 2019, the terms of the excess cash flow prepayment provisions did not require any mandatory prepayment.

The New Credit Agreement requires mandatory prepayments upon certain excess cash flow, subject to certain step-downs and threshold levels as defined and set forth in the terms of the New Credit Agreement, to commence with the fiscal year ending December 31, 2021.

Off-Balance Sheet Arrangements

As of December 31, 2019, we did not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Qualitative and Quantitative Disclosures About Market Risk

Interest Rate Risk

Our primary exposure to interest rate risk is associated with our variable rate long-term debt. The First Lien Credit Agreement and Second Lien Credit Agreement bore, and the New Credit Agreement bears, interest subject to the Base Rate or the Adjusted Eurocurrency Rate. Interest rates can fluctuate for a number of reasons, including changes in the fiscal and monetary policies or geopolitical events or changes in general economic conditions. This could adversely affect our cash flows. We seek to manage these risks through interest rate cap agreements.

As of December 31, 2018 and 2019, we had four interest rate cap agreements with a financial institution to manage our variable interest rate risk on a portion of our credit borrowings under the First Lien Credit Agreement and the Second Lien Credit Agreement.

We had $337.3 million of outstanding borrowings under our long-term debt facilities as of December 31, 2019. During the years ended December 31, 2018 and, 2019, the effect of a hypothetical 100 basis point increase or decrease in overall interest rates would have changed our interest expense by approximately $3.2 million and $3.5 million, respectively, in each year.

We had cash of $21.9 million and $24.7 million as of December 31, 2018 and 2019, respectively. Our cash is held in cash demand deposits and are not subject to market risk.

Foreign Currency Risk

The majority of our revenue is denominated in U.S. dollars; however, approximately 40% and 41% of our revenue was derived from international sales in the years ended December 31, 2018 and 2019, respectively, primarily in Europe and Asia Pacific. However, only our sales in the United Kingdom are denominated in local currency. Our remaining international sales are denominated in the U.S. dollar. Our expenses are generally denominated in the currencies in which they are incurred, which is primarily in the United States and, to a lesser extent, the United Kingdom. As we expand our presence in international markets, to the extent we are required to enter into agreements denominated in a currency other than the U.S. dollar, results of operations and cash flows

may increasingly be subject to fluctuations due to changes in foreign currency exchange rates and may be adversely affected in the future due to changes in foreign exchange rates. To date, we have not entered into any hedging arrangements with respect to foreign currency risk. As our international operations grow, we will continue to reassess our approach to manage our risk relating to fluctuations in currency rates.

Critical Accounting Policies and Estimates

We have prepared our consolidated financial statements in accordance with GAAP. Our preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expenses and related disclosures in the consolidated financial statements. Our estimates are based on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results could differ from these estimates under different assumptions or conditions and any such difference may be material.

While our significant accounting policies are described in more detail in Note 1 to our consolidated financial statements appearing elsewhere in this prospectus, we believe the following discussion addresses our most critical accounting policies, which are those that are most important to our financial condition and results of operations and require our subjective and complex judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

We recognize revenue primarily from the sale of manufactured products, including products that can be purchased out of a catalogue and custom manufactured products, and the performance of services, including custom antibody and assay development contracts, antibody affinity extraction and stability and feasibility studies, which often result in the generation of report deliverables. We also have certain licensing and royalty arrangements. Our customers are primarily life science research pharmaceutical and biotechnology companies. We also sell to global and regional distribution partners and original equipment manufacturer ("OEM") customers who incorporate our products into their products under their own brands.

We adopted the requirements of Accounting Standards Codification ("ASC") 606, *Revenue from Contracts with Customers* ("ASC 606"), effective January 1, 2019 using the modified retrospective method. Under the modified retrospective method, this guidance is applied to those contracts that were not completed as of January 1, 2019, with no restatement of contracts that were commenced and completed within fiscal years prior to January 1, 2019, and the prior period comparable financial information continues to be presented under the guidance of ASC 605, *Revenue Recognition* ("ASC 605"). The adoption of ASC 606 resulted in a cumulative effect adjustment of $0.3 million to reduce the opening accumulated deficit as of January 1, 2019. This adjustment primarily related to over-time recognition of revenue and associated costs for certain products for which revenue had previously been deferred and recognized at a point in time.

Under ASC 606, revenue is recognized when control of promised goods or services is transferred to a customer in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. To determine revenue recognition for our arrangements with customers, we perform the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. The majority of our contracts include only one performance obligation. A performance obligation is a promise in a contract to transfer a distinct good or service to the customer and is defined as the unit of account for revenue recognition under ASC 606. We also recognize revenue from other contracts that may include a combination of products and services, the provision of solely services, or from license fee arrangements which may be associated with the delivery of product. Where there is a combination of products and services, we account for the promises as

individual performance obligations if they are concluded to be distinct. Performance obligations are considered distinct if they are both capable of being distinct and distinct within the context of the contract. In determining whether performance obligations meet the criteria for being distinct, we consider a number of factors, such as the degree of interrelation and interdependence between obligations, and whether or not the good or service significantly modifies or transforms another good or service in the contract. As a practical expedient, we do not adjust the transaction price for the effects of a significant financing component if, at contract inception, the period between customer payment and the transfer of goods or services is expected to be one year or less. Contracts with customers are evaluated on a contract-by-contract basis as contracts may include multiple types of goods and services as described below.

Nucleic Acid Production

Nucleic acid production revenue is generated from the manufacture and sale of highly modified, complex nucleic acids products to support the needs of our customers' research, therapeutic and vaccine programs. The primary offering of products include: CleanCap®, mRNA and oligonucleotide contracts typically consist of a single performance obligation. We also sell nucleic acid products for labeling and detecting proteins in cells and tissue samples research. We recognize revenue from these products in the period in which the performance obligation is satisfied by transferring control to the customer. Revenue for nucleic acid catalog products is recognized at a point in time, generally upon shipment to the customer. Revenue for contracts for certain custom nucleic acid products, with an enforceable right to payment and a reasonable margin for work performed to date, is recognized over time, based on a cost-to-cost input method over the manufacturing period.

Biologics Safety Testing

Our biologics safety testing revenue is associated with the sale of bioprocess impurity detection kit products. We also enter into contracts that include custom antibody development, assay development and antibody affinity extraction services. These products and services enable the detection of impurities and contaminants that occur in the manufacturing of biologic drugs and other therapeutics. We recognize revenue from the sale of bioprocess impurity detection kits in the period in which the performance obligation is satisfied by transferring control to the customer. Custom antibody development contracts consist of a single performance obligation, typically with an enforceable right to payment and a reasonable margin for work performed to date. Revenue is recognized utilizing a cost-based input method over the term of the contract. Where an enforceable right to payment does not exist, revenue is recognized at a point in time when control is transferred to the customer. Assay development service contracts, which generally occur over a short period of time and consist of a single performance obligation, revenue is recognized at a point in time when a successful antigen test and report is provided to the customer. Affinity extraction services consist of a single performance obligation to perform the extraction service and provide a summary report to the customer. Revenue is recognized either over time or at a point in time depending on contractual payment terms with the customer.

Protein Detection

We also manufacture and sell protein labeling and detection reagents used by researchers in protein labeling and detection. The contracts to sell these catalog products consist of a single performance obligation to deliver the reagent products. Revenue from these contracts is recognized at a point in time, generally upon shipment of the product to the customer.

We recognize royalty revenue related to certain out-licensing and royalty arrangements in the period the sales or usage occur using third-party evidence to estimate the amount to be recorded. To date this revenue has not been material to the consolidated financial statements.

We have elected the practical expedient to not disclose the unfulfilled performance obligations for contracts with an original length of one year or less. We had no material unfulfilled performance obligations for contracts with an original length greater than one year as of December 31, 2019.

We accept returns only if the products do not meet customer specifications and historically, our volume of product returns has not been significant. Further, no warranties are provided for promised goods and services other than assurance type warranties.

Revenue for an individual contract is recognized at the related transaction price, which is the amount we expect to be entitled to in exchange for transferring the products and/or services. The transaction price for product sales, which excludes sales taxes we collect, is calculated at the contracted product selling price. The transaction price for a contract with multiple performance obligations is allocated to the separate performance obligations on a relative standalone selling price basis. Standalone selling prices for products are determined based on the prices charged to customers, which are directly observable. Standalone selling price of services are mostly based on time and materials. Generally, payments from customers are due when goods and services are transferred. As most contracts contain a single performance obligation, the transaction price is representative of the standalone selling price charged to customers. Revenue is recognized only to the extent that it is probable that a significant reversal of the cumulative amount recognized will not occur in future periods. Since the adoption of ASC 606, variable consideration has not been material. For arrangements where the anticipated period between timing of transfer of goods and services and the timing of payment is one year or less, we have elected to not assess whether a significant financing component exists.

We have elected to account for shipping and handling activities related to contracts with customers as costs to fulfill the promise to transfer the associated products. Accordingly, revenue for shipping and handling is recognized at the same time that the related product revenue is recognized.

Contract assets are generated when contractual billing schedules differ from revenue recognition timing and we record contract receivable when it has an unconditional right to consideration. Contract liabilities are recorded when cash payments are received or due in advance of performance.

Applying the practical expedient, we recognize the incremental costs of obtaining contracts as an expense when incurred when the amortization period of the assets that otherwise would have been recognized is one year or less. These costs are included in sales and marketing and general and administrative expenses. The costs to fulfill the contracts are determined to be immaterial and are recognized as an expense when incurred.

Prior to January 1, 2019, revenue from the sale of products and services was recognized when all of the following conditions per ASC 605,*Revenue Recognition* were met: (1) there was persuasive evidence of an arrangement; (2) the product or service had been delivered to the customer; (3) the collection of the fees was reasonably assured; and (4) the amount of fees to be paid by the customer was fixed or determinable.

When an arrangement involved multiple elements, the multiple elements, referred to as deliverables, were evaluated to determine whether they represent separate units of accounting in accordance with ASC 605-25, *Revenue Recognition—Multiple-Element Arrangements*. We performed this evaluation at the inception of an arrangement and as each item was delivered in the arrangement. Generally, we accounted for a deliverable separately if the delivered item has standalone value to the customer and delivery or performance of the undelivered item or service was probable and substantially in our control.

When multiple elements could be separated into separate units of accounting, arrangement consideration was allocated at the inception of the arrangement, based on each unit's relative selling price, and recognized based on the method most appropriate for that unit.

Inventory

Our inventories consist of raw materials, work in process and finished goods. Inventories are stated at the lower of cost (weighted average cost) or net realizable value. Inventory costs include materials, direct labor and manufacturing overhead, which are related to the purchase or production of inventories. We review our inventory

at least quarterly for excess and obsolete inventory based on our estimates of expected sales volumes, production capacity and expiration of raw materials, work-in-process and finished products. Expected sales volumes are determined based on internal sales forecasts that consider both historical and projected sales. We write down inventory that has become obsolete, inventory that has a cost basis in excess of its expected net realizable value, and inventory in excess of expected manufacturing requirements. Any write-downs of inventories are charged to cost of revenue.

A change in the estimated timing or amount of demand for our products could result in additional provisions for excess inventory quantities on hand. Any significant unanticipated changes in demand or unexpected quality failures could have a significant impact on the value of inventory and reported operating results. During all periods presented in the accompanying consolidated financial statements, there have been no material adjustments related to a revised estimate of inventory valuations.

Goodwill

Goodwill represents the excess of consideration transferred over the estimated fair value of assets acquired and liabilities assumed in a business combination. We conduct a goodwill impairment analysis in the fourth quarter of each year, and more frequently if changes in facts and circumstances indicate that the fair value of our reporting units may be less than carrying amount. To analyze goodwill for impairment, we must assign our goodwill to individual reporting units. Identification of reporting units includes an analysis of the components that comprise each of our operating segments, which considers, among other things, the manner in which we operate our business and the availability of discrete financial information. Components of an operating segment are aggregated to form one reporting unit if the components have similar economic characteristics. We periodically review our reporting units to ensure that they continue to reflect the manner in which we operate our business.

Accounting guidance also permits an optional qualitative assessment for goodwill on a reporting unit by reporting unit basis to determine whether it is more likely than not that the carrying value of a reporting unit exceeds its fair value. If, after this qualitative assessment, we determine that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then no further quantitative testing would be necessary. A quantitative assessment is performed if the qualitative assessment results in a more likely than not determination or if a qualitative assessment is not performed. The quantitative assessment considers whether the carrying amount of a reporting unit exceeds its fair value, in which case an impairment charge is recorded to the extent the reporting unit's carrying value exceeds its fair value.

As of December 31, 2018 and 2019, we concluded that we operated as three reporting units and elected to perform a qualitative impairment test for our nucleic acid production and biologics safety testing reporting units and a quantitative impairment test for our protein detection reporting unit. The qualitative impairment test was elected for the nucleic acid production and biologics safety testing reporting units because of the growth in revenue and cash flows in excess of our initial projections and the quantitative impairment test was elected for the protein detection reporting unit as a result of lowering forecasted growth projections. The fair value of the protein detection reporting unit was determined using both an income approach and market approach. The income approach is a valuation technique under which we estimated future cash flows using the protein detection reporting unit's financial forecast from the perspective of an unrelated market participant. Using historical trending and internal forecasting techniques, we projected revenue and applied our fixed and variable cost experience rates to the projected revenue to arrive at the future cash flows. A terminal value was then applied to the projected cash flow stream. Future estimated cash flows were discounted to their present value to calculate the estimated fair value. The discount rate used was the value-weighted average of our estimated cost of capital derived using both known and estimated customary market metrics. In determining the estimated fair value of the protein detection reporting unit, we were required to estimate a number of factors, including projected operating results, terminal growth rates, economic conditions, anticipated future cash flows, the discount rate and the allocation of shared or corporate items. Our market approach model estimates the fair value of the protein

detection reporting unit based on market prices paid in actual precedent transactions of similar businesses and market multiples of guideline public companies. This impairment assessment is sensitive to changes in forecasted cash flows, as well as our selected discount rate. Changes in the protein detection reporting unit's results, forecast assumptions and estimates could materially affect the estimation of its fair value.

As a result of our 2018 and 2019 qualitative and quantitative assessments, we concluded that goodwill was not impaired as of December 31, 2018 or 2019.

Valuation of Intangible Assets

In conjunction with our business combinations, we have recorded intangible assets primarily consisting of trade names, customer relationships, patents, and developed technology. Certain criteria are used in determining whether intangible assets acquired in a business combination must be recognized and reported separately. Finite-lived intangible assets are initially recognized at fair value, are subject to amortization and are subsequently stated at amortized cost. Our finite-lived intangible assets are amortized using a method that reflects the pattern in which the economic benefits of the intangible assets are consumed or otherwise used. If that pattern cannot be reliably determined, the intangible assets are amortized using the straight-line method over their estimated useful lives.

We periodically review our finite-lived intangible assets, to determine whether current events or circumstances indicate that such carrying amounts may not be recoverable. If such facts or circumstances are determined to exist, an estimate of the undiscounted future cash flows of these assets is compared to the carrying value the assets to determine whether impairment exists. If the assets are determined to be impaired, the loss is measured based on the difference between the fair value and carrying value of the assets. No impairment loss was recognized for finite-lived intangible assets during the years ended either December 31, 2018 or 2019.

Leases, Deferred Rent and Lease Facility Financing Accounting

We rent our office space and facilities under non-cancelable operating lease agreements and recognize related rent expense on a straight-line basis over the term of the lease. Our lease agreements contain rent holidays, scheduled rent increases and renewal options. Rent holidays and scheduled rent increases are included in the determination of rent expense to be recorded ratably over the lease term. We do not assume renewals in its determination of the lease term unless they are deemed to be reasonably assured at the inception of the lease. We begin recognizing rent expense on the date that we obtain the legal right to use and control the leased space. Deferred rent consists of the difference between cash payments and the recognition of rent expense on a straight-line basis for the buildings we occupy.

Funding of leasehold improvements by our landlord is accounted for as a tenant improvement allowance and recorded as current and non-current deferred rent liabilities and amortized on a straight-line basis as a reduction of rent expense over the term of the lease.

In certain arrangements, we are involved in the construction of improvements to buildings we are leasing. To the extent we are involved with the structural improvements of the construction project or take construction risk, we are considered to be the owner of the building and related improvements for accounting purposes during the construction period. Therefore, we record the fair value of the building subject to the lease within property and equipment on the balance sheet, plus the amount of building improvements incurred and funded by us and/or the landlord as of the balance sheet date. We also record a corresponding lease financing obligation on our balance sheet representing the amounts financed by the lessor for the building and lessor financed improvements. Lessor financed improvement incentives due but not yet received are recorded as prepaid expense and other current assets on the balance sheet.

Once construction is completed, we consider the requirements for sale-leaseback accounting treatment, including evaluating whether all risks of ownership have been transferred back to the landlord, as evidenced by a

lack of our continuing involvement in the leased property. If we conclude the arrangement does not qualify for sale-leaseback accounting treatment, the building and improvements remain on our balance sheet and are subject to depreciation and assessment of impairment. We bifurcate our lease payments into a portion allocated to the lease financing obligation and a portion allocated to the parcel of land on which the building has been built. The portion of the lease payments allocated to the land is treated for accounting purposes as operating lease payments, and therefore is recorded as rent expense in the consolidated statements of operations and comprehensive loss. The portion of the lease payments allocated to the lease financing obligation is further bifurcated into a portion allocated to interest expense and a portion allocated to reduce the lease financing obligation.

The interest rate used for the lease financing obligation represents our estimated incremental borrowing rate at the inception of the lease, adjusted to reduce any built-in loss. The initial recording of these assets and liabilities is classifiedas non-cash investing and financing items, respectively, for purpose of the consolidated statements of cash flows.

The most significant estimates used by us in accounting for the lease financing transaction and the impact of these estimates are as follows:

- *Incremental borrowing rate*. We estimate our incremental borrowing rate as the rate we would have incurred to borrow, based on our credit quality at the inception of the lease over a similar term, the funds necessary to purchase the leased building subject to the financing lease transaction. The incremental borrowing rate is used in determining allocating our rental payments between interest expense and a reduction of the outstanding lease financing obligation.
- *Land capitalization rate.* The land capitalization rate is the rate of return on the land underlying the lease properly considering expected income that the land would be expected to generate. The land lease capitalization rate is estimated using comparable market data for land capitalization rates for similar properties. The land capitalization rate is used in determining allocating our rental payments between interest expense and a reduction of the outstanding lease financing obligation.
- *Fair value of leased building and underlying land* The fair value of a leased building and underlying land subject to the lease financing transaction is based on comparable market data for similar properties as of the lease inception date. The fair value of the underlying land is used in determining allocating our rental payments between interest expense and a reduction of the outstanding lease financing obligation.

Prior to our October 2016 acquisition of MLSC, the Southport, North Carolina facility (the “Southport Facility”) leased by a subsidiary of MLSC failed to qualify for sale and leaseback accounting. As a result, MLSC recognized during construction, and retained upon the completion of construction, the value of the Southport Facility and obligation on its balance sheet as a financing obligation. Pursuant to the business combination fair value guidance, upon acquisition of MLSC, we recorded the fair value of the building asset, which was estimated to be $2.2 million, and the related financing obligation of $2.2 million. We continue to recognize payments under the amended lease agreement as a reduction of the facility financing obligation using the effective interest method and the ground rent as operating lease expense. At the conclusion of the lease term, we will de-recognize both the then carrying values of the asset and financing obligation with any differences between the book value of the building asset and remaining facility financing obligation being recognized in operations at that time. For its existing arrangement for the Southport Facility, these differences are expected to be immaterial.

In July 2018, we entered intoa non-cancelable lease for a new manufacturing facility (the “San Diego Facility Lease”) and subsequently took possession of the space. The scope of the tenant improvements did not qualify under the lease accounting guidance as “normal tenant improvements” and we were the deemed owner of the leased building during the construction period for accounting purposes. In 2019, construction on the facility was substantially completed and the leased property was placed into service. We determined that the completed construction project did not qualify for sale-leaseback accounting due to non-recourse financing we provided to the lessor for reimbursed construction costs and has instead been accounted for as a financing transaction. The

leased building for the San Diego Facility Lease and related improvements remains on our consolidated balance sheet as of December 31, 2019 and rental payments associated with the lease have been allocated to operating lease expense for the ground underlying the leased building and principal and interest payments on the lease financing obligation.

Unit-Based Compensation and Incentive Unit Valuation

Unit-based awards have been granted by our parent and also by one of our subsidiaries to certain executives and employees of our subsidiaries in the form of non-vested incentive units ("Incentive Units"). All awards of Incentive Units are measured based on the fair value of the award on the date of grant. We recognize compensation expense for these awards over the requisite service period. Forfeitures are recognized when they occur. Unit-based compensation expenses are classified in the consolidated statements of operations based on the job functions of the related employees. These Incentive Units are subject to service, market or performance conditions. For Incentive Units subject to performance conditions, we evaluate the probability of achieving each performance condition at each reporting date and recognize expense over the requisite service period when it is deemed probable that a performance condition will be met using the accelerated attribution method over the requisite service period. For Incentive Units that remain subject to performance conditions as of December 31, 2018 and 2019, we concluded that it was not yet probable that the performance conditions would be met. Accordingly, we have not recognized any compensation expense loss for Incentive Units that include a performance condition.

As there has been no public market for the Incentive Units granted by our parent or by our subsidiary, the grant date fair value of Incentive Unit awards has been determined by our board of directors with the assistance of management and an independent third-party valuation specialist. We believe our board of directors has the relevant experience and expertise to determine the fair value of our Incentive Units. The grant date fair value of Incentive Units was determined first by estimating our aggregate equity value using a weighting of discounted cash flows, comparable public companies, and comparable-transactions valuation methodologies. An Option-Pricing Method, which utilizes certain assumptions including volatility, time to liquidation, a risk-free interest rate, and an assumption for a discount for lack of marketability, was then used to allocate our total equity value to our different classes of equity according to their rights and preferences. A discount for lack of marketability was applied to determine the Incentive Unit equity values. In determining the fair value of the Incentive Units, the methodologies used to estimate our enterprise value were performed using methodologies, approaches, and assumptions consistent with the American Institute of Certified Public Accountants Accounting and Valuation Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation ("AICPA Accounting and Valuation Guide"). The assumptions we use in the valuation model are based on future expectations combined with management's judgment. In the absence of a public trading market, our board of directors, with input from management, exercised significant judgment and considered numerous objective and subjective factors to determine the fair value of the Incentive Units as of the date of each award, including the following factors:

- independent valuations performed at periodic intervals by an independent third-party valuation firm;
- our operating and financial performance, forecasts and capital resources;
- current business conditions;
- the hiring of key personnel;
- the status of research and development efforts;
- the likelihood of achieving a liquidity event for these incentive units, such as an initial public offering or sale of our company, given prevailing market conditions;
- any adjustment necessary to recognize a lack of marketability for the Incentive Units;
- trends and developments in our industry;

- the market performance of comparable publicly traded technology companies; and
- the U.S. and global economic and capital market conditions.

The dates of our valuation reports, which were prepared on a periodic basis, were not contemporaneous with the grant dates of our Incentive Unit awards. Therefore, we considered the amount of time between the valuation report date and the grant date to determine whether to use the latest Incentive Unit valuation report for the purposes of determining the fair value of our units for financial reporting purposes. If Incentive Units were granted a short period of time preceding the date of a valuation report, we assessed the fair value of such Incentive Unit award used for financial reporting purposes after considering the fair value reflected in the subsequent valuation report and other facts and circumstances on the date of grant as described below. The additional factors considered when determining any changes in fair value between the most recent valuation report and the grant dates included, when available, the prices paid in recent transactions involving our Incentive Units, as well as our operating and financial performance, current industry conditions and the market performance of comparable publicly traded companies. There were significant judgments and estimates inherent in these valuations, which included assumptions regarding our future operating performance, the time to completing an initial public offering or other liquidity event and the determinations of the appropriate valuation methods to be applied. If we had made different estimates or assumptions, our unit-based compensation expense, net loss and net loss per unit attributable to our member could have been significantly different from those reported in this prospectus.

In valuing our units, the executive committee determined the equity value of our business by taking a weighted combination of the value indications using the income approach and the market comparable approach valuation methods.

Income Approach

The income approach estimates value based on the expectation of future cash flows a company will generate, such as cash earnings, cost savings, tax deductions and the proceeds from disposition. These future cash flows are discounted to their present values using a discount rate derived from an analysis of the cost of capital of comparable publicly traded companies in our industry or similar lines of business as of each valuation date. This weighted-average cost of capital discount rate, or WACC, is adjusted to reflect the risks inherent in the business. The WACC used for these valuations was determined to be reasonable and appropriate given our debt and equity capitalization structure at the time of each respective valuation. The income approach also assesses the residual value beyond the forecast period and is determined by taking the projected residual cash flow for the final year of the projection and applying a terminal exit multiple. This amount is then discounted by the WACC less the long-term growth rate.

Market Comparable Approach

The market comparable approach estimates value based on a comparison of the subject company to comparable public companies in a similar line of business. From the comparable companies, a representative market multiple is determined which is applied to our financial metrics to estimate the value of our parent or our subsidiary. To determine our peer group of companies, we considered life sciences tools companies and selected those most similar to us based on various factors, including, but not limited to, financial risk, company size, geographic diversification, profitability, growth characteristics and stage of life cycle.

In some cases, we considered the amount of time between the valuation date and the award grant date to determine whether to use the latest valuation determined pursuant to one of the methods described above or to use a valuation calculated by management between the two valuation dates.

In some cases, we considered the amount of time between the valuation date and the award grant date to determine whether to use the latest valuation determined pursuant to one of the methods described above or to use a valuation calculated by management between the two valuation dates.

Once we determined an equity value, we utilized the Black-Scholes Option Pricing Model ("BSOPM") to allocate the equity value to our options. BSOPM values our options by creating call options on the respective equity value, with exercise prices based on the liquidation preferences, participation rights and strike prices. This method is generally preferred when future outcomes are difficult to predict and dissolution or liquidation is not imminent.

As of December 31, 2019, the aggregate value of our vested and unvested Incentive Units was $ million and $ million, respectively, based on the estimated fair value for one unit of $ per Class A Common share, which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus. As of December 31, 2019, we had $3.7 million of unrecognized compensation expense related to Incentive Units not subject to a performance condition that is expected to be recognized over a weighted-average period of 1.9 years. For Incentive Units subject to a performance condition, unrecognized compensation expense was $4.1 million as of December 31, 2019.

Income Taxes

Our wholly-owned U.S. subsidiary, Maravai Life Sciences, Inc. ("Maravai Inc.") and its subsidiaries, are taxpaying entities in the U.S., Canada, and the U.K, and we provide current and deferred income taxes for these entities. We and our other subsidiaries are treated as pass-through entities for federal and state income tax purposes. The income or loss generated by these entities is not taxed at the LLC level. As required by U.S. tax law, income or loss generated by these LLCs passes through to their owners. As such, our tax provision consists solely of the activities of Maravai Inc. and its subsidiaries, which is taxed as a corporation for federal and state income tax purposes.

Our taxable subsidiaries account for income taxes under the asset and liability method of accounting. We recognize deferred tax assets and liabilities for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, as well as for operating loss and tax credit carryforwards. We measure deferred tax assets and liabilities using enacted tax rates expected to apply to taxable income in the years in which we expect to recover or settle those temporary differences. We recognize the effect of a change in tax rates on deferred tax assets and liabilities in the results of operations in the period that includes the enactment date. We reduce the measurement of a deferred tax asset, if necessary, by a valuation allowance if it is more likely than not that we will not realize some or all of the deferred tax asset.

We account for uncertain tax positions by recognizing the financial statement effects of a tax position only when, based upon technical merits, it is more likely than not that the position will be sustained upon examination.

Significant judgment is required in determining the accounting for income taxes. In the ordinary course of business, many transactions and calculations arise where the ultimate tax outcome is uncertain. Our judgments, assumptions and estimates relative to the accounting for income taxes take into account current tax laws, our interpretation of current tax laws, and possible outcomes of future audits conducted by foreign and domestic tax authorities. Although we believe that our estimates are reasonable, the final tax outcome of matters could be different from our assumptions and estimates used when determining the accounting for income taxes. Such differences, if identified in future periods, could have a material effect on the amounts recorded in our consolidated financial statements.

JOBS Act Accounting Election

We are an "emerging growth company" within the meaning of the JOBS Act. The JOBS Act permits an emerging growth company like us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. We are electing to use this extended transition period and we will therefore comply with new or revised accounting standards when they apply to private

companies. As a result, our financial statements may not be comparable with companies that comply with public company effective dates for accounting standards. We also intend to rely on other exemptions provided by the JOBS Act, including not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act.

We will remain an emerging growth company until the earliest of (1) December 31, 2025, (2) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (3) the last day of the fiscal year in which we are deemed to be a "large accelerated filer" as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our common stock held by non-affiliates exceeded $700.0 million as of the last business day of the second fiscal quarter of such year or (4) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

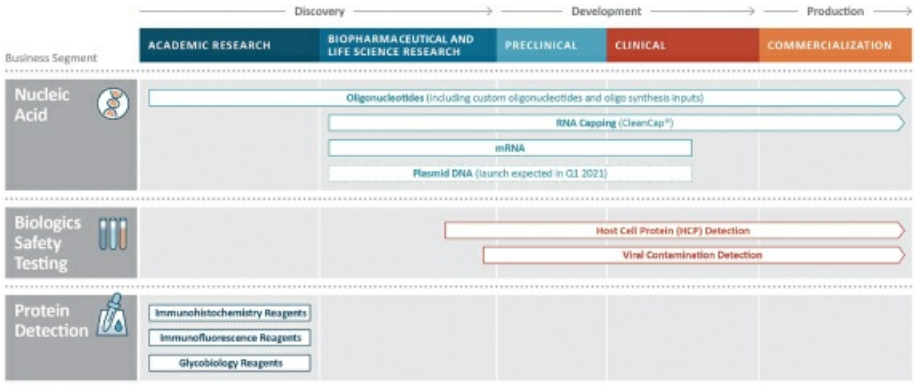
Recent Accounting Pronouncements

See Note 1 to our consolidated financial statements included elsewhere in this prospectus for more information.

BUSINESS

Overview

We are a leading life sciences company providing critical products to enable the development of drug therapies, diagnostics, novel vaccines and support research on human diseases. Our more than 5,000 customers as of August 31, 2020 include the top 20 global biopharmaceutical companies ranked by research and development expenditures according to industry consultants, and many other emerging biopharmaceutical and life sciences research companies, as well as leading academic research institutes and *in vitro* diagnostics companies. Our products address the key phases of biopharmaceutical development and include complex nucleic acids for diagnostic and therapeutic applications, antibody-based products to detect impurities during the production of biopharmaceutical products, and products to detect the expression of proteins in tissues of various species.



Our businesses principally address high growth market segments in biopharmaceutical development and manufacturing. We estimate that the market segments we serve are growing at a weighted average blended rate of 20% per annum. In particular, the field of cell and gene therapy has emerged as one of the fastest growing treatment modalities to address a host of human conditions. There are more than 400 cell and gene therapies in development or launched and sales in this category are expected to grow more than tenfold by 2024, according to industry consultants and management estimates. Our portfolio offers key products for each stage of the cell and gene therapy development lifecycle. For example, our mRNA products are used in drug development to assist in the production of immune-activating antigens; our CleanCap® technology is used to stabilize mRNA; and we expect our upcoming plasmid DNA products will be used as vectors in gene editing for cellular therapies. We also provide biologics safety testing technology used to ensure the safety of the biological drug manufacturing process and drug products. We estimate that more than of our revenue for the nine months ended September 30, 2020 were in support of vaccines and therapies in development, including biological drugs and cell and gene therapies. We have relationships with the following categories of customers (percentages represent the share of revenue in each category for the nine months ended September 30, 2020): developers of therapeutics and vaccines (%), other biopharmaceutical and life science research companies (%), academic institutions (%) and molecular diagnostic companies (%).

Our proprietary capabilities and products underpin the value we aim to provide to our customers. Among other capabilities, we are expert in RNA and mRNA products, which are challenging and often unstable molecules requiring significant chemical modifications to ensure their stability and efficacy in our customers' applications. Notably, according to research commissioned by us consisting of over 70 interviews with our current and former customers, our competitors and industry experts focused across our three business segments (the "Industry Analysis"), we believe CleanCap® is viewed as a leading solution to ensure the stability of mRNA. CleanCap® is a novel chemical approach to produce a cap analog, which, in addition to making mRNA more stable, aids in protein production and helps prevent an unwanted immune response to the mRNA. As of

September 30, 2020, CleanCap® had been used by approximately 109 customers and had been incorporated into several development programs targeting immunization against the novel strain of coronavirus, SARS-CoV-2 ("COVID-19"). These programs included one phase II/III clinical program led by Pfizer in partnership with BioNTech, four phase I/II clinical programs led by Arcturus Therapeutics in partnership with Duke-NUS Medical School, Imperial College London, Fosun Pharma in partnership with BioNTech and CureVac and one pre-clinical program led by the University of Tokyo in partnership with Daiichi-Sankyo. In addition, CleanCap® will potentially be used in three additional COVID-19 mRNA vaccine programs that are in earlier stages of development, led by Chula Vaccine Research Center in partnership with the University of Pennsylvania, eTheRNA Immunotherapies and Greenlight Biosciences. We estimate our mRNA and CleanCap® products have also been incorporated in at least 33 therapeutic programs in development as of September 30, 2020. These therapeutic programs address a number of disease states, including ornithine transcarbamylase deficiency, glycogen storage disorders, Alpha-1 antitrypsin deficiency, acute lymphoblastic leukemia, Hurler syndrome, ovarian cancer and cardiovascular disease. These therapeutic programs also use multiple therapeutic modalities, including CRISPR/Cas-9, transcription activator-like effector nuclease (TALENS), enzyme replacement therapies, allogeneic CAR-T cells and base editing. Should one or more of these programs proceed to commercialization, we believe we will continue to supply our customers and our products will likely be incorporated in customer regulatory filings.

mRNA is at the core of our capabilities. We developed our expertise in mRNA with a belief in its potential as a therapeutic modality. The first clinical trial for an mRNA therapeutic agent occurred in 2016. More than 30 clinical trials have occurred since then, principally focused on vaccines against viruses and cancer vaccines. With the COVID-19 pandemic, mRNA has shown its potential for more rapid vaccine design and manufacture when compared to traditional techniques involving culturing inactivated virus to elicit an immune response. According to the World Health Organization, there were 193 COVID-19 vaccine development programs as of October 2, 2020, with some lead candidates for approval in the RNA class and anticipated data readouts from certain RNA programs, including results of preclinical studies and phase I/II and phase III clinical trials. COVID-19 has helped highlight the potential advantage of mRNA as a treatment modality and directed significant resources to the developing base of knowledge about mRNA. We believe this knowledge will be directed at future vaccine programs as well as therapeutic agents for a host of human diseases. We are positioned to serve our biopharmaceutical customers in the fast-growing mRNA field across a range of clinical programs for a variety of diseases. Approximately % of our revenue was derived from products that support mRNA research for the nine months ended September 30, 2020.

Forming long-term partnerships with our customers is core to our strategy. We primarily serve our customers during the product development and process development phases. During product development, we collaborate with our customers to develop and synthesize nucleic acids, which in some cases comprise the APIs of our customers' products in development. We also provide our customers a host of chemically complex and highly specialized raw materials. Process development entails establishing production methods in anticipation of regulatory approval of biopharmaceutical products. Process development is a complex phase that establishes highly validated procedures and determines the investment in facilities and equipment required to bring biopharmaceutical products to market. These decisions impact the viability of our customers' products for the long term. During process development, we provide enzyme-linked immunosorbent assays ("ELISAs") that reduce the risk posed by impurities and contaminants in biological drugs, a critical step to ensure the safety of the drug product.

While we do not provide products that are themselves regulated as drugs or *in vitro* diagnostics, our customers frequently incorporate our products into their highly validated products and processes. For example, we provide oligonucleotides and antibody-based products used by *in vitro* diagnostic product manufacturers for their on-market products. Because of the extensive validation required for these products, these components are frequently purchased for the life of our customers' products and we believe they are unlikely to be substituted. In addition, our analytical tools are used in the design and development of manufacturing processes and often will be used throughout the life cycle of our customers' manufactured products. As a result, our customer relationships may span many years.

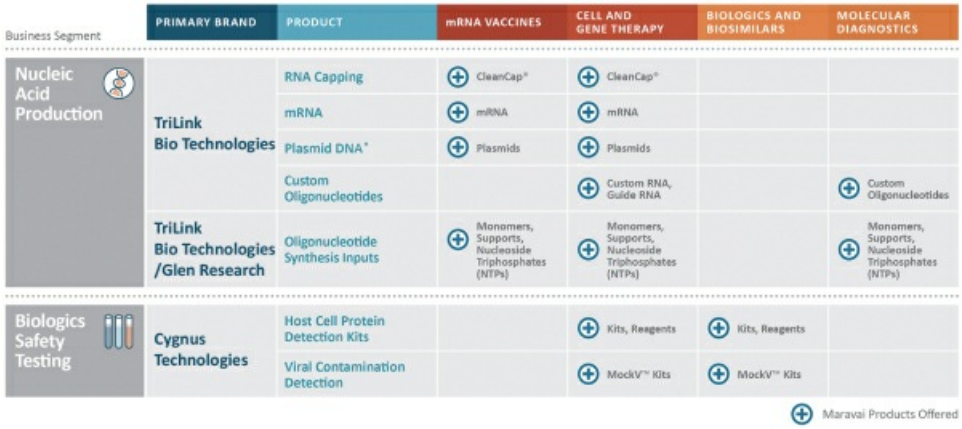
The nature of our products and their uses require that they be manufactured by highly trained personnel in state-of-the-art facilities following exacting procedures to ensure quality. We manufacture our nucleic acid products at our San Diego, California facility, one of four facilities we occupy in the United States. The facility was purpose-built to address our customers' needs for critical raw materials manufactured under certain good manufacturing practices ("GMP") conditions and APIs for investigational use. Our raw material products are manufactured following the voluntary quality standards of ISO 9001:2015. Our GMP-grade raw materials follow ISO 9001:2015 standards, additional voluntary GMP quality standards and customer specific requirements. Our API products are manufactured following the voluntary quality standards of ISO 9001:2015, the International Council for Harmonisation's GMP Guide, comparable GMP principles for the European Union and customer specific requirements. We believe our products are exempt from compliance with the current GMP ("cGMP") regulations of the Food and Drug Administration ("FDA"), as our products are further processed or incorporated into final drug products by our customers and we do not make claims related to their safety or effectiveness. As of September 30, 2020, we estimate that $ has been invested in our San Diego facility. Our other facilities are similarly designed for specific applications with quality systems to match our customers' requirements. All of our facilities meet applicable ISO standards. In addition, as of August 31, 2020, approximately 10% of our workforce have earned advanced degrees and all receive rigorous on-the-job training.

We built our business through a combination of acquisitions and subsequent investments in our acquired companies to grow their commercial capabilities, upgrade and expand their research and production facilities, deploy stringent quality systems, integrate their back-office functions, and develop the personnel and management to fuel continued growth. Today, we offer an integrated portfolio that enables innovation across the biopharmaceutical and academic markets. We completed our first acquisition in April 2016. The trailing twelve-month revenue of each of our acquired businesses at the time we acquired each of them totaled approximately $85.0 million. Since our first acquisition in 2016 and through the year ended December 31, 2019, our total revenue has increased by approximately 69%. Mergers, acquisitions and strategic partnerships that complement our capabilities in cell and gene therapy and biopharmaceutical production remain core to our strategy. Our strategy aims to augment our strong organic growth with the addition of synergistic products and capabilities.

Our Portfolio and Capabilities

We provide products that support our customers' needs from discovery through commercialization of their vaccines, therapeutic agents and *in vitro* diagnostic products. Our products are frequently incorporated into our customers' products, whether as research products or APIs used in development or research products incorporated as raw materials into on-market products. They may also be incorporated into the manufacturing process itself. We are therefore a critical part of our customers' supply chain and they frequently seek to maintain their supply relationship with us for the life of their products or development programs.

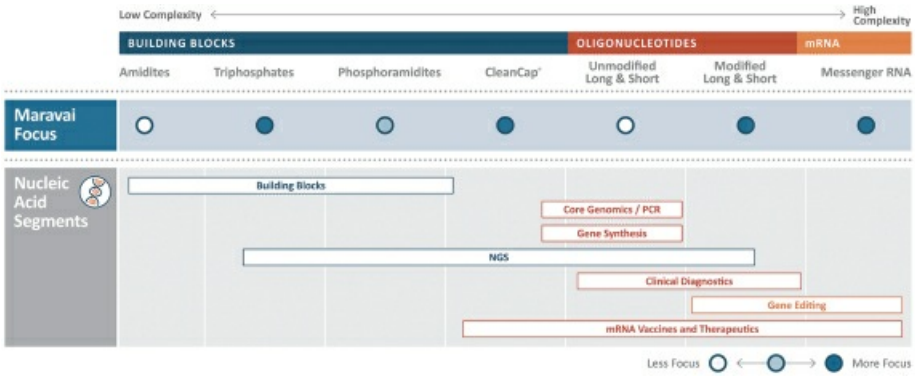
Our products address our customers' needs for nucleic acid production, biologics safety testing and protein detection, and our operations are aligned to these three segments. For the nine months ended September 30, 2020, we sold more than % of our products and services to biopharmaceutical customers and our products serve high growth applications in vaccines, cell and gene therapies, biological drugs and molecular diagnostics.



* Our plasmid DNA products are expected to launch in Q1 2021

Nucleic Acid Production (% of Revenue for the Nine Months Ended September 30, 2020)

We are a global provider of highly modified, complex nucleic acids and related products. We have recognized expertise in complex chemistries and products provided under exacting quality standards. Our core offerings include mRNA, long and short oligonucleotides, our proprietary CleanCap® capping technology and oligonucleotide building blocks. Our offerings address key customer needs for critical components, from research to GMP-grade materials. We market our nucleic acid products under the TriLink BioTechnologies and Glen Research brands.

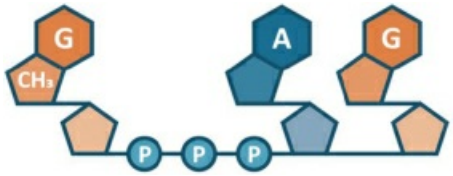


The growth in our nucleic acid production business segment has been fueled by the significant growth in biological drugs in development, many of which are addressing cell and gene therapies, and by the rapid rise in mRNA vaccines. mRNA as a treatment modality has been an area of acute interest for several years. The global

COVID-19 pandemic, however, has highlighted its potential advantages in speed of development and manufacturing, as well as cost. Of the estimated 193 COVID-19 vaccine development programs underway as of October 2, 2020, according to the World Health Organization, 25 are mRNA-based. Six of the 25, including one phase II/III clinical program led by Pfizer in partnership with BioNTech, four phase I/II clinical programs led by Arcturus Therapeutics in partnership with Duke-NUS Medical School, Imperial College London, Fosun Pharma in partnership with BioNTech and CureVac and one pre-clinical program led by the University of Tokyo in partnership with Daiichi-Sankyo, use our CleanCap® products and up to three more in earlier stages of development, led by Chula Vaccine Research Center in partnership with the University of Pennsylvania, eTheRNA Immunotherapies and Greenlight Biosciences, will potentially use our CleanCap® products. We further serve cell and gene therapies with our RNA and mRNA products and expect to supplement with our upcoming plasmid DNA capability. In addition to the vaccine programs above, our products have been incorporated in 33 therapeutic programs in development for CRISPR/Cas-9, CAR-T, base editing and enzyme replacement therapies, among others.

Our nucleic acid products fall into four broad categories: CleanCap®, mRNA, oligonucleotides and plasmid DNA. We expect to offer our plasmid DNA products in the first quarter of 2021.

CleanCap®. Our proprietary CleanCap® analogs principally serve the mRNA vaccine and therapeutic markets, including vaccine candidates in development for immunizing against COVID-19. Cap analogs are a component of mRNA that aids in protein production as well as making mRNA more stable inside cells. For mRNA to serve as a template to make a protein, it requires a special cap at the 5' (five prime) end of the molecule. The cap structure also affects the stability of the mRNA. The lack of a cap can result in activation of the innate immune system, which can affect the production of the desired protein or elicit undesired biological effects. We offer a suite of CleanCap® analogs that are specifically made for therapeutics and vaccines. Based on the Industry Analysis, we believe our cap analogs are critical features of several mRNA vaccines in development.



CleanCap® is a synthetic capping reagent composed of N7 Methyl (G) linked to a dimer at (A) and (G) through a triphosphate (P) linkage that is added during the transcription reaction and resulting in high levels of mRNA capping.

Traditionally, the 5' cap has been added in one of two ways. The cap can be added post mRNA synthesis by an enzymatic process. This enzymatic method has several drawbacks, including the high cost of the capping enzymes as well as the need to perform additional processing steps to the mRNA to remove enzymes and byproducts of the capping reaction. While capping efficiency is usually high, the extra processing steps typically result in mRNA of poorer quality and degradation often results. The second method is to add a synthetic cap analog into the transcription reaction such that the mRNA is transcribed and capped in a single step. Anti-reverse cap analog ("ARCA") is an example of a cap analog that is added to the transcription reaction. This avoids the workflow challenges of the enzymatic process, but typically results in lower yields.

Like ARCA, CleanCap® is a synthetic, chemically made mRNA 5' cap analog added to the transcription process in a single step. Unlike ARCA, however, CleanCap® results in significantly higher levels of capping efficiency, resulting in very low levels of uncapped mRNA, which in turn minimizes the risk of activation of the innate immune system. In addition, CleanCap®'s higher mRNA yields compared to ARCA result in lower cost of goods. When compared to enzymatic capping, CleanCap® removes the additional downstream purification steps

required. We have developed a suite of CleanCap® analogs that are specifically designed for therapeutics and vaccines. CleanCap® products represented % of our nucleic acid production revenue for the nine months ended September 30, 2020.

mRNA. mRNA is an intermediary molecule that translates the genetic information stored in DNA into proteins. The genetic information stored in DNA is transferred to mRNA in a cellular process called transcription. This process occurs in the nucleus of cells. DNA, a double stranded molecule, is unwound and copied as mRNA by the enzyme RNA polymerase. mRNA is then transferred out of the nucleus to the cytosol, a component of the cytoplasm of a cell, where it serves as a blueprint for making cellular proteins by a multi-component organelle complex called the ribosome.

mRNA has traditionally been a difficult molecule for vaccine and therapeutic purposes. mRNA is inherently unstable compared to DNA and is susceptible to degradation by ubiquitous enzymes called RNases. mRNAs are also physically and chemically fragile and can degrade at elevated temperatures and under shear forces that occur during downstream manufacturing processes. We have developed manufacturing processes that overcome some of these obstacles, resulting in highly effective mRNA.

We develop and manufacture mRNA products to support vaccine and therapeutic programs from pre-clinical development through and including clinical phases, including scale-up and analytical development services. The mRNA molecules may serve as APIs for diverse applications, such as enzyme replacement therapies, gene editing therapies and vaccines. We offer both research grade material and material made under GMP conditions for early phase clinical trials. mRNA products represented % of our nucleic acid production revenue for the nine months ended September 30, 2020.

Oligonucleotides. The oligonucleotide product category supports broad customer applications, including therapeutics, *in vitro* diagnostics, next generation sequencing ("NGS") and CRISPR-based gene editing. Most of our TriLink BioTechnologies oligonucleotide products are custom manufactured DNA or RNA sequences, often highly modified and produced as research grade or under GMP conditions for use in development, clinical and commercial applications.

We also provide nucleoside triphosphates ("NTPs"). NTPs are the precursors to DNA and RNA. They are composed of a nitrogen base bound to either ribose or deoxyribose with three phosphate groups added to the sugar. We manufacture NTPs that are used in polymerase chain reactions ("PCR"), sequencing reactions and in the manufacture of mRNA. The NTPs can be unmodified, composed of the four standard bases, or modified, with a base altered to enhance a particular biological property, such as the ability to evade the innate immune system in therapeutic applications. TriLink BioTechnologies NTPs are used by customers in both research and clinical trial applications.

Our product offerings also include reagents that form the building blocks of oligonucleotides with our Glen Research products, including high quality specialty chemicals and amidites. The oligonucleotide products category represented % of our nucleic acid production revenue for the nine months ended September 30, 2020.

Plasmid DNA. We finished construction of a plasmid DNA manufacturing suite inside our newly built San Diego facility and manufacturing is expected to begin in the first quarter of 2021. Unlike genomic DNA, which constitutes the chromosome, plasmid DNA exists outside the chromosome and represents small circular double-stranded constructs. Plasmid DNA is frequently used as a vector for replicating nucleic acid products. Plasmid DNA is integral to the production of mRNA and our production of plasmid DNA will assist in ensuring the quality of the mRNA we produce.

Our nucleic acid customers are generally vaccine and therapeutic drug makers, who accounted for % of nucleic acid production revenue for the nine months ended September 30, 2020 and *in vitro* diagnostics and next-generation sequencing products manufacturers, who accounted for % of our nucleic acid production revenue over the same period.

Biologics Safety Testing (% of Revenue for the Nine Months Ended September 30, 2020)

We provide products and services under the Cygnus Technologies brand that ensure the purity of our customers' biopharmaceutical products, including biological drugs. For over 20 years, the Cygnus Technologies brand has been associated with products and services that enable the detection of impurities and contaminants present in bioproduction. Our biologics safety testing products are used during development and scale-up, during the regulatory approval process and throughout commercialization. We are recognized globally for the detection of HCPs and process-related impurities during bioproduction.

Our customers in this segment manufacture a broad range of biopharmaceutical products. These include monoclonal antibodies and recombinant proteins, both as novel biologics and biosimilars, and recombinant vaccines including vaccines to prevent COVID-19 and to treat cancer. We also provide products in support of the development of cell and gene therapies. Recombinant vaccines and cell and gene therapies rely on manufacturing of various viral vectors produced using recombinant nucleic acid and cell culture technologies. Viral vector manufacturing processes require rigorous analytics, including testing for process-related impurities such as HCPs, host cell DNA, purification leachates, growth media additives and enzymes used in viral vector purification processes.

ELISA is the benchmark method for monitoring levels of process-related impurities during the purification process and in product release testing. The advantages of well-developed ELISA kits include the ability to measure very low levels of impurities in the presence of high amounts of drug product, without requiring a high level of expertise to run, and are readily transferable across an organization from process development to manufacturing and quality control bioanalytical groups. Though relatively simple to run, these ELISA kits require a high level of expertise to design, develop and qualify.

Customers establishing biopharmaceutical manufacturing processes may use off-the-shelf or generic HCP kits provided by manufacturers like ourselves, or they may choose to design their own in-house assays for their specific processes. Some customers may choose to use generic assays early in development and migrate to process-specific assays later. The trend in recent years has been for customers to increasingly use generic assays throughout their development pathway, relying on our expertise and the established performance of our assays. If customers choose to develop their own assays, we offer custom services and bulk materials to assist them.

Our comprehensive catalog of Cygnus Technologies HCP ELISA kits covers 22 expression platforms and provides the specificity and sensitivity to detect impurities with reproducibility, which supports regulatory compliance. Our reputation for quality is recognized by the industry and global regulatory agencies, with Cygnus Technologies assays used as reference methods throughout the industry and to support manufacturing and quality control of commercialized biologics.

Our customers in this segment are biopharmaceutical companies, contract research organizations ("CROs"), contract development and manufacturing organizations ("CDMOs") and life science companies, which together accounted for % of our biologics safety testing revenue for the nine months ended September 30, 2020. International distributors and United States-based resellers accounted for % of this revenue. These customers largely serve the biopharmaceutical industry. Academia, hospitals and government accounts contributed % of our biologics safety testing revenue in the nine months ended September 30, 2020.

Cygnus Technologies product categories include HCP ELISA kits, other bioprocess impurity and contaminant ELISA kits, ancillary reagents and custom services.

HCP ELISA kits. HCP ELISAs are kits used to detect residual proteins from the expression system used in bioproduction. HCPs constitute a major group of process-related impurities produced using cell culture technology no matter what cell expression platform is used. HCPs pose potential health risks for patients and the risk of failure of safety endpoints for drug manufacturers. When present in the administered product, even at low levels, HCPs can induce an undesired immune response, interfere with drug efficacy and impact drug stability. HCPs are a critical quality attribute for biologics safety testing development and must be adequately removed during the downstream purification process.

HCP ELISA kits represented % of our biologics safety testing revenue in the nine months ended September 30, 2020.

Other impurity and contaminant kits. Products in this category include kits for measuring Protein A leachate, which results from the affinity purification method used for monoclonal antibody therapeutic agents; ELISA kits for measuring additives in growth media, such as bovine serum albumin; ELISA kits for measuring host cell DNA; and ELISA kits to detect and quantify residual endonuclease impurities in recombinant viral vector and vaccine preparations.

In addition, in 2020, Cygnus Technologies introduced the MockV™ Minute Virus of Mice (MVM) kit, a novel, proprietary viral clearance prediction tool that includes a non-infectious “mock virus particle” mimicking the physicochemical properties of live virus that may be present endogenously in the drug substance or introduced during bioproduction. The kit enables manufacturers to conduct viral clearance assessments easily and economically and to predict outcomes in-house ahead of costly and logistically challenging live viral clearance studies.

Other impurity and contaminant kits represented % of our biologics safety testing revenue for the nine months ended September 30, 2020 in the biologics safety testing segment.

Ancillary reagents. These products include antibodies, antigens, sample diluents and other auxiliary products necessary to optimize applications for customer processes. Ancillary reagents represented % of our biologics safety testing revenue for the nine months ended September 30, 2020.

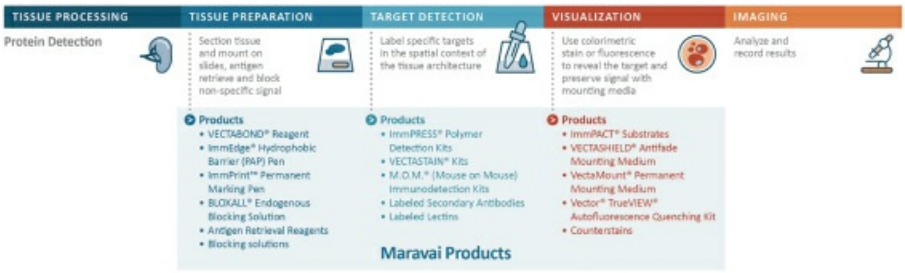
Custom services. We provide process-specific antibody and ELISA development, qualification and maintenance services. In addition, we have pioneered advanced orthogonal methods including antibody affinity extraction (AAE™) and mass spectrometry for HCP antibodies coverage analysis and HCP identification, which we provide as custom services. Custom services represented % of our biologics safety testing revenue for the nine months ended September 30, 2020.

Protein Detection (% of Revenue for the Nine Months Ended September 30, 2020)

We believe that we are a leader in labeling and detection reagents for immunohistochemistry, immunofluorescence and glycobiology, principally in research settings, with Vector Laboratories, the brand under which we market our protein detection products, having been cited over 350,000 times in scientific publications. Our products are used to detect the expression of proteins in tissue, which may indicate an ongoing disease process, with the use of antibody-based detection systems. We also manufacture lectins, proteins that preferentially bind to carbohydrates and which are used, for example, in the study of glycosylation, the process by which carbohydrates attach to proteins and lipids. Glycosylation is critical in a range of biological processes, including cell-to-cell adhesion, the performance of glycoprotein-based drugs and cancer. In addition, we manufacture bioconjugation reagents to allow rapid and quantifiable conjugation of all classes of biomolecules.

Our presence in protein detection dates to the founding of Vector Laboratories in 1976. Under the Vector Laboratories brand, we provide reagents to researchers worldwide investigating biological processes and the nature of disease in tissue, including oncology research applications. Our reagents span the immunohistochemistry and immunofluorescence workflows and include products for tissue preparation, tagging targets of interest via secondary antibodies, detection systems for visualizing proteins, enzyme substrates for chromogenic color development, secondary antibodies to amplify target signal, fluorescent dyes for use in live cell imaging, fluorophore-conjugated secondary antibodies and products for the identification and isolation of glycosylated targets.

Our expertise includes the development of a broad range of highly validated secondary antibodies, used for labeling targets of interest. We produce over 20 proprietary antibodies constituting over 180 different SKUs in different formats and quantities. We also offer a broad portfolio of over 35 distinct lectins making up nearly 140 SKUs addressing a broad set of applications. Our capabilities extend to assay development, protein purification and bioconjugation as well as development of critical related reagents such as mounting media and substrates.



We principally serve academic researchers worldwide in our protein detection segment. Our research customers generally rely on us to provide our catalog products in a timely fashion, often overnight, and to provide live technical support and responsive customer service. All protein detection products sold directly to academic researchers carry the Vector Laboratories brand. We also sell custom products to industry customers, whether as components to be integrated into their own products, or to be resold. We serve these customers with catalog products directly via Web, email and phone ordering; with custom or bulk products through direct sales; and through distributors and resellers. Direct catalog sales represented % of our protein detection revenue for the nine months ended September 30, 2020. Bulk and custom products sold directly accounted for % of our protein detection revenue and resellers and distributors together accounted for % of our protein detection revenue during the same period.

Our Competitive Strengths

We believe we are a leader in providing nucleic acid products and biologics safety testing products and services to biopharmaceutical customers worldwide. Our success is built on the ability of our proprietary technologies and products, provided under exacting quality standards, to reliably serve our customers' needs for critical raw materials.

Leading Supplier of Critical Solutions for Life Sciences from Discovery to Commercialization

We seek to be an important component of our customers' supply chain by providing inputs that are central to the performance of their products and processes throughout the product lifecycle. By collaborating with customers early in the development phase, our products frequently follow our customers' development path to commercialization and are likely to be incorporated as raw materials in their on-market products and processes. Our decades-long experience and track record, coupled with our ongoing investment in facilities and quality systems, allow our customers to rely on us for their critical products. Our approach is to be a trusted partner throughout the life cycle of our customers' products.

Innovation, Proprietary Technologies and Knowhow Underpin Our Portfolio

Our expertise in complex chemistries leads customers to seek our collaboration in designing complex products that meet high performance expectations. Based on the responses to the Industry Analysis, we believe the solutions we provide, in many cases, cannot be provided effectively by our competitors. In certain cases, like our CleanCap® technology, our knowhow is backed by intellectual property. In other cases, such as our HCP products, our antibodies are proprietary and therefore can only be supplied by us. We believe the proprietary nature of our knowhow and products solidifies our long-term customer relationships.

Products with Outstanding Quality Performance

We believe our products stand out when compared to our competitors' because they present innovative solutions to customer needs, as indicated by the responses to the Industry Analysis, while providing reliable performance and quality. CleanCap®, for example, offers advantages over competing technologies in yield, stability and safety. Our oligonucleotides address complex chemistry challenges, which we believe few competitors can address. The results of the Industry Analysis indicate that our HCP ELISAs have defined the market for impurity detection and we believe they have become a *de facto* standard in biologics safety testing. Similarly, our protein detection assays have been recognized for their performance for over 40 years.

Trusted Brands

Our TriLink BioTechnologies, Glen Research, Cygnus Technologies and Vector Laboratories brands are well known in their respective markets for consistent quality and performance. This brand recognition has been earned over decades. Our manufacturing processes, quality standards, technical support and high-touch customer service ensure that we maintain the reputation of our brands.

State-of-the-Art Manufacturing Facilities

Our biopharmaceutical customers manufacture their products to meet stringent quality standards and expect their critical suppliers to meet their exacting requirements. Our customers further expect that we have the production capacity to meet their needs in a timely manner. As of September 30, 2020, we estimated that $ million has been invested in our flagship San Diego facility and its five dedicated manufacturing suites to produce materials under GMP conditions, along with the required quality systems to meet requirements specified by our customers. We similarly invest in our other sites to ensure we meet our customers' expectations. We believe that the capacity to manufacture to stringent biopharmaceutical standards is constrained in the industry and our ability to meet this demand sets us apart from our competition.

Experienced Leaders and Talented Workforce

Our management includes experienced leaders with demonstrated records of success at Maravai and other highly regarded industry participants. In addition, as of August 31, 2020, approximately 10% of our workforce have advanced degrees. We believe the quality of our personnel is critical to ensuring the collaborative, long-standing relationships we maintain with many of our customers.

Our Markets

We participate in three distinct market segments: nucleic acid production, biologics safety testing and protein detection, which together represented approximately $8.4 billion in annual spending in 2019 and which are expected to grow at a 15% compound annual growth rate ("CAGR") through 2023. Of that combined market, we estimate our addressable portion represents approximately $3.6 billion. Our addressable segments as a whole, adjusted for the mix of products we offer, are expected to grow at a weighted average blended rate of 20% per annum through 2023, according to industry consultants and management estimates. We benefit from favorable industry dynamics in our broader market segments and specific growth drivers in our addressable market segments.

Business Segment	PRIMARY BRAND	PRODUCT	TOTAL MARKET SIZE (2019)	MARKET GROWTH (2019-2023 CAGR)	ADDRESSABLE MARKET SIZE[1] (2019)	ADDRESSABLE MARKET GROWTH[2] (2019-2023 CAGR)
Nucleic Acid Production	TriLink Biotechnologies and Glen Research	• RNA Capping (CleanCap®) • mRNA • Plasmid DNA • Oligonucleotides and Inputs	$3.5B	19%	$2.8B	28%
Biologics Safety Testing	Cygnus Technologies	• Host Cell Protein Detection • Viral Contamination Detection	$2.8B	12%	$575M	13%
Protein Detection	Vector Laboratories	• Immunohistochemistry	$2.2B	8%	$200M	6%
		TOTAL	$8.4B	15%	$3.6B	20%

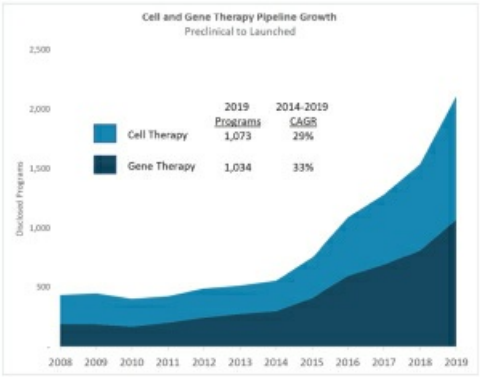
1 Includes products, use cases, and customer types relevant to Maravai

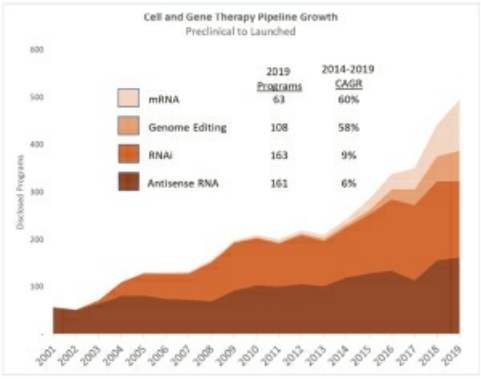
2 Growth rates weighted by revenue exposure to addressable market segments

Biopharmaceutical customers are increasingly relying on outside parties to provide important inputs and services for their clinical research and manufacturing, a development driving growth for suppliers with unique capabilities and the ability to manufacture at an appropriate scale to support customer programs. We believe that suppliers like ourselves, with this rare combination of capabilities, proprietary products and the required investment in manufacturing and quality systems, are benefiting from rapid growth as biopharmaceutical customers seek to partner with a small number of trusted suppliers.

In addition to the continued trend toward outsourcing, several market developments are driving increased growth, above the broader market growth rates, in our addressable market segments, including:

- **Pivot toward mRNA vaccines driven in part by COVID-19**. mRNA vaccine pre-clinical programs grew approximately 38% in 2019, before theCOVID-19 pandemic. That rate is estimated to increase to approximately 63% in 2020. The increased growth is being driven, in part, by 25 COVID vaccine programs using mRNA as of October 2, 2020, according to the World Health Organization. Six of the 25, including one phase II/III clinical program led by Pfizer in partnership with BioNTech, four phase I/II clinical programs led by Arcturus Therapeutics in partnership with Duke-NUS Medical School, Imperial College London, Fosun Pharma in partnership with BioNTech and CureVac and one pre-clinical program led by the University of Tokyo in partnership with Daiichi-Sankyo, involve our CleanCap® products and up to three more in earlier stages of development, led by Chula Vaccine Research Center in partnership with the University of Pennsylvania, eTheRNA Immunotherapies and Greenlight Biosciences, will potentially use our CleanCap® products. The mRNA vaccine technology is gaining prominence as a result of its faster development time, lower manufacturing costs and improved safety because of the lower risk of unwanted immune responses. RNA expertise is highly specialized and customers seek partners to provide these complex products. A small number of providers, like ourselves, can provide this RNA capability.
- **Rapid growth in development of cell and gene therapies**. Sales of cell and gene therapy drugs are expected to grow from $1 billion in 2019 to $25 billion by 2024 and recent approvals of Kymriah®, Yescarta® and Luxturna™ have added clinical credibility to cell and gene therapies. We support the development of cell and gene therapies with products used in gene editing and cell therapy research, and we are well positioned to supply materials for gene therapy with our launch of DNA plasmid products, which we expect in the first quarter of 2021.

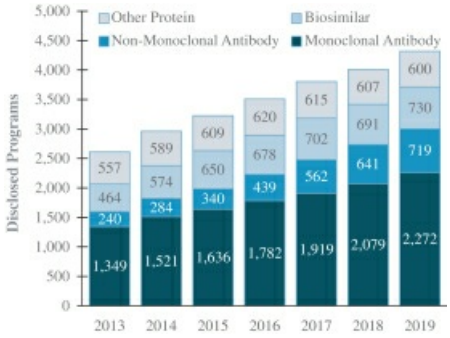




- **Large and growing pipeline of protein-based therapeutics**. In addition to cell and gene therapies, an increase in protein-based therapies is driving the need for impurity testing during process development and manufacturing.

Protein Therapy Pipeline Growth
CAGR = 9%

Protein Therapy Pipeline Mix
CAGR = 9%



Source: Industry consultants. Included proteins are biosimilars, antibodies, recombinant proteins, hormonal products and coagulation factors

- **Rise in molecular diagnostics driven by COVID-19**. The market for molecular diagnostics is growing dramatically because of demand for new tests related to COVID-19. This growth is driving demand for our products, particularly oligonucleotides and related inputs.
- **COVID-19 providing both short-term and expected long-term growth**. Several of our product categories are experiencing accelerated growth in 2020, notably our CleanCap® and oligonucleotides products. We expect the impact of COVID-19 on our growth to sustain in the longer-term as the entire mRNA category benefits from lessons learned during COVID-19. We expect research in other therapeutic categories to experience increased growth as research conducted for COVID-19 diffuses more broadly into other vaccines and therapies.

Anticipated COVID-19 Impact on Market Growth

Business Segment	Primary Brand	Product	Near Term (2020-2021)	Long Term (2022+)	Comments
Nucleic Acid Production	TriLink BioTechnologies	RNA Capping	⊕	⊕	• Significant growth from '19 to '20 driven by COVID mRNA programs • Success will grow R&D pipeline for non-COVID mRNA therapeutics, vaccines, & diagnostics in 2022+, sustaining significant category growth
		mRNA	⊕	⊕	
		Plasmid DNA*	⊖	⊖	• Minimal impact • Not a significant input to COVID vaccines, PCR diagnostics, etc.
		Custom Oligonucleotides	⊕	⊖	• Molecular diagnostics driving outsized near-term growth, likely to return to historic growth rates
	TriLink BioTechnologies /Glen Research	Oligonucleotide Synthesis Inputs	⊕	⊖	• Supporting commercialized efforts that rely on mRNA for vaccines & therapeutics, likely to return to secular category growth rates
Biologics Safety Testing	Cygnus Technologies	Host Cell Protein Detection	⊖	⊖	• Minimal impact • HCP tests & viral clearance growing from biologics & biosimilars market, not directly impacted by COVID vaccines & diagnostics
		Viral Contamination Detection	⊖	⊖	
Protein Detection	Vector Laboratories	Immunohistochemistry	⊗	⊖	• Market decline in '20 due to COVID-driven lab closures, expect post-COVID recovery

⊕ Strong Positive Impact ⊕ Moderate Positive Impact ⊖ Minimal Impact ⊗ Negative Impact

* Our plasmid DNA products are expected to launch in Q1 2021.

Nucleic Acid Production Market

The nucleic acid production market includes the production and synthesis of reagents for research and manufacturing of DNA andRNA-based biologics. Nucleic acid production is a $3.5 billion market expected to grow at 19% annually through 2023. Growth has generally accelerated in recent years with continued innovation in cell and gene therapy, including mRNA therapeutics and synthetic biology approaches. Our addressable portion of the market is $2.8 billion with expected growth of 28% annually through 2023. This higher growth rate is driven by our exposure to high growth sub-markets including RNA cap analog production and mRNA. Capping and mRNA growth is fueled by the continued growth of nucleic acid vaccines and therapies, which we expect will accelerate because of research into COVID-19. That research has highlighted the benefits of mRNA vaccines and therapies more broadly.

The field of mRNA-based drugs and vaccines has advanced dramatically within a few short years. Capacity to manufacture these products when approved, however, remains in short supply. Providers of technical expertise and manufacturing capabilities, like ourselves, with the facilities and quality systems demanded by biopharmaceutical customers, benefit from the demand created in the mRNA category.

COVID-19 is further accelerating growth in custom oligonucleotides and related inputs, which are used to manufacture diagnostic tests. New participants have entered the diagnostics market. Reference labs and hospitals have rapidly expanded their capacity. And demand for testing is increasing rapidly. These developments in turn lead to increased demand for our oligonucleotide products.

Biologics Safety Testing Market

The biologics safety testing market includes the detection and clearance of downstream bioprocessing product and process impurities. Biologics safety testing is a $2.8 billion market expected to grow at 12% annually through 2023. We participate in the HCP and other process related impurities and viral contamination segments of this market for biopharmaceutical vaccine and therapeutics manufacturing. These addressable segments account for $575 million of the market and are expected to grow at 13% annually through 2023. The growth in this market is driven by continued growth of biologics and biosimilars and increased outsourcing of process development.

Protein Detection Market

The protein detection market includes methods to detect and visualize proteins (antigens) in tissue sections to provide insight into gene expression, spatial relationships, and biomarker identification. Protein detection includes immunohistochemistry, immunofluorescence and glycobiology. Immunohistochemistry, our largest market within protein detection, is a $2.2 billion market, expected to grow at 8% annually through 2023. We participate in the immunohistochemistry segment of the academic and biopharmaceutical research market, which represents $200 million of annual expenditures expected to grow at 6% annually through 2023. This market has seen a temporary contraction in 2020 of approximately 15% given lab closures due to COVID-19, but is expected to return to historical numbers.

Our Strategy

Our customers strive to improve human health. Our goal is to provide them with products and services to accelerate their development efforts, from basic research through clinical trials and ultimately to commercialization for drugs, diagnostics and vaccines.

Supporting Biopharmaceutical Customers from Product Development Through Commercialization

Our customers include both emerging and established biopharmaceutical leaders developing novel therapies, diagnostics and vaccines. Emerging biopharmaceutical customers frequently seek the support we can offer in our

state-of-the-art facilities under our stringent quality standards, with the capabilities that result from the capital and process investments we have made over the last several years. We are capable of manufacturing reagents from research-grade to GMP-grade, which often exceeds the in-house capabilities of our pre-commercial customers. The results of the Industry Analysis indicate that our emerging and established customers also seek us out for our leading capabilities in nucleic acid chemistries and process control assays. We have expertise in complex chemistries, especially in highly modified nucleic acids and mRNA, and we believe we are a leader in applying these capabilities to the development of vaccines and therapeutics. We further support our customers as they transition from product development to commercialization by providing critical raw materials for their drugs. A core component of our strategy is the continued investment in facilities, quality standards and products and services that allow us to support our customers through the entire life cycle of their drugs.

Developing Proprietary Technologies that Deepen our Relationships with Our Customers

We are experts in nucleic acids and our scientists aim to develop proprietary enabling technologies that become integral to our customers' products. For example, CleanCap®, our proprietary chemical capping technology, has demonstrated its advantages in terms of the stability of the associated mRNA and its efficiency in protein production when compared to traditional capping technologies. This efficiency has led biopharmaceutical customers to employ CleanCap® in their vaccine and therapeutic programs. As those products proceed through development into commercialization, we believe CleanCap® will be a critical input in on-market vaccines and therapeutics, with 109 customers having used CleanCap® as of September 30, 2020 and six COVID-19 vaccine programs incorporating CleanCap® as of September 30, 2020, including one phase II/III clinical program led by Pfizer in partnership with BioNTech, four phase I/II clinical programs led by Arcturus Therapeutics in partnership with Duke-NUS Medical School, Imperial College London, Fosun Pharma in partnership with BioNTech and CureVac and one pre-clinical program led by the University of Tokyo in partnership with Daiichi-Sankyo. We expect to supply our customers throughout their products' life cycle.

Forming Long-Term Partnerships for Critical Biopharmaceutical Components and Process Tests

Our products are frequently incorporated into regulated and highly validated therapeutic and diagnostic products and processes. Our biopharmaceutical customers expect us to provide them with consistent, high quality products that meet narrow specifications, and that we ensure their supply chain for such products for the length of their programs. In many cases, we may be the sole source of the products we provide. We therefore take seriously our responsibility to our biopharmaceutical partners, and by extension the patients they serve. Our emphasis on partnership generally leads to long-term relationships with our customers.

Focusing Our Efforts on High Growth End Markets

While biopharmaceutical research and *in vitro* diagnostics markets are experiencing strong growth, we target the highest growth segments within those markets. Our product portfolio is well positioned to serve the biologic, cell and gene therapy and mRNA vaccine and therapeutic end markets, which are currently experiencing above-market growth. By investing in technologies at the forefront of biopharmaceutical and *in vitro* diagnostics, we aim to remain focused on the highest-growth applications.

Opportunistically Acquiring Leading Life Sciences Businesses and Supporting Their Continued Development

We built our business by acquiring established and emerging companies with strong scientific foundations in our target markets and investing in their systems, processes and people to accelerate their growth and expand their technologies. Going forward, we may opportunistically pursue strategic acquisitions that we believe meet, or could meet after being acquired and expanded, the following criteria:

- address our core target markets;
- have a demonstrated adherence to high quality standards;

- be leaders in their market niches;
- have differentiated or proprietary products and processes that provide clear value to our biopharmaceutical and other customers; and
- have a track record of attractive rates of growth and compelling returns on invested capital.

Our acquisition strategy is to invest significantly in our acquired businesses. We strive to rapidly integrate their information and financial systems. All of our companies share a common enterprise resource planning system and we implement our financial controls and reporting systems soon after acquisition. We seek opportunities to invest in their facilities and personnel to provide an operating foundation for growth. We also augment their commercial capabilities through a combination of sales and marketing resources dedicated to each business, supported by our global marketing infrastructure.

We will continue to seek a balance between driving growth organically and through opportunistic acquisitions.

Commercial

Our customers are biopharmaceutical companies, which represented % of our revenue for the nine months ended September 30, 2020; life sciences companies manufacturing tools for research (%); *in vitro* diagnostics companies (%); and academic researchers (%). Our biopharmaceutical customers include startups, established biotechnology companies and large pharmaceutical companies developing enzyme replacement therapies, gene editing therapies, *ex vivo* therapies and vaccines.

Our commercial function includes direct sales, marketing, customer service, technical support and distributor management. We serve customers through direct sales in each business segment, with a primary focus on our larger biopharmaceutical and other industry customers. We serve our academic customers via Web, email and phone ordering. We support all customers with live technical support and customer service.

We address customers outside the United States with a combination of direct sales and distributors. We serve many of our biopharmaceutical customers, especially in our nucleic acid production segment, via direct sales worldwide. Our distributors also sell our products in over 50 countries and provide customer service and local sales and marketing. As of August 31, 2020, our commercial organization included 57 employees and over 100 distributors.

Competition

We compete with a range of companies across our segments.

Nucleic Acid Production

Within nucleic acid production, we compete with four primary types of companies: (1) chemistry companies that create and produce the basic monomers, amidites, and supports that go into the creation of an oligonucleotide; (2) oligonucleotide manufacturers that specialize in custom oligonucleotide development of varying complexities and scales; (3) mRNA biotechnology companies that create fully processed mRNA and specialize in custom, complex orders; and (4) CDMO organizations that have the capability to accept work from large biopharmaceutical companies and serve as the outsourcing entity for the development and manufacturing of nucleic acid products. However, it is important to note that CDMOs seldom offer proprietary products.

For mRNA capping analogs, we compete principally with Thermo Fisher Scientific Inc. (“Thermo Fisher”) and Hongene Biotech Corporation, who offer alternatives to CleanCap®. Many biopharmaceutical companies produce capping solutions in-house using enzymatic or ARCA processes. However, given CleanCap®’s high

yield and process efficiency, many customers who previously insourced these processes have begun to partner with us. Based on the Industry Analysis, we believe our products and services are more effective than those of our competitors. Deep scientific expertise, intellectual property protection and specialty equipment serve as barriers to entry in this space.

For our mRNA offerings, we compete with Aldevron LLC,Bio-synthesis Inc., and System Biosciences, LLC, among others. Based on the Industry Analysis, we believe we have a reputation for our expertise in the RNA space with talented scientists who are constantly pushing the frontier of RNA science. This scientific expertise and the required high-cost equipment serve as barriers to entry. In addition to our expertise, we believe our GMP cleanroom manufacturing process differentiates us from competitors.

For custom oligonucleotides, we compete with a number of manufacturers. Custom oligonucleotide providers include those that provide complex, highly modified oligonucleotides and those that provide less complex offerings. In the custom oligonucleotide space, complexity is based on the length of the sequence and level of modification to the phosphate backbone. Large manufacturers like Integrated DNA Technologies, Inc., Thermo Fisher and EMD Millipore Corporation ("Millipore Sigma") serve less complex customer needs while TriLink BioTechnologies, LGC Biosearch Technologies, Inc. and GenScript Biotech Corporation serve more complex customer needs. In the custom oligonucleotide market, we have a reputation for accepting complex orders and delivering high purity products that reduce researcher re-work and save money. Quick turnaround times and the ability to produce at scale are essential requirements in this segment.

In the oligonucleotide synthesis inputs market, we compete against large distributor-manufacturers like Thermo Fisher and Millipore Sigma while also serving them as customers. The Glen Research brand has a long history in this industry, which drives customer loyalty, and has a reputation for high-fidelity technical service, focusing on supplying and sourcing highly modified inputs for its customers.

Biologics Safety Testing

For drugs in early development, we compete against other bioprocess impurity kit providers such as BioGenes GmbH ("BioGenes") or Enzo Life Sciences, Inc. ("Enzo"). Competitors generally offer fewer expression platforms (as few as one or two) compared to our offering of 21 expression platforms and a total of 78 ELISA impurity detection kits. As a drug successfully moves forward to validation and approval stages, a customer may either continue with an off-the-shelf kit or they may begin the process to develop a custom assay that is tailored to meet their specific host cell and manufacturing process needs. During the entire drug development process, and especially during this decision, we are partners with the manufacturer and provide our expertise to help them make the best bioprocess quality control and testing-related decisions.

If a drug manufacturer continues with an off-the-shelf assay from development to validation and approval, they will generally stay with the incumbent kit provider due to the extensive validation they have conducted. For custom assay development, our main competitors are BioGenes, Rockland Immunochemicals, Inc., and some CDMOs and CROs with custom assay development capabilities. The trend in recent years has been for CDMOs, CROs and large biopharmaceutical companies to focus on core competencies and outsource host cell protein assays or qualify off-the-shelf kits when possible.

Protein Detection

In the protein detection market, we compete against large life sciences manufacturers and niche tissue staining offerings. We compete in the research segment of this market against large life sciences manufacturers such as Thermo Fisher and Abcam plc, who compete across the value chain offering primary and secondary antibody detection, visual detection and labeling, slide processes and visualization and analysis. Additionally, we compete against niche tissue staining offerings such as Enzo and Jackson ImmunoResearch Laboratories, Inc. We are differentiated by our deep visual detection and labeling experience, our Vector Laboratories brand's

sterling reputation established over more than 40 years, and the desire of our research customers to replicate past findings, many of which were completed using Vector Laboratories products.

Licenses and Collaborations

ProteinSimple Supply and Distribution Agreement

On August 12, 2019, we (through Cygnus Technologies) entered into a Supply and Distribution Agreement with ProteinSimple (the "ProteinSimple Agreement") for the supply of bioprocess impurity assays to be assembled in assay cartridges for use in automated analyzer instruments. Under the ProteinSimple Agreement, we supply to ProteinSimple, at no charge, certain reagents to be incorporated into ProteinSimple cartridges or sold directly by us. This collaboration with ProteinSimple is generally exclusive in the field of testing for bioprocess impurities using immunoassays on an automated analyzer for the United States, United Kingdom, Ireland and Europe.

The ProteinSimple Agreement contains non-exclusive licenses from each party to the other to permit the other party to fulfill its obligations and sell its products under the ProteinSimple Agreement. If any intellectual property is developed jointly or any intellectual property that covers both bioprocess impurity assays and automated immunoassay kits and instruments is developed solely by either party, we will own all intellectual property with respect to the bioprocess impurity assays and ProteinSimple will own all intellectual property with respect to automated immunoassay kits and instruments.

The ProteinSimple Agreement is in effect for an initial seven (7) year term with automatic renewal for successive two (2) year renewal terms unless either party elects not to renew. Beginning on the third anniversary of the date of the ProteinSimple Agreement, either Party may terminate the ProteinSimple Agreement on thirty (30) days' notice if Cygnus Technologies has not purchased certain minimum numbers of cartridge kits from ProteinSimple.

Broad Patent License Agreement

We (through TriLink BioTechnologies) entered into a Nonexclusive Patent License and Material Transfer Agreement with The Broad Institute, Inc. ("Broad") effective as of July 5, 2017, and amended on September 29, 2017 (the "Broad Patent License Agreement"). Broad, together with a consortium of educational institutions (including Harvard University and the Massachusetts Institute of Technology), owns and controls certain patent rights relating to genome editing technology, including the CRISPR-Cas9 gene editing processes and have a licensing program for use and commercialization of technologies and products covered by the underlying patent rights. Under the Broad Patent License Agreement, Broad grants to us a non-exclusive, royalty-bearing, non-transferable and non-sublicensable, worldwide license under the licensed patent rights to manufacture and sell products and to perform certain *in vitro* processes or services on a fee-for-service basis, in each case, solely as research tools for research purposes (excluding human, clinical or diagnostic uses). We must use diligent efforts to develop products, introduce products into the commercial market and make products reasonably available to the public. We are obligated to pay a mid-five figure annual license maintenance fee and royalties in the range of 5% to 10% on net sales of covered products and processes.

The term of the Broad Patent License Agreement extends through the expiration of the last to expire claim of any of the licensed patents. We are entitled to terminate the Broad Patent License Agreement for convenience at any time on at least three (3) months' written notice, in which case we must continue to pay license maintenance fees and royalties as noted above for the sale of products that are not covered by the specific claims of the licensed patent rights but are otherwise derived from such licensed patent rights or from products covered by such licensed patent rights. Broad may terminate the license for our uncured failure to make payments, for our uncured material breach or if we bring a patent challenge against any of the institutional rights holders.

LSU Patent License Agreement

We (through TriLink BioTechnologies) entered into a Patent License Agreement with the Board of Supervisors of Louisiana State University and Agricultural and Mechanical College and Dr. Edward Darzynkiewicz (collectively, "LSU") effective as of July 7, 2010 (the "LSU Patent License Agreement"). Under the LSU Patent License Agreement, LSU grants to us a non-exclusive, royalty-bearing license under an issued U.S. patent and patents that claim priority thereto, directed to mRNA capping technology to make and sell reagents and kits for research use only (excluding use in humans or for diagnostic or therapeutic purposes) in the United States. We are required to use commercially reasonable efforts to commercialize the licensed products throughout the life of the LSU Patent License Agreement. We are obligated to pay a low four-figure annual license maintenance fee and royalties in the range of 5% to 10% on net sales of licensed products.

We must pay royalties to LSU until the expiration of the last to expire licensed patents. We are entitled to terminate the LSU Patent License Agreement for convenience at any time on at least sixty (60) days' written notice, subject to paying in full all amounts due up to the date of termination and cessation of any exercise of the licensed rights thereafter. LSU may terminate the license for our uncured failure to make payments or our uncured material breach.

AmberGen Agreement

We (through Glen Research) entered into an Agreement with AmberGen, Inc. ("AmberGen"), dated May 11, 2000 (the "AmberGen Agreement") under which AmberGen has appointed us the exclusive distributor of AmberGen's proprietary photocleavable product offered under the name PC Phosphoramidite on a worldwide basis. We are limited to selling the product for research use only and are required to use good faith efforts to discontinue distribution to buyers making use of the product than purposes other than laboratory research.

We are entitled under the AmberGen Agreement to purchase product from AmberGen at AmberGen's cost to manufacture the product. On a monthly basis, we are required to remit to AmberGen 50% of the gross profits on product sales for which payments were received in the preceding month.

The AmberGen Agreement was initially in effect for a five-year term but is now in a series of automaticone-year renewal terms. Either party may terminate the AmberGen Agreement on six months' written notice or immediately for material breach of the other party or, subject to a cure period, for certain bankruptcy-related events.

BTI Biosearch Dyes Agreement

We (through Glen Research) are a party to a Commercial Supply and License Agreement with Biosearch Technologies, Inc. ("BTI"), dated June 29, 2004, as amended on November 8, 2004 (the "BTI Biosearch Dyes Agreement"), under which BTI agrees to supply us with certain BTI dyes and we are granted a worldwide, non-exclusive license to sell certain BTI dyes and to use BTI's product-related trademarks to do so. The BTI dyes can only be sold for the customer's internal research and development use and inclusion in commercial kits or any commercial application is prohibited unless the customer has obtained a valid commercial license from BTI. The rights granted do not include sales to customers for use in human *in vitro* or clinical diagnosis. We are required to pay a per unit price for the licensed BTI products.

The BTI Biosearch Dyes Agreement was originally in effect for a term of three years and is now in a series of annual year-to-year renewals. Either party has the right to opt-out of such renewals upon 90 days' notice prior to the next renewal. Either party can terminate the agreement for convenience at any time on six months' written notice. Either party can terminate the agreement for the other party's uncured material breach or insolvency.

Manufacturing and Supply

We occupy facilities in San Diego, California, Burlingame, California, Southport, North Carolina and Sterling, Virginia. Except for our Sterling facility, all our facilities are engaged in the manufacture of reagents.

Our San Diego facility, in particular, was designed and built by us in conjunction with the building owner to contain fully functional chemical and biological manufacturing operations from material receiving to product distribution and has its own loading dock, manufacturing gas delivery system, solvent delivery and waste system, ISO 8 and ISO 7 designated customer manufacturing suites and integrated building management systems for required site control. Our San Diego facility, fully completed in early 2020, doubled our previous overall nucleic acid production manufacturing capacity and quintupled our previous capacity to manufacture products under certain GMP conditions.

We continue to invest in our San Diego facility with recent expansions allowing for the manufacture of plasmid DNA and creation of ISO Class 8 and ISO Class 7 clean rooms providing for an expansion of the scale at which we can manufacture CleanCap® and NTPs, supported by a pilot plant for development of large scale manufacturing processes.

Our Southport and Burlingame operations are engaged in the manufacture and processing of antibody, ELISA kits and related reagents. The facilities incorporate laboratory, manufacturing, bottling, shipping and waste handling capabilities. Our Sterling facility was designed to perform quality control, aliquoting, packaging and shipping and houses the appropriate space and systems.

Our supply chain relies on a network of specialized suppliers and transportation companies. We regularly review our supply chain for supplier quality and risks related to concentration of supply and we take appropriate action to manage these potential risks.

Government Regulation

We provide products used for basic research or as raw materials used by biopharmaceutical customers for further processing, and active pharmaceutical ingredients used for preclinical and clinical studies. The quality of our products is critical to researchers looking to develop novel vaccines and therapies and for biopharmaceutical customers who use our products as raw materials or who are engaged in preclinical studies and clinical trials. Biopharmaceutical customers are subject to extensive regulations by the Food and Drug Administration ("FDA") and similar regulatory authorities in other countries for conducting clinical trials and commercializing products for therapeutic, vaccine or diagnostic use. This regulatory scrutiny results in our customers imposing rigorous quality requirements on us as their supplier through supplier qualification processes and customer contracts.

Our nucleic acid and biologics safety testing segments produce materials used in research and biopharmaceutical production, clinical trial vaccines and vaccine support products. We produce materials in support of our customers' manufacturing businesses and to fulfill their validation requirements, as applicable. These customer activities are subject to regulation and consequently require these businesses to be inspected by the FDA and other national regulatory agencies under their respective cGMP regulations. These regulations result in our customers imposing quality requirements on us for the manufacture of our products, and maintain records of our manufacturing, testing and control activities. In addition, the specific activities of some of our businesses require us to hold specialized licenses for the manufacture, distribution and/or marketing of particular products.

All of our sites are subject to licensing and regulation, as appropriate under federal, state and local laws relating to:

- the surface and air transportation of chemicals, biological reagents and hazardous materials;
- the handling, use, storage and disposal of chemicals (including toxic substances), biological reagents and hazardous waste;
- the procurement, handling, use, storage and disposal of biological products for research purposes;
- the safety and health of employees and visitors to our facilities; and
- protection of the environment and general public.

Regulatory compliance programs at each of our businesses are managed by a dedicated group responsible for regulatory affairs and compliance, including the use of outside consultants. Our compliance programs are also managed by quality management systems, such as vendor supplier programs and training programs. Within each business, we have established Quality Management Systems ("QMS") responsible for risk based internal audit programs to manage regulatory requirements and client quality expectations. Our QMS program ensures that management has proper oversight of regulatory compliance and quality assurance, inclusive of reviews of our system practices to ensure that appropriate quality controls are in place and that a robust audit strategy confirms requirements for compliance and quality assurance.

Research Products

Our products and operations may be subject to extensive and rigorous regulation by the FDA and other federal, state, or local authorities, as well as foreign regulatory authorities. The FDA regulates, among other things, the research, development, testing, manufacturing, clearance, approval, labeling, storage, recordkeeping, advertising, promotion, marketing, distribution, post-market monitoring and reporting, and import and export of pharmaceutical drugs. Certain of our products are currently marketed as research use only ("RUO").

We believe that our products that are marketed as RUO products are exempt from compliance with GMP regulations under the FDCA. RUO products cannot make any claims related to safety, effectiveness or diagnostic utility and they cannot be intended for human clinical diagnostic use. In November 2013, the FDA issued a final guidance on products labeled RUO, which, among other things, reaffirmed that a company may not make any clinical or diagnostic claims about an RUO product. The FDA will also evaluate the totality of the circumstances to determine if the product is intended for diagnostic purposes. If the FDA were to determine, based on the totality of circumstances, that our products labeled and marketed for RUO are intended for diagnostic purposes, they would be considered medical products that will require clearance or approval prior to commercialization.

We do not make claims related to safety or effectiveness and they are not intended for diagnostic or clinical use. However, the quality of our products is critical to meeting customer needs, and we therefore voluntarily follow the quality standards outlined by the International Organization for Standardization for quality management systems (ISO 9001:2015) for the design, development, manufacture, and distribution of our products. Some biopharmaceutical customers desire extra requirements including quality parameters and product specifications, which are outlined in customer-specific quality agreements. These products are further processed and validated by customers for their applications. Customers qualify us as part of their quality system requirements, which can include a supplier questionnaire and on-site audits. Customers requalify us on a regular basis to ensure our quality system, processes and facilities continue to meet their needs and we are meeting requirements outlined in relevant customer agreements.

Active Pharmaceutical Ingredients (APIs) for Clinical Trials

We provide APIs to customers for use in preclinical studies through and including clinical trials. We hold a drug manufacturing license with the California Food and Drug Branch of the California Department of Public Health for manufacture of APIs for clinical use and are subject to inspection to maintain licensure. Manufacture of APIs for use in clinical trials is regulated under § 501(a)(2)(B) of the FDCA, but is not subject to the current GMP regulations in 21 CFR § 211 by operation of 21 CFR § 210. We follow the principles detailed in the International Council for Harmonisation (ICH) Q7, Good Manufacturing Practice Guide for Active Pharmaceutical Ingredients (Section 19, APIs For Use in Clinical Trials) in order to comply with the applicable requirements of the FDCA, and the comparable GMP principles for Europe; European Community, Part II, Basic Requirements for Active Substances Used as Starting Materials (Section 19, APIs For Use in Clinical Trials). APIs are provided to customers under customer contracts that outline quality standards and product specifications. As products advance through the clinical phases, requirements become more stringent and we work with customers to define and agree on requirements and risks associated with their product.

Customers' biopharmaceutical products early in their development have a high failure rate and often do not advance through the clinical stages to commercialization. Our customers are required to follow regulatory pathways that are not always known, which may cause additional unforeseen requirements placed on us as their contract manufacturer and delays in advancing to the next stage of product development. We also provide novel compounds for cell and gene therapy applications, which result in additional challenges for our customers attempting to obtain regulatory approval given that this field is relatively new and regulations are evolving. Customer clinical trials rely on approval from institutional review boards (IRBs) and patient and volunteer enrollment, which makes timelines unpredictable for advancing to the next stage in product development. Preclinical studies and clinical trials conducted by our customers are also expensive and data may be negative or inconclusive causing customers to abandon projects that were expected to continue. Regulatory requirements in both the United States and abroad are always evolving and compliance with future laws may require significant investment to ensure compliance.

Other Regulatory Requirements

Select agent and toxin. We have one product classified as a select agent and toxin. Pursuant to the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, the United States Department of Health and Human Services ("HHS") and the United States Department of Agriculture ("USDA") have established regulatory requirements for the possession, use, and transfer of biological agents and toxins that have the potential to pose a severe threat to public health and safety, animal and plant health, and the safety of animal and plant products for their intended use. These requirements can be found at 42 CFR Part 73 (HHS), 7 CFR Part 33 1 (USDA-PPQ), and 9 CFR Part 121 (USDA-VS). The possession, use and transfer of the relevant biological agent and toxin in quantities greater than 1.0 gram is governed by the regulations of 42 CFR Part 73 (HHS), Possession, Use and Transfer of Select Agents and Toxins. Vector Laboratories is registered with the CDC for these activities, is subject to inspection by the CDC and maintains an approved biosecurity plan. The regulations include specific requirements for safety (e.g. handling), security (e.g. access control, inventory control) and emergency response (e.g. addressing spills during manufacture or broken containers).

Environmental laws and regulations. We believe that our operations comply in all material respects with applicable laws and regulations concerning environmental protection. There have been no material effects upon our earnings or competitive position resulting from compliance with applicable laws or regulations enacted or adopted relating to the protection of the environment. Our capital and operating expenditures for pollution control in 2019 were not material and are not expected to be material in 2020.

Intellectual Property

Our success depends in part on our ability to obtain and maintain intellectual property protection for our products and services, defend and enforce our intellectual property rights, preserve the confidentiality of our trade secrets, and operate without infringing, misappropriating or otherwise violating valid and enforceable intellectual property rights of others. We seek to protect the investments made into the development of our products and services by relying on a combination of patents, trademarks, copyrights, trade secrets, including know-how, and license agreements. We also seek to protect our proprietary products and services, in part, by requiring our employees, consultants, contractors and other third parties to execute confidentiality agreements and invention assignment agreements.

Patents. Our intellectual property strategy is focused on protecting through patents and other intellectual property rights our core products and services, including CleanCap®, and related instrumentation and applications. In addition, we protect our ongoing research and development into critical reagents for cell and gene therapy through patents and other intellectual property rights.

As of December 31, 2019, we solely owned 18 issued U.S. patents including two patents received in December 2019 for certain of our CleanCap® products, three pending U.S. non-provisional patent applications,

29 issued foreign patents and 10 pending foreign patent applications and co-own two issued U.S. patents and one issued foreign patent with third parties, the details of which are set out in the tables below. Two of the foregoing U.S. patent applications are national stage filings of two PCT patent applications that we solely own. Our patent portfolio generally includes patents and patent applications relating to compositions and methods for the production of oligonucleotides, nucleic acids and mock viral particles. Issued U.S. patents in our portfolio of company-owned patents are expected to expire between 2021 and 2035. In addition, certain patents related to our SoluLINK products expired in 2020 and certain other patents related to such products are due to expire in 2021 and 2022.

The following patents and patent applications (including expected 20 year expiration dates) relate to our CleanCap® related products and technology.

Patent and Patent Application Numbers	Form of Ownership	Expected Expiration Date	Description
US 10,494,399, US 10,519,189, US Patent App. No. 15/761,957, and foreign applications in certain jurisdictions claiming priority to PCT/US2016/052670	Owned	Sept. 20, 2036	Directed to compositions and methods for synthesizing 5'-capped RNAs

The following patents and patent applications (including expected 20 year expiration dates and any patent term adjustment) relate to our CleanTag® Library Prep related products and technology.

Patent Numbers	Form of Ownership	Expected Expiration Date	Description
US 8,728,725	Owned	Jan. 5, 2032	Directed to compositions and methods for ligation of nucleic acids
US 9,631,227	Owned	Nov. 10, 2030	Directed to compositions and methods for ligation of nucleic acids
AU Patent No. 2010270715	Owned	July 6, 2030	Directed to compositions and methods for ligation of nucleic acids
CA Patent No. 2,767,408	Owned	July 6, 2030	Directed to compositions and methods for ligation of nucleic acids
EP Patent No. 2451980 (validated in DE, ES, FR, GB, IT)	Owned	July 6, 2030	Directed to compositions and methods for ligation of nucleic acids
ES Patent No. 2521740	Owned	July 6, 2030	Directed to compositions and methods for ligation of nucleic acids
HK Patent No. 1220234	Owned	July 6, 2030	Directed to compositions and methods for ligation of nucleic acids
JP Patent No. 5903379	Owned	July 6, 2030	Directed to compositions and methods for ligation of nucleic acids
MX Patent No. 321180	Owned	July 6, 2030	Directed to compositions and methods for ligation of nucleic acids

NZ Patent No. 597535	Owned	July 6, 2030	Directed to compositions and methods for ligation of nucleic acids

The following patents and patent applications (including expected 20 year expiration dates and any patent term adjustment) relate to our CleanAmp® related products and technology.

Patent Numbers	Form of Ownership	Expected Expiration Date	Description
US 8,133,669	Owned	May 21, 2029	Directed to compositions and methods for nucleic acid replication
AU Patent No. 2009257815	Owned	May 21, 2029	Directed to compositions and methods for nucleic acid replication
CA Patent No. 2,725,239	Owned	May 21, 2029	Directed to compositions and methods for nucleic acid replication
CN Patent No. 102105481	Owned	May 21, 2029	Directed to compositions and methods for nucleic acid replication
EP Patent No. 2294076 (validated in DE, ES, FR, GB, IT)	Owned	May 21, 2029	Directed to compositions and methods for nucleic acid replication
ES Patent No. 2625938	Owned	May 21, 2029	Directed to compositions and methods for nucleic acid replication
GB Patent No. 2473778	Owned	May 21, 2029	Directed to compositions and methods for nucleic acid replication
HK Patent No. 1155456	Owned	May 21, 2029	Directed to compositions and methods for nucleic acid replication
IN Patent No. 318293	Owned	May 21, 2029	Directed to compositions and methods for nucleic acid replication
JP Patent No. 5712125	Owned	May 21, 2029	Directed to compositions and methods for nucleic acid replication
US 8,361,753	Owned	October 21, 2029	Directed to compositions and methods for nucleic acid amplification
AU Patent No. 2007268075	Owned	May 17, 2027	Directed to compositions and methods for nucleic acid amplification
CA Patent No. 2,653,841	Owned	May 17, 2027	Directed to compositions and methods for nucleic acid amplification
CN Patent No. 101517091	Owned	May 17, 2027	Directed to compositions and methods for nucleic acid amplification
DE Patent No. 602007013223	Owned	May 17, 2027	Directed to compositions and methods for nucleic acid amplification

EP Patent No. 2032714 (validated in DE, ES, FR, GB, IT)	Owned	May 17, 2027	Directed to compositions and methods for nucleic acid amplification
ES Patent No. 2360738	Owned	May 17, 2027	Directed to compositions and methods for nucleic acid amplification
HK Patent No. 1129045	Owned	May 17, 2027	Directed to compositions and methods for nucleic acid amplification
JP Patent No. 5558811	Owned	May 17, 2027	Directed to compositions and methods for nucleic acid amplification

The following patent (including expected 20 year expiration dates and any patent term adjustment) relates to our decanoic acid diester linker-related technology.

Patent Numbers	Form of Ownership	Expected Expiration Date	Description
US 6,320,041	Owned	April 13, 2021	Directed to compositions used for chemical joining molecules to oligonucleotide

The following patents and patent applications (including expected 20 year expiration dates and any patent term adjustment) relate to our SoluLINK® related products and technology.

Patent Numbers	Form of Ownership	Expected Expiration Date	Description
US 6,686,461	Owned	Feb. 28, 2021	Directed to methods and compositions for preparation, detection and immobilization of macromolecules including oligonucleotides
US 7,173,125	Owned	Jan. 29, 2022	Directed to methods and compositions for preparation, detection and immobilization of macromolecules including oligonucleotides
US 7,999,098	Owned	Jan. 29, 2022	Directed to methods and compositions for preparation, detection and immobilization of macromolecules including oligonucleotides
US 6,800,728	Owned	June 28, 2021	Directed to methods and compositions for crosslinking and immobilizing biomolecules, drugs and synthetic polymers

US 7,462,689	Owned	July 15, 2021	Directed to methods and compositions for crosslinking and immobilizing biomolecules, drugs and synthetic polymers
US 7,732,628	Owned	Sept. 6, 2023	Directed to methods and compositions for immobilizing biomolecules, drugs and synthetic polymers
US 7,102,024	Owned	Sept. 6, 2023	Directed to methods and compositions for immobilizing biomolecules
US 6,911,535	Owned	Mar. 31, 2022	Directed to methods for immobilizing biomolecules
US 8,541,555	Owned	April 8, 2031	Directed to methods and compounds used to label biomolecules
US 8,846,875	Owned	Feb. 11, 2031	Directed to methods, systems, and kits for preparing, purifying, and isolating oligonucleotide conjugates
EP Patent No. 1315699 (validated in FR, DE, GB)	Owned	Mar. 22, 2021	Directed to methods and compositions for crosslinking and immobilizing biomolecules, drugs and synthetic polymers
EP Patent No. 2295407 (validated in FR, DE, GB)	Owned	Mar. 22, 2021	Directed to methods and compositions for crosslinking and immobilizing biomolecules, drugs and synthetic polymers
EP Patent No. 2298736 (validated in FR, DE, GB)	Owned	Mar. 22, 2021	Directed to methods and compositions for crosslinking and immobilizing biomolecules, drugs and synthetic polymers

The following patents and patent applications (including expected 20 year expiration dates) relate to our immunofluorescence assay related products and technology.

Patent Application Numbers	Form of Ownership	Expected Expiration Date	Description
US Patent App. No. 15/970,100, and foreign applications in certain jurisdictions claiming priority to PCT/US2018/030799	Owned	May 3, 2038	Directed to kits and methods related to immunofluorescence assays
US Patent App. No. 16/195,208, and foreign applications in certain jurisdictions claiming priority to PCT/US2018/061807	Owned	Nov. 19, 2038	Directed to systems and methods for immunoassay detection

The following patents and patent applications (including expected 20 year expiration dates) relate to our immunofluorescence assay related products and technology.

Patent Numbers	Form of Ownership	Expected Expiration Date	Description
US 6,770,754	Owned	Nov. 29, 2021	Directed to compositions and methods related to oligonucleotide synthesis
US 7,491,817	Owned	Nov. 29, 2021	Directed to compositions and methods related to oligonucleotide synthesis
EP Patent No. 1404695 (validated in BE, CH, DE, FR, GB)	Owned	Nov. 29, 2021	Directed to compositions and methods related to oligonucleotide synthesis
EP Patent No. 2248820 (validated in BE, CH, DE, FR, GB)	Owned	Nov. 29, 2021	Directed to compositions and methods related to oligonucleotide synthesis

Patent Numbers	Form of Ownership	Expected Expiration Date	Description
US 8,394,948	Co-owned with Nelson Biotechnologies	Sept. 28, 2030	Directed to compositions and methods related to oligonucleotide synthesis

Patent Numbers	Form of Ownership	Expected Expiration Date	Description
US 7,144,995	Co-owned with Berry & Associates	June 1, 2024	Directed to compositions and methods related to fluorescent nitrogenous bases
EP Patent No. 1483280 (validated in CH, DE, FR, GB)	Co-owned with Berry & Associates	Mar. 6, 2023	Directed to compositions and methods related to fluorescent nitrogenous bases

PCT patent applications are not eligible to become an issued patent until, among other things, we file one or more national stage patent applications within, depending on the country, 30 to 32 months of the PCT application's priority date in the countries in which we seek patent protection. Moreover, we may own

provisional patent applications in the future, and provisional patent applications are not eligible to become issued patents until, among other things, we file a non-provisional patent application within 12 months of filing of one or more of related provisional patent applications. If we do not timely file any national stage patent applications or non-provisional patent applications, we may lose our priority date with respect to our PCT patent applications or provisional patent applications and any patent protection on the inventions disclosed in such patent applications. While we intend to timely file national stage patent applications relating to our PCT patent applications and non-provisional patent applications relating to our provisional patent applications, we cannot predict whether any such patent applications will result in the issuance of patents that provide us with any competitive advantage.

Individual issued patents extend for varying periods depending on the date of filing of the patent application or the date of patent issuance and the legal term of patents in the countries in which they are obtained. Generally, utility patents issued for applications filed in the United States are granted a term of 20 years from the earliest effective filing date of a non-provisional patent application. The duration of foreign patents varies in accordance with provisions of applicable local law, but typically is also 20 years from the earliest effective filing date. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

Trademarks. Our trademark portfolio is designed to protect the brands of our current and future products and includes U.S. trademark registrations for our company name, Maravai, and various product names, such as CleanCap®.

Trade Secrets. We also rely on trade secrets, including know-how, unpatented technology and other proprietary information, to strengthen our competitive position. We have determined that certain technologies, such as the production of antibodies for biologics safety testing, are better kept as trade secrets, rather than pursuing patent protection. To prevent disclosure of trade secrets to others, it is our policy to enter into nondisclosure, invention assignment and confidentiality agreements with parties who have access to trade secrets, such as our employees, collaborators, outside scientific collaborators, consultants, advisors and other third parties. These agreements also provide that all inventions resulting from work performed for us or relating to our business and conceived or completed during the period of employment or assignment, as applicable, are our exclusive property. In addition, we take other appropriate precautions, such as physical and technological security measures, to guard against misappropriation of our proprietary information by third parties.

We intend to pursue additional intellectual property protection to the extent we believe it would advance our business objectives. Notwithstanding these efforts, there can be no assurance that we will adequately protect our intellectual property or provide any competitive advantage. We cannot provide any assurance that any patents will be issued from our pending or any future patent applications or that any issued patents will adequately protect our products or technology. Our intellectual property rights may be invalidated, held unenforceable, circumvented, narrowed or challenged. In addition, the laws of various foreign countries where our products are distributed may not protect our intellectual property rights to the same extent as laws in the United States. Furthermore, it may be difficult to protect our trade secrets. While we have confidence in the measures we take to protect and preserve our trade secrets, they may be inadequate and can be breached, and we may not have adequate remedies for violations of such measures. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. Moreover, our invention assignment agreements with employees, collaborators, outside scientific collaborators, consultants, advisors and other third parties may not be self-executing or otherwise provide meaningful protection for our intellectual property rights. If we do not adequately protect our intellectual property, third parties, including our competitors, may be able to use our technologies to produce and market products that compete with us and erode our competitive advantage. For more information regarding risks related to intellectual property, please see “Risk Factors —Risks Related to our Intellectual Property.”

Facilities

Our corporate headquarters are in San Diego, California, where we occupy approximately 119,000 square feet of leased space. We completed construction of the facility in 2020. In addition to housing our headquarters, the facility serves as the principal hub of operations for our nucleic acid production business and was purpose built to expand the capacity of this business segment while adding specialized capabilities in the form of clean rooms, air handling, waste and solvent handling, and GMP capabilities.

Our other facilities are in Burlingame, California, Southport, North Carolina and Sterling, Virginia. Across all of our facilities we have approximately 140,000 square feet of lab and production space. All facilities are leased. Our facility in Burlingame is subject to a lease that terminates in June 2022, at which time we intend to relocate the operations. A summary of our facilities is listed below.

We own a 3,000 square foot facility in Peterborough, United Kingdom, which previously housed our local sales office. The building is being marketed for sale.

Location	Approx. Square Footage	Products Produced	Lease Term
San Diego, CA	119,000	TriLink BioTechnologies branded reagents	May 2030
Burlingame, CA	65,000	Vector Laboratories branded reagents	June 2022
Southport, NC	20,000	Cygnus Technologies branded reagents	July 2027
Sterling, VA	21,000	Glen Research branded reagents	April 2025

Employees

As of August 31, 2020, we had 382 full-time employees. Among our employees, 43% identify as female and 57% identify as male. None of our employees is represented by a labor union, and none of our employees has entered into a collective bargaining agreement with us. We offer a highly competitive compensation and benefits program to attract and retain top talent.

Our talented employees drive our mission and share core values that both stem from and define our culture, which plays an invaluable role in our execution at all levels in our organization. Our culture is based on these shared core values which we believe contribute to our success and the continued growth of the organization. Our core values are used in candidate screening and in employee evaluations to help reinforce their importance in our organization:

- *Adaptability*. We stay agile, ready to shift or change our approach when challenges arise and open to new ideas and responsibilities.
- *Open Communication*. We focus on open source sharing with our focus on constant improvement as individuals and as an organization.
- *Quality Mindset*. We strive to eliminate errors with accurate work as a priority and seek opportunities to improve products/services.
- *Work Together*. We are accountable to our team and work to meet established deliverables with respect and appreciation of others' views.
- *Workplace Awareness.* We promote a safe and healthy work environment.
- *Reward.* We celebrate and recognize accomplishments, both individual and collectively.

Legal Proceedings

From time to time, we may be involved in various legal proceedings and subject to claims that arise in the ordinary course of business. Although the results of litigation and claims are inherently unpredictable and uncertain, we are not currently a party to any legal proceedings the outcome of which, if determined adversely to

us, are believed to, either individually or taken together, have a material adverse effect on our business, operating results, cash flows or financial condition. Regardless of the outcome, litigation has the potential to have an adverse impact on us because of defense and settlement costs, diversion of management resources, and other factors. See “Risk Factors—Risks Related to Our Intellectual Property—Intellectual property litigation and other proceedings could cause us to spend substantial resources and distract our personnel from their normal responsibilities” and “Risk Factors—Risks Related to Our Intellectual Property—If we are sued for infringing, misappropriating, or otherwise violating intellectual property rights of third parties, such litigation could be costly and time consuming and could prevent or delay us from developing or commercializing our current or future products.”

ORGANIZATIONAL STRUCTURE

Overview

Maravai LifeSciences Holdings, Inc. is a Delaware corporation formed to serve as a holding company that will hold an interest in Topco LLC. Maravai LifeSciences Holdings, Inc. has not engaged in any business or other activities other than in connection with its formation and this offering. Upon consummation of this offering and the application of the net proceeds therefrom, we will be a holding company, our sole asset will be an equity interest in Topco LLC and we will operate and control all of the business and affairs and consolidate the financial results of Topco LLC. Prior to the closing of this offering, the operating agreement of Topco LLC will be amended and restated to, among other things, modify its capital structure by replacing the membership interests currently held by Topco LLC's existing owner, MLSH 1, with a new class of LLC Units. We and MLSH 1 will also enter into an Exchange Agreement under which MLSH 1 (and certain permitted transferees thereof) may (subject to the terms of the Exchange Agreement) exchange its LLC Units for shares of our Class A common stock on a one-for-one basis, or, at our election, for cash, from a substantially concurrent public offering or private sale (based on the price of our Class A common stock in such public offering or private sale). MLSH 1 will also be required to deliver to us an equivalent number of shares of Class B common stock to effectuate an exchange. Any shares of Class B common stock so delivered will be cancelled. As MLSH 1 exchanges its LLC Units, our interest in Topco LLC will be correspondingly increased.

Upon completion of this offering, GTCR will control the voting power in Maravai LifeSciences Holdings, Inc. as follows: (i) approximately % (or approximately % if the underwriters exercise their option to purchase additional shares in full) through its control of MLSH 1 and (ii) approximately % through its control of MLSH 2.

Incorporation of Maravai LifeSciences Holdings, Inc.

Maravai LifeSciences Holdings, Inc. was incorporated in Delaware on August 25, 2020, and has not engaged in any business or other activities except in connection with its formation and the offering. Our certificate of incorporation will be amended and restated at or prior to the consummation of this offering. Our amended and restated certificate of incorporation will authorize two classes of common stock, Class A common stock and Class B common stock, each having the terms described in "Description of Capital Stock." In addition, our amended and restated certificate of incorporation will authorize shares of undesignated preferred stock, the rights, preferences and privileges of which may be designated from time to time by our Board.

Shares of our Class B common stock, which provide no economic rights, will be distributed to MLSH 1 in connection with this offering. Each share of our Class B common stock entitles its holder to one vote on all matters to be voted on by shareholders generally. See "Description of Capital Stock—Class B Common Stock." Holders of our Class A common stock and Class B common stock vote together as a single class on all matters presented to our shareholders for their vote or approval, except as otherwise required by applicable law.

Organizational Transactions

The following transactions, referred to collectively herein as the "Organizational Transactions," will each be completed prior to or in connection with the completion of this offering.

Immediately prior to the effectiveness of this Registration Statement, we will take the following actions:

- We will amend and restate the LLC Operating Agreement of Topco LLC to, among other things (i) modify its capital structure by replacing the membership interests currently held by Topco LLC's existing owners (beneficially owned through MLSH 1) with a new class of LLC Units held initially by MLSH 1 and Maravai LifeSciences Holdings, Inc. and (ii) appoint Maravai LifeSciences Holdings, Inc. as the sole managing member of Topco LLC.

- The Blocker Entities through which GTCR and Newstone hold a portion of their ownership interests in MLSH 1 will engage in a series of transactions that will result in each of these entities merging with and into Maravai LifeSciences Holdings, Inc., with Maravai LifeSciences Holdings, Inc. remaining as the surviving corporation. As a result of such transactions, MLSH 2 will exchange all of the equity interests in the Blocker Entities for shares of Maravai LifeSciences Holdings, Inc. Class A common stock.
- We will amend and restate the certificate of incorporation of Maravai LifeSciences Holdings, Inc. to, among other things, provide for Class A common stock and Class B common stock. See "Description of Capital Stock."
- We will issue shares of Class B common stock to MLSH 1, on a one-to-one basis with the number of LLC Units it owns, for nominal consideration.
- We expect to award options to purchase an aggregate of shares of Class A common stock with an exercise price set at the initial public offering price issued pursuant to the 2020 Plan.
- We will enter into the Exchange Agreement with MLSH 1 pursuant to which MLSH 1 will be entitled to exchange LLC Units, together with an equal number of shares of Class B common stock, for shares of Class A common stock on a one-for-one basis or, at our election, for cash, from a substantially concurrent public offering or private sale (based on the price of our Class A common stock in such public offering or private sale). See "—Exchange Agreement."
- We will enter into the Tax Receivable Agreement with MLSH 1 and MLSH 2 that will provide for the payment by Maravai LifeSciences Holdings, Inc. to MLSH 1 and MLSH 2, collectively, of 85% of the amount of cash savings, if any, in U.S. federal, state and local income taxes (computed using simplifying assumptions to address the impact of state and local taxes) we actually realize (or under certain circumstances are deemed to realize in the case of an early termination payment by us, a change in control or a material breach by us of our obligations under the Tax Receivable Agreement, as discussed below) as a result of (i) certain increases in the tax basis of assets of Topco LLC and its subsidiaries resulting from purchases or exchanges of LLC Units, (ii) certain tax attributes of the Blocker Entities, Topco LLC and subsidiaries of Topco LLC that existed prior to this offering and (iii) certain other tax benefits related to our entering into the Tax Receivable Agreement, including tax benefits attributable to payments that we make under the Tax Receivable Agreement. See "—Tax Receivable Agreement."

In connection with the completion of this offering, we will issue shares of our Class A common stock to the investors in this offering (or shares if the underwriters exercise their option to purchase additional shares in full) in exchange for net proceeds of approximately $ million (or approximately $ million if the underwriters exercise their option to purchase additional shares in full), after deducting underwriting discounts and commissions but before estimated offering expense payable by us.

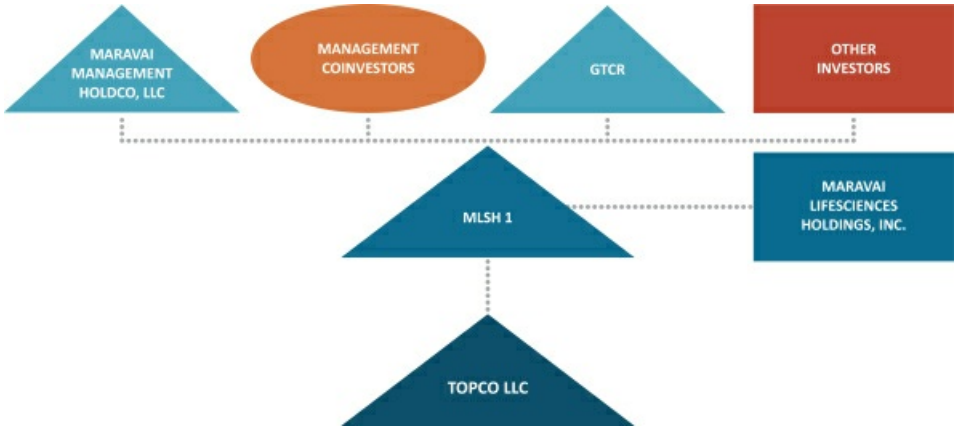
Immediately following the completion of this offering, we will take the following actions:

- We will use approximately $ million of the net proceeds of this offering to (i) acquire newly-issued LLC Units in Topco LLC and approximately $ million of the net proceeds of this offering to acquire outstanding LLC Units in Topco LLC from MLSH 1, in each case at a purchase price per LLC Unit equal to the initial offering price per share of Class A common stock in this offering, less underwriting discounts and commissions and (ii) pay $ million to MLSH 2 as consideration for the Blocker Mergers.
- Topco LLC will apply the proceeds it receives from us (including any additional proceeds it may receive from us if the underwriters exercise their option to purchase additional shares) to pay expenses incurred in connection with this offering and the Organizational Transactions and for general corporate purposes. Topco LLC will bear or reimburse us for all of the expenses of this offering, including the underwriters' discounts and commissions. See "Use of Proceeds."

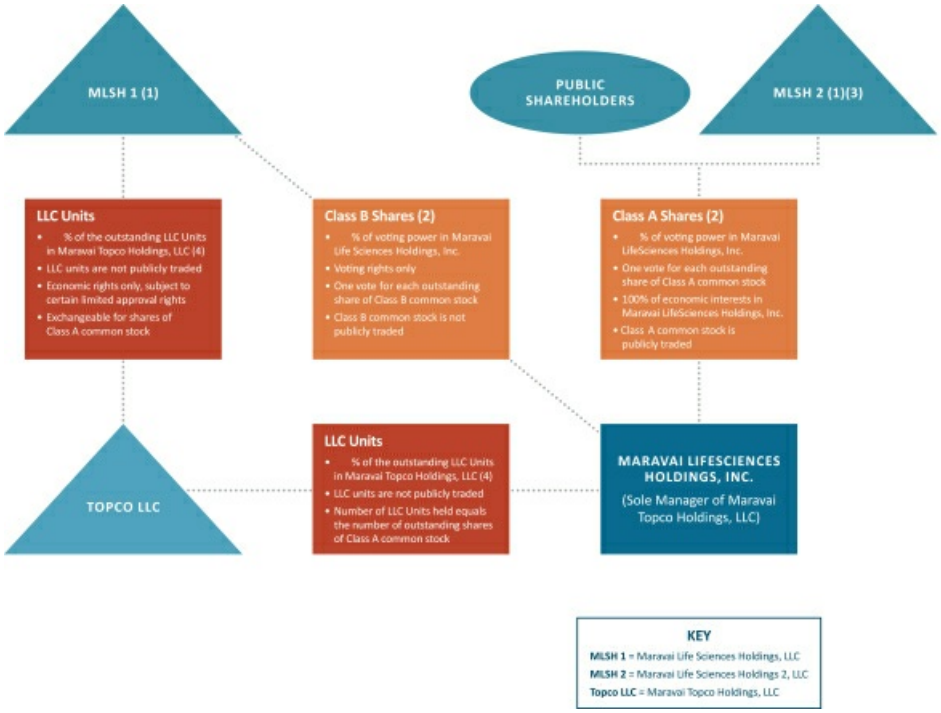
As a result of the Organizational Transactions:

- the investors in this offering will collectively own shares of our Class A common stock and we will hold LLC Units;
- MLSH 1 will own LLC Units and shares of Class B common stock;
- our Class A common stock will collectively represent approximately % of the voting power in us; and
- our Class B common stock will collectively represent approximately % of the voting power in us.

The diagram below depicts our historical organizational structure prior to the completion of the Organizational Transactions. This diagram is provided for illustrative purposes only and does not purport to represent all legal entities owned or controlled by us, or owning a beneficial interest in us.



The diagram below depicts our expected organizational structure immediately following completion of the Organizational Transactions. This diagram is provided for illustrative purposes only and does not purport to represent all legal entities owned or controlled by us, or owning a beneficial interest in us.



(1) Upon completion of this offering, GTCR will control the voting power in Maravai LifeSciences Holdings, Inc. as follows: (i) approximately % (or approximately % if the underwriters exercise their option to purchase additional shares in full) through its control of MLSH 1 and (ii) approximately % through its control of MLSH 2. See "Principal Shareholders" for additional information about MLSH 1 and MLSH 2.

(2) Shares of Class A common stock and Class B common stock will vote as a single class. Each outstanding share of Class A common stock and Class B Common stock will be entitled to one vote on all matters to be voted on by shareholders generally. The shares of Class B common stock have no economic rights. In accordance with the Exchange Agreement to be entered into in connection with the Organizational Transactions, MLSH 1 will be entitled to exchange LLC Units, together with an equal number of shares of Class B common stock, for shares of Class A common stock determined in accordance with the Exchange Agreement or, at our election, for cash from a substantially concurrent public offering or private sale (based on the price of our Class A common stock in such public offering or private sale).

(3) Upon completion of this offering, we expect to award options to purchase an aggregate of shares of Class A common stock with an exercise price set at the initial public offering price issued pursuant to the 2020 Plan.

(4) Assumes no exercise of the underwriters' option to purchase additional shares. If the underwriters exercise their option to purchase additional shares in full, (i) the holders of Class A common stock will have % of the voting power in Maravai LifeSciences Holdings, Inc., (ii) MLSH 1, through ownership of the Class B common stock, will have % of the voting power of Maravai LifeSciences Holdings, Inc., (iii) MLSH 1

will own % of the outstanding LLC Units in Topco LLC and (iv) Maravai LifeSciences Holdings, Inc. will own % of the outstanding LLC Units in Topco LLC.

Following the consummation of the Organizational Transactions, Maravai LifeSciences Holdings, Inc. will be a holding company and its sole asset will be its direct equity interest in Topco LLC. Maravai LifeSciences Holdings, Inc. will operate and control all of the business and affairs of Topco LLC and its subsidiaries. Accordingly, although Maravai LifeSciences Holdings, Inc. will initially own a minority economic interest in Topco LLC following the consummation of this offering, Maravai LifeSciences Holdings, Inc. will have 100% of the voting power and will control management of Topco LLC, subject to certain exceptions. The financial results of Topco LLC and its consolidated subsidiaries will be consolidated in our financial statements.

Our post-offering organizational structure will allow MLSH 1 to retain its equity ownership in Topco LLC, an entity that is classified as a partnership for United States federal income tax purposes, in the form of LLC Units. Investors in this offering will, by contrast, hold their equity ownership in Maravai LifeSciences Holdings, Inc., a Delaware corporation that is a domestic corporation for United States federal income tax purposes, in the form of shares of Class A common stock. We believe that MLSH 1 generally will find it advantageous to hold its equity interests in an entity that is not taxable as a corporation for United States federal income tax purposes. The LLC Unitholders, like Maravai LifeSciences Holdings, Inc., will be allocated their proportionate share of any taxable income of Topco LLC.

MLSH 1 will also hold shares of our Class B common stock. Although these shares of Class B common stock have only voting and no economic rights, they will allow MLSH 1 to exercise voting power over Maravai LifeSciences Holdings, Inc., the sole managing member of Topco LLC, at a level that is greater than their overall equity ownership of our business. Class B common stock is entitled to one vote per share. When MLSH 1 exchanges LLC Units for shares of our Class A common stock or, at our election, for cash from a substantially concurrent public offering or private sale (based on the price of our Class A common stock in such public offering or private sale), pursuant to the Exchange Agreement described below, it will also be required to deliver an equivalent number of shares of Class B common stock. Any shares of Class B common stock so delivered will be cancelled.

Amended and Restated Operating Agreement of Topco LLC

In connection with the completion of this offering, we will amend and restate Topco LLC's existing operating agreement, which we refer to as the "LLC Operating Agreement." The operations of Topco LLC, and the rights and obligations of the LLC Unitholders, will be set forth in the LLC Operating Agreement. The LLC Operating Agreement will be filed as an exhibit to the registration statement of which this prospectus forms a part.

Sole Manager

In connection with this offering, we will become a member and the sole managing member of Topco LLC. As the sole managing member, we will be able to control all of the day-to-day business affairs and decision-making of Topco LLC without the approval of any other member, unless otherwise stated in the LLC Operating Agreement. As such, through our officers and directors, we will be responsible for all operational and administrative decisions of Topco LLC and the day-to-day management of Topco LLC's business. Pursuant to the LLC Operating Agreement, we cannot be removed, under any circumstances, as the sole managing member of Topco LLC except by our election.

Compensation

We will not be entitled to compensation for our services as managing member. We will be entitled to reimbursement by Topco LLC for fees and expenses incurred on behalf of Topco LLC, including all expenses associated with this offering and maintaining our corporate existence.

Recapitalization

The LLC Operating Agreement recapitalizes the interests currently held by the existing owner of Topco LLC, MLSH 1, into a new single class of common membership units, which we refer to as the "LLC Units." The LLC Operating Agreement will also reflect a split of LLC Units such that one LLC Unit can be acquired with the net proceeds received in the initial offering from the sale of one share of our Class A common stock. Each LLC Unit will entitle the holder to a pro rata share of the net profits and net losses and distributions of Topco LLC. Holders of LLC Units will have no voting rights, except as expressly provided in the LLC Operating Agreement.

Distributions

The LLC Operating Agreement will require "tax distributions," as that term is defined in the LLC Operating Agreement, to be made by Topco LLC to its "members," as that term is defined in the LLC Operating Agreement. Tax distributions generally will be made quarterly to each member of Topco LLC, including us, on a pro rata basis among the LLC Unitholders based on Topco LLC's net taxable income and without regard to any applicable basis adjustment under Section 743(b) of the Code and at a tax rate that will be determined by us. The tax rate used to determine tax distributions will apply regardless of the actual final tax liability of any such member. Tax distributions will also be made only to the extent all distributions from Topco LLC for the relevant period were otherwise insufficient to enable each member to cover its tax liabilities as calculated in the manner described above. We expect Topco LLC may make distributions out of distributable cash periodically to the extent permitted by agreements governing indebtedness of Topco LLC and necessary to enable Topco LLC to cover its operating expenses and other obligations, including our tax liability and obligations under the Tax Receivable Agreement, as well as to make dividend payments, if any, to the holders of our Class A common stock.

Exchange Rights

The LLC Operating Agreement provides that MLSH 1 (and certain permitted transferees thereof) may, pursuant to the terms of the Exchange Agreement described below, exchange its LLC Units for shares of our Class A common stock on a one-for-one basis, or, at our election, for cash, from a substantially concurrent public offering or private sale (based on the price of our Class A common stock in such public offering or private sale). MLSH 1 will also be required to deliver to us an equivalent number of shares of Class B common stock to effectuate an exchange. As a holder surrenders or exchanges its LLC Units, our interest in Topco LLC will be correspondingly increased. See "—Exchange Agreement."

Issuance of LLC Units Upon Exercise of Options or Issuance of Other Equity Compensation

Upon the exercise of options issued by us, or the issuance of other types of equity compensation by us (such as the issuance of restricted or non-restricted stock, payment of bonuses in stock or settlement of stock appreciation rights in stock), we will be required to acquire from Topco LLC a number of LLC Units equal to the number of shares of Class A common stock being issued in connection with the exercise of such options or issuance of other types of equity compensation. When we issue shares of Class A common stock in settlement of stock options granted to persons that are not officers or employees of Topco LLC or its subsidiaries, we will make, or be deemed to make, a capital contribution to Topco LLC equal to the aggregate value of such shares of Class A common stock, and Topco LLC will issue to us a number of LLC Units equal to the number of shares of Class A common stock we issued. When we issue shares of Class A common stock in settlement of stock options granted to persons that are officers or employees of Topco LLC or its subsidiaries, we will be deemed to have sold directly to the person exercising such award a portion of the value of each share of Class A common stock equal to the exercise price per share, and we will be deemed to have sold directly to Topco LLC (or the applicable subsidiary of Topco LLC) the difference between the exercise price and market price per share for each such share of Class A common stock. In cases where we grant other types of equity compensation to employees of Topco LLC or its subsidiaries, on each applicable vesting date we will be deemed to have sold to

Topco LLC (or such subsidiary) the number of vested shares of Class A common stock at a price equal to the market price per share, Topco LLC (or such subsidiary) will deliver the shares to the applicable person, and we will be deemed to have made a capital contribution in Topco LLC equal to the purchase price for such shares in exchange for an equal number of LLC Units.

Maintenance of One-to-One Ratio of Shares of Class A Common Stock and LLC Units Owned by Maravai LifeSciences Holdings, Inc.

Our amended and restated certificate of incorporation and the LLC Operating Agreement will require that (1) we at all times maintain a ratio of one LLC Unit owned by us for each share of Class A common stock issued by us (subject to certain exceptions for treasury shares and shares underlying certain convertible or exchangeable securities), and (2) Topco LLC at all times maintains a one-to-one ratio between the number of shares of Class A common stock issued by us and the number of LLC Units owned by us.

Transfer Restrictions

The LLC Operating Agreement generally does not permit transfers of LLC Units by members, subject to limited exceptions. Any transferee of LLC Units must assume, by operation of law or written agreement, all of the obligations of a transferring member with respect to the transferred units, even if the transferee is not admitted as a member of Topco LLC.

Dissolution

The LLC Operating Agreement will provide that the unanimous consent of all members holding voting units will be required to voluntarily dissolve Topco LLC. In addition to a voluntary dissolution, Topco LLC will be dissolved upon a change of control transaction under certain circumstances, as well as upon the entry of a decree of judicial dissolution or other circumstances in accordance with Delaware law. Upon a dissolution event, the proceeds of a liquidation will be distributed in the following order: (1) first, to pay the expenses of winding up Topco LLC; (2) second, to pay debts and liabilities owed to creditors of Topco LLC, other than members; (3) third, to pay debts and liabilities owed to members; and (4) fourth, to the members pro rata in accordance with their respective percentage ownership interests in Topco LLC (as determined based on the number of LLC Units held by a member relative to the aggregate number of all outstanding LLC Units).

Confidentiality

Each member will agree to maintain the confidentiality of Topco LLC's confidential information. This obligation excludes information independently obtained or developed by the members, information that is in the public domain or otherwise disclosed to a member, in either such case not in violation of a confidentiality obligation or disclosures required by law or judicial process or approved by our chief executive officer.

Indemnification and Exculpation

The LLC Operating Agreement provides for indemnification of the manager, members and officers of Topco LLC and their respective subsidiaries or affiliates. To the extent permitted by applicable law, Topco LLC will indemnify us, as its managing member, its authorized officers, its other employees and agents from and against any losses, liabilities, damages, costs, expenses, fees or penalties incurred by any acts or omissions of these persons, provided that the acts or omissions of these indemnified persons are not the result of fraud, intentional misconduct or a violation of the implied contractual duty of good faith and fair dealing, or any lesser standard of conduct permitted under applicable law.

We, as the managing member, and the authorized officers and other employees and agents of Topco LLC will not be liable to Topco LLC, its members or their affiliates for damages incurred by any acts or omissions of

these persons, provided that the acts or omissions of these exculpated persons are not the result of fraud, or intentional misconduct.

Amendments

The LLC Operating Agreement may be amended with the consent of the holders of a majority in voting power of the outstanding LLC Units. Notwithstanding the foregoing, no amendment to any of the provisions that expressly require the approval or action of certain members may be made without the consent of such members and no amendment to the provisions governing the authority and actions of the managing member or the dissolution of Topco LLC may be amended without the consent of the managing member.

Tax Receivable Agreement

The purchase of LLC Units by us in connection with this offering is expected to result in the acquisition by us of a proportionate share of the existing tax basis of the assets of Topco LLC and its flow-through subsidiaries. Topco LLC (and each of its subsidiaries classified as a partnership for U.S. federal income tax purposes) intends to have in place for its taxable year in which this offering and the associated purchase of LLC Units occurs an election under Section 754 of the U.S. Internal Revenue Code of 1986, as amended (the "Code"). Accordingly, such purchase of LLC Units by us is expected to result in an adjustment in the tax basis of the assets of Topco LLC and its flow-through subsidiaries reflected in the proportionate share of such assets treated as acquired by us.

In addition, MLSH 1 may from time to time (subject to the terms of the Exchange Agreement) exercise a right to exchange LLC Units for shares of our Class A common stock on a one-for-one basis, or, at our election, for cash from a substantially concurrent public offering or private sale (based on the price of our Class A common stock in such public offering or private sale). We intend to treat such acquisitions of LLC Units as direct purchases of LLC Units from MLSH 1 for U.S. federal income and other applicable tax purposes, regardless of whether such LLC Units are surrendered by MLSH 1 to Topco LLC for redemption or sold to us upon the exercise of our election to acquire such LLC Units directly. Topco LLC (and each of its subsidiaries classified as a partnership for U.S. federal income tax purposes) intends to have in place an election under Section 754 of the Code effective for each taxable year in which an exchange of LLC Units for Class A common stock or cash occurs. As a result, an exchange of LLC Units is expected to result in (1) an increase in our proportionate share of the existing tax basis of the assets of Topco LLC and its flow-through subsidiaries and (2) an adjustment in the tax basis of the assets of Topco LLC and its flow-through subsidiaries reflected in that proportionate share ("Basis Adjustments").

Any increases in our share of tax basis as a result of the purchase of LLC Units or LLC Unit exchanges will generally have the effect of reducing the amounts that we would otherwise be obligated to pay thereafter to various tax authorities. Such basis increases may also decrease gains (or increase losses) on future dispositions of certain assets to the extent tax basis is allocated to those assets.

As a result of the mergers of the Blocker Mergers, we will succeed to the federal net operating losses ("NOL") and certain other existing tax attributes of the Blocker Entities. Subject to certain limitations, such NOLs and other attributes may be available to offset our taxable income in future years (and in certain circumstances, taxable income from prior years) in the manner described below.

An NOL occurs when a taxpayer's tax deductions exceed its taxable income within a given tax year. An NOL can be carried forward over future tax years and used to offset taxable income incurred in such future tax year. The 2017 tax reform legislation known as the Tax Cuts and Jobs Act of 2017 lifted the previous 20-year limitation on NOL carryforwards (allowing NOLs to be carried forward indefinitely), but limited NOLs to 80% of taxable income in any one tax period. Notably, among other changes, the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") has temporarily removed this 80% limit for taxable years beginning

before 2021 to allow an NOL carryforward to fully offset a taxpayer's income, and additionally, to allow NOLs incurred in 2018, 2019, and 2020 to be carried back to offset taxable income up to five years prior to the taxable year in which the NOL was generated.

We intend to enter into a Tax Receivable Agreement with MLSH 1 and MLSH 2. The Tax Receivable Agreement provides for the payment by us to MLSH 1 and MLSH 2, collectively, of 85% of the amount of tax benefits, if any, that we actually realize, or in some circumstances are deemed to realize, as a result of (i) certain increases in the tax basis of assets of Topco LLC and its subsidiaries resulting from purchases or exchanges of LLC Units, (ii) certain tax attributes of the Blocker Entities, Topco LLC and subsidiaries of Topco LLC that existed prior to this offering and (iii) certain other tax benefits related to our entering into the Tax Receivable Agreement, including tax benefits attributable to payments that we make under the Tax Receivable Agreement (collectively, the "Tax Attributes"). The payment obligations under the Tax Receivable Agreement are not conditioned upon any LLC Unitholder maintaining a continued ownership interest in us or Topco LLC and the rights of MLSH 1 under the Tax Receivable Agreement are assignable. We expect to benefit from the remaining 15% of the tax benefits, if any, that we may actually realize.

For purposes of the Tax Receivable Agreement, the tax benefit deemed realized by us will generally be computed by comparing our actual cash income tax liability to the amount of such taxes that we would have been required to pay had there been no Tax Attributes; provided that, for purposes of determining the tax benefit with respect to state and local income taxes, we will use simplifying assumptions. The Tax Receivable Agreement will generally apply to each of our taxable years, beginning with the taxable year that the Tax Receivable Agreement is entered into. There is no maximum term for the Tax Receivable Agreement and the Tax Receivable Agreement will continue until all such tax benefits have been utilized or expired unless we exercise our right to terminate the Tax Receivable Agreement for an agreed-upon amount equal to the estimated present value of the remaining payments to be made under the agreement (calculated with certain assumptions, including as to utilization of the Tax Attributes).

The actual Tax Attributes, as well as any amounts paid to MLSH 1 and MLSH 2 under the Tax Receivable Agreement, will vary depending on a number of factors, including:

- *the timing of any future exchanges*—for instance, the increase in any tax deductions will vary depending on the fair value, which may fluctuate over time, of the depreciable or amortizable assets of Topco LLC and its flow-through subsidiaries at the time of each exchange;
- *the price of shares of our Class A common stock at the time of any future exchanges*—the Basis Adjustments are directly related to the price of shares of our Class A common stock at the time of future exchanges;
- *the extent to which such exchanges are taxable*—if an exchange is not taxable for any reason, increased tax deductions as a result of the Section 754 election mentioned above will not be available to generate payments under the Tax Receivable Agreement;
- *the amount and timing of our income*—the Tax Receivable Agreement generally will require us to pay 85% of the tax benefits as and when those benefits are treated as realized by us under the terms of the Tax Receivable Agreement. If we do not have taxable income in a particular taxable year, we generally will not be required (absent a change of control or other circumstances requiring an early termination payment) to make payments under the Tax Receivable Agreement for that taxable year because no tax benefits will have been actually realized. Nevertheless, any tax benefits that do not result in realized tax benefits in a given taxable year will likely generate tax attributes that may be utilized to generate tax benefits in future (and possibly previous) taxable years. The utilization of any such tax attributes will result in payments under the Tax Receivable Agreement; and
- *applicable tax rates*—the tax rates in effect at the time a tax benefit is recognized.

The payment obligations under the Tax Receivable Agreement are obligations of Maravai LifeSciences Holdings, Inc. and not of Topco LLC. Although the actual timing and amount of any payments that may be made under the Tax Receivable Agreement will vary, we expect that the aggregate payments that we will be required to make to MLSH 1 and MLSH 2 will be substantial. Any payments made by us under the Tax Receivable Agreement will generally reduce the amount of overall cash flow that might have otherwise been available to us or to Topco LLC and, to the extent that we are unable to make payments under the Tax Receivable Agreement for any reason, the unpaid amounts will be deferred and will accrue interest until paid by us. We anticipate funding ordinary course payments under the Tax Receivable Agreement from cash flow from operations of Topco LLC and its subsidiaries, available cash and/or available borrowings under the New Credit Agreement.

We expect that the aggregate payments that we may make under the Tax Receivable Agreement will be substantial. Assuming no material changes in the relevant tax law, and that we earn sufficient taxable income to realize all tax benefits that are subject to the Tax Receivable Agreement, we expect that future payments under the Tax Receivable Agreement relating to the purchase by Maravai LifeSciences Holdings, Inc. of LLC Units from MLSH 1 in connection with this offering to be approximately $ million (or approximately $ million if the underwriters exercise their option to purchase additional shares (the proceeds of which will be used by Maravai LifeSciences Holdings, Inc. to acquire additional LLC Units from MLSH 1) and to range over the next 15 years from approximately $ to $ million per year (or range from approximately $ to $ million per year if the underwriters exercise their option to purchase additional shares) and decline thereafter. As a result, we expect that aggregate payments under the Tax Receivable Agreement over this 15-year period will range from approximately $ million to $ million (or range from approximately $ million to $ million if the underwriters exercise their option to purchase additional shares). These estimates are based on an initial public offering price of $ per share of Class A common stock, which is the midpoint of the estimated public offering price range set forth on the cover page of this prospectus. Future payments in respect of subsequent exchanges or financing would be in addition to these amounts and are expected to be substantial. The foregoing numbers are merely estimates—the actual payments could differ materially. It is possible that future transactions or events could increase or decrease the actual tax benefits realized and the corresponding Tax Receivable Agreement payments. There may be a material negative effect on our liquidity if, as a result of timing discrepancies or otherwise, the payments under the Tax Receivable Agreement exceed the actual benefits we realize in respect of the tax attributes subject to the Tax Receivable Agreement and/or distributions to Maravai LifeSciences Holdings, Inc. by Topco LLC are not sufficient to permit Maravai LifeSciences Holdings, Inc. to make payments under the Tax Receivable Agreement after it has paid taxes.

The Tax Receivable Agreement provides that if (1) certain mergers, asset sales, other forms of business combination, or other changes of control were to occur, (2) we materially breach any of our material obligations under the Tax Receivable Agreement or (3) we elect an early termination of the Tax Receivable Agreement, then the Tax Receivable Agreement will terminate and our obligations, or our successor's obligations, under the Tax Receivable Agreement will accelerate and become due and payable, based on certain assumptions, including an assumption that we would have sufficient taxable income to fully utilize all potential future tax benefits that are subject to the Tax Receivable Agreement and, to the extent applicable, that any LLC Units that have not been exchanged are deemed exchanged for the fair market value of our Class A common stock at the time of termination.

As a result of a change of control, material breach, or our election to terminate the Tax Receivable Agreement early, (1) we could be required to make cash payments to MLSH 1 and MLSH 2 that are greater than the specified percentage of the actual benefits we ultimately realize in respect of the tax benefits that are subject to the Tax Receivable Agreement and (2) we will be required to make an immediate cash payment equal to the present value of the anticipated future tax benefits that are the subject of the Tax Receivable Agreement, which payment may be made significantly in advance of the actual realization, if any, of such future tax benefits. In these situations, our obligations under the Tax Receivable Agreement could have a material adverse effect on our liquidity and could have the effect of delaying, deferring or preventing certain mergers, asset sales, other forms

of business combination, or other changes of control. There can be no assurance that we will be able to finance our obligations under the Tax Receivable Agreement.

Payments under the Tax Receivable Agreement will be based on the tax reporting positions that we determine. Although we are not aware of any issue that would cause the IRS to challenge a tax basis increase or the availability of Blocker Entities' NOLs, we will not be reimbursed for any cash payments previously made to MLSH 1 and MLSH 2 pursuant to the Tax Receivable Agreement if any tax benefits initially claimed by us are subsequently disallowed, in whole or in part, by the IRS or other applicable taxing authority. For example, if the IRS later asserts that we did not obtain a tax basis increase or disallows (in whole or in part) the availability of NOLs due to a potential ownership change under Section 382 of the Code, among other potential challenges, then we would not be reimbursed for any cash payments previously made to MLSH 1 and MLSH 2 pursuant to the Tax Receivable Agreement with respect to such tax benefits that we had initially claimed. Instead, any excess cash payments made by us pursuant to the Tax Receivable Agreement will be netted against any future cash payments that we might otherwise be required to make under the terms of the Tax Receivable Agreement. Nevertheless, any tax benefits initially claimed by us may not be disallowed for a number of years following the initial time of such payment or, even if challenged early, such excess cash payment may be greater than the amount of future cash payments that we might otherwise be required to make under the terms of the Tax Receivable Agreement. Accordingly, there may not be sufficient future cash payments against which to net. The applicable U.S. federal income tax rules are complex, and there can be no assurance that the IRS or a court will not disagree with our tax reporting positions. As a result, it is possible that we could make cash payments under the Tax Receivable Agreement that are substantially greater than our actual cash tax savings.

Under the Tax Receivable Agreement, we are required to provide MLSH 1 and MLSH 2 with a schedule setting forth the calculation of payments that are due under the Tax Receivable Agreement with respect to each taxable year in which a payment obligation arises within sixty (60) days after filing our U.S. federal income tax return for such taxable year. This calculation will be based upon the advice of our tax advisors. Payments under the Tax Receivable Agreement will generally be made within three (3) business days after this schedule becomes final pursuant to the procedures set forth in the Tax Receivable Agreement, although interest on such payments will begin to accrue at a rate of LIBOR plus basis points from the due date (without extensions) of such tax return. Any late payments that may be made under the Tax Receivable Agreement will continue to accrue interest at LIBOR plus basis points until such payments are made, generally including any late payments that we may subsequently make because we did not have enough available cash to satisfy our payment obligations at the time at which they originally arose.

Exchange Agreement

We will enter into the Exchange Agreement with MLSH 1. Under the Exchange Agreement, MLSH 1 (and certain permitted transferees thereof) may (subject to the terms of the Exchange Agreement) surrender their LLC Units to Topco LLC or, at our election, exchange its LLC Units for shares of our Class A common stock on a one-for-one basis, or, at our election, for cash from a substantially concurrent public offering or private sale (based on the price of our Class A common stock in such public offering or private sale). MLSH 1 will also be required to deliver to us an equivalent number of shares of Class B common stock to effectuate an exchange. Any shares of Class B common stock so delivered will be cancelled. As a holder surrenders or exchanges its LLC Units, our interest in Topco LLC will be correspondingly increased.

Registration Rights Agreement

We intend to enter into the Registration Rights Agreement with MLSH 1 and MLSH 2 in connection with this offering. The Registration Rights Agreement will provide MLSH 1 and MLSH 2 certain registration rights whereby, following our initial public offering and the expiration of any related lock-up period, MLSH 1 and MLSH 2 can require us to register under the Securities Act shares of Class A common stock owned by them or issuable to MLSH 1 upon exchange of its LLC Units. The Registration Rights Agreement will also provide for piggyback registration rights for MLSH 1 and MLSH 2. See "Certain Relationships and Related Party Transactions—Registration Rights Agreement."

MANAGEMENT

Our Executive Officers and Directors

Below is a list of the names, ages as of August 31, 2020, positions and brief accounts of the business experience of the individuals who serve as (i) our executive officers, (ii) our directors and (iii) our director nominees. Upon the completion of this offering, Messrs. Cunningham, Daverman, Hance, Lucier, Marker, Mihas and Prahalad are anticipated to be elected to our Board.

Name	Age	Position
Carl Hull	62	Chief Executive Officer and Director
Eric Tardif	51	President
Kevin Herde	49	Chief Financial Officer
Brian Neel	44	Chief Operating Officer, Nucleic Acid Production
Christine Dolan	52	Chief Operating Officer, Biologics Safety Testing
Lisa Sellers	48	Chief Operating Officer, Protein Detection
Sean Cunningham	45	Director Nominee
Benjamin Daverman	42	Director Nominee
Robert B. Hance	61	Director Nominee
Gregory T. Lucier	56	Director Nominee
Luke Marker	35	Director Nominee
Constantine Mihas	53	Director Nominee
Murali K. Prahalad	49	Director Nominee

Carl Hull has served as our Chief Executive Officer since March 2014. Mr. Hull brings over 35 years of sales, marketing and general management leadership in the diagnostics and life sciences industries. From 2009 to 2012, Mr. Hull was Chief Executive Officer of Gen-Probe Incorporated ("Gen-Probe"), a medical diagnostics company, and served as its Chief Operating Officer from 2007 to 2009. Under Mr. Hull's leadership, Gen-Probe took full advantage of its core molecular diagnostics and automation strengths and launched several highly innovative products including the PANTHER® molecular diagnostic system and APTIMA® HPV screening assay. During Mr. Hull's tenure, Gen-Probe extended its recognized leadership position in the most rapidly growing diagnostics market segment and the market capitalization of Gen-Probe doubled, creating nearly $2 billion in value for shareholders and culminating in a successful sale to Hologic in 2012. Prior to Gen-Probe, Mr. Hull had been in sales, marketing and management positions for Abbott Laboratories, Ventana Medical Systems, Inc. (acquired by Roche Holding AG), Applied Imaging Corp. (now part of Danaher Corporation) and Applied Biosystems Inc. (now part of Thermo Fisher Scientific Inc. ("Thermo Fisher")), all biomedical technology companies. Mr. Hull serves as Chairman of the Board for The Binding Site and is a member of the Board of Ortho Clinical Diagnostics, both leading human diagnostics companies. Mr. Hull holds an MBA from the University of Chicago and a BA in Political Science and International Relations from the Johns Hopkins University.

Eric Tardif has served as our President since he co-founded Maravai in 2014. Prior to co-founding Maravai, he led corporate development and corporate strategy at Gen-Probe Incorporated. Following the acquisition of Gen-Probe by Hologic, Inc. ("Hologic"), a medical technology company, in 2012, Mr. Tardif was promoted to lead corporate strategy for Hologic. Mr. Tardif began his career as an investment banker executing mergers and acquisitions at investment banking firms Merrill Lynch, Piper Jaffray and Morgan Stanley, with a focus on medical device companies, particularly in the life sciences tools and diagnostics segments. Mr. Tardif has a Master of Science in Finance from Boston College, an MBA from University of British Columbia and a BA in Business Administration from Major Bishops University.

Kevin Herde has served as our Chief Financial Officer since May 2017. Prior to joining Maravai, he served as Executive Vice President and Chief Financial Officer at Sorrento Therapeutics, Inc., a biopharmaceutical company, from April 2016 to May 2017 and as Vice President of Global Blood Screening at Hologic from January 2015 to February 2016. Mr. Herde also served as Vice President, Finance and Corporate Controller at Gen-Probe prior to its acquisition by Hologic in 2012. Mr. Herde began his career at KPMG LLC. Mr. Herde holds a BBA in Business Administration from University of San Diego and is a certified public accountant in California (inactive).

Brian Neel has served as the Chief Operating Officer for our Nucleic Acid Production business segment since October 2017. Prior to joining Maravai, Mr. Neel was Vice President of Operations of Codex DNA, Inc. (formerly Synthetic Genomics DNA) ("Codex"), a biological equipment company, from May 2016 to October 2017. Prior to joining Codex, Mr. Neel was Vice President of Operations of GenMark Diagnostics, Inc. ("Genmark"), a molecular diagnostics company, from 2014 to 2016. Prior to joining GenMark, Mr. Neel was the Site Manufacturing Operations Leader at Thermo Fisher Scientific (formerly Life Technologies) from January 2013 to June 2014. Prior to joining Thermo Fisher, Mr. Neel was a Global Operations Associate Director and Manufacturing Operations Leader at Life Technologies, Inc. ("Life Technologies"), a global life sciences company that was ultimately purchased by Thermo Fisher in 2014, for over eleven years. Mr. Neel holds a BS in Microbiology from the University of Missouri.

Christine Dolan has served as the Chief Operating Officer of our Biologics Safety Testing business segment since October 2017. Prior to joining Maravai, Ms. Dolan was a Senior Vice President of Product Development at Catalent, Inc. ("Catalent"), a biotechnology company, where Ms. Dolan worked for over eight years. Prior to joining Catalent, Ms. Dolan was a Director of Nuclear Operations and Global Quality Control and a Director of QC, Validation and Supply Chain Management at GE Healthcare, a medical technology company, for over three years. Prior to joining GE Healthcare, Ms. Dolan was a Director of QC and Materials Management at Amersham, where she worked for over ten years. Ms. Dolan has more than 25 years of global leadership experience and successful profit-and-loss management of diverse businesses in the pharmaceutical industry. Ms. Dolan holds a BS in Biology from Lenoir-Rhyne College.

Lisa Sellers has served as the Chief Operating Officer of our Protein Detection business segment since August 2020. With over 20 years of experience, Lisa is an experienced general manager and commercial executive. Prior to joining Maravai, Lisa was Vice President of Marketing at 10X Genomics, Inc. ("10X"). Prior to 10X, Lisa led global reagent and instrumentation businesses within Applied Biosystems, Life Technologies and then Thermo Fisher Scientific. While at Thermo Fisher, Lisa also led B2B business development and sales channels to supply and out-license a portfolio of genetic analysis products and IP to the molecular diagnostic market. Lisa received her PhD in Chemistry from the University of Colorado at Boulder and her BS in Chemistry from Santa Clara University.

Sean Cunningham will begin serving on our board upon the completion of this offering and has served as a member of MLSH 1's board since March 2016. Mr. Cunningham joined GTCR in 2001 where he is currently a Managing Director. He was previously a consultant with The Boston Consulting Group. Mr. Cunningham holds an MBA from the Wharton School at the University of Pennsylvania as well as a BA and BE in Engineering sciences from Dartmouth College. Mr. Cunningham served on the board of managers of MLSH 1 and will continue to serve until he is appointed as director in connection with the closing of the offering. We determined that Mr. Cunningham's directorship experience with similar companies and extensive experience in the healthcare and pharmaceutical industries qualifies him to serve as a director on the Board of Directors.

Benjamin Daverman will begin serving on our board upon the completion of this offering and has served as a member MLSH 1's board since March 2016. Mr. Daverman joined GTCR in 2008 where he is currently a Managing Director. Prior to joining GTCR, he worked as a Venture Capitalist at Alta Partners, a venture capital firm, as well as an Investment Banking Associate at JMP Securities and an analyst in the mergers and acquisitions group at J.P. Morgan (formerly Hambrecht & Quist), both investment banking firms. Mr. Daverman

holds an MBA from the Wharton School at the University of Pennsylvania and a BA in History from Colgate University. He also holds an MS in Biotechnology from the School of Engineering and Applied Science at the University of Pennsylvania. Mr. Daverman served on the board of managers of MLSH 1 and will continue to serve until he is appointed as director in connection with the closing of the offering. We determined that Mr. Daverman's extensive directorship experience with similar companies, and extensive experience in the healthcare, pharmaceutical and life sciences qualifies him to serve as a director on the Board of Directors.

Robert B. Hance will begin serving on our board upon the completion of this offering and has served as a member of MLSH 1's board since 2017. Mr. Hance is a medical device industry veteran with more than 25 years' experience and has served as the Chief Executive Officer of Regatta Medical, Inc. ("Regatta Medical"), a medical device company, since 2017. Prior to Regatta Medical from 2013 to 2016, Mr. Hance was Chief Executive Officer of Creganna Medical Devices, Inc. ("Creganna Medical"), a leading supplier to the minimally invasive medical device industry. Creganna Medical was sold to TE Connectivity Ltd. in 2016. From 2012 to 2013, Mr. Hance was an Entrepreneur-in-Residence within the FDA at the Center for Devices and Radiological Health. Prior to his FDA experience, Mr. Hance was President of Abbott Vascular, the cardiovascular device division of Abbott Laboratories, a biomedical company. Mr. Hance holds an MBA from Harvard Business School and a BS in Chemical Engineering from the Massachusetts Institute of Technology. Mr. Hance served on the board of managers of MLSH 1 and will continue to serve until he is appointed as director in connection with the closing of the offering. We determined Mr. Hance's extensive expertise in the medical device and life sciences industry qualifies him to serve as a director on the Board of Directors.

Gregory T. Lucier will begin serving on our board upon the completion of this offering and has served as a member of MLSH 1's board since January 2020. Mr. Lucier has served as the Chief Executive Officer of Corza Health, Inc. ("Corza Health"), a life sciences company, since 2018 and is a 25-year veteran of the healthcare industry. Prior to Corza Health, Mr. Lucier was Chairman and Chief Executive Officer of NuVasive, Inc. ("NuVasive") from 2015 to 2018. NuVasive is an innovative medical device company specializing in minimally invasive spine surgery. Prior to NuVasive, from 2003 to 2014, Mr. Lucier served as Chairman and CEO of Life Technologies. Mr. Lucier's early career included roles as a corporate officer of General Electric Company and as an executive at GE Medical Systems Information Technologies, Inc., a healthcare company. Mr. Lucier continues to serve as director and Chairman of NuVasive, as well as director of Catalent and Dentsply Sirona Inc., a global provider of professional dental products and technologies. He has an MBA from Harvard Business School and a BA in Industrial Engineering from Pennsylvania State University. Mr. Lucier served on the board of managers of MLSH 1 and will continue to serve until he is appointed as director in connection with the closing of the offering. We determined Mr. Lucier's extensive experience in the healthcare and medical device industry, in addition to his experience on multiple public and private boards of directors, qualifies him to serve as a director on the Board of Directors.

Luke Marker will begin serving on our board upon the completion of this offering and has served as a member of MLSH 1's board since 2016. Mr. Marker joined GTCR in 2009 and became a Principal in 2020. Prior to joining GTCR, he worked in the investment banking division at Lehman Brothers and Barclays Capital. Mr. Marker holds an MBA with distinction from Harvard Business School and a BA in Mathematics and Economics from Kalamazoo College. Mr. Marker served on the board of managers of MLSH 1 and will continue to serve until he is appointed as director in connection with the closing of the offering. We determined that Mr. Marker's directorship experience with similar companies and extensive experience in the healthcare, pharmaceutical and life sciences industries qualifies him to serve as a director on the Board of Directors.

Constantine Mihas will begin serving on our board upon the completion of this offering and has served as a member MLSH 1's board since March 2016. Mr. Mihas joined GTCR in 2001 where he is currently a Managing Director and head of the Healthcare group. Prior to joining GTCR, Mr. Mihas was Chief Executive Officer and co-founder of Delray Farms, LLC ("Delray Farms"), a specialty food retailer. Prior to Delray Farms, Mr. Mihas was with McKinsey & Company, Inc., a consulting firm. Mr. Mihas holds an MBA with distinction from the Harvard Business School and a BS in Finance and Economics from the University of Illinois, Chicago.

Mr. Mihas served on the board of managers of MLSH 1 and will continue to serve until he is appointed as director in connection with the closing of the offering. We determined that Mr. Mihas' directorship experience with similar companies, deep business background, and extensive experience in the healthcare, pharmaceutical and life sciences industries qualifies him to serve as a director on the Board of Directors.

Murali K. Prahalad will begin serving on our board upon the completion of this offering and has served as a member MLSH 1's board since August 2016. Dr. Prahalad is currently the President and Chief Executive Officer of Iridia, Inc., a nanotechnology company, and was most recently the President and Chief Executive Officer of Epic Sciences, Inc., a medical diagnostics company, from August 2013 through April 2019. Dr. Prahalad has two decades of experience in the technology and life science industries. From 2007 through 2013, Dr. Prahalad served in multiple roles at Life Technologies, including as Vice President of Corporate Strategy. Before Life Technologies, Dr. Prahalad was Vice President of Business Development at Sequenom, Inc., a biotechnology company. Dr. Prahalad received a PhD in biochemistry and molecular pharmacology as well as an MS in medical sciences from Harvard University. He also holds a BS in Cellular and Molecular Biology and Economics from the University of Michigan. Mr. Prahalad served on the board of managers of MLSH 1 and will continue to serve until he is appointed as director in connection with the closing of the offering. We determined Dr. Prahalad's extensive experience in the technology and life sciences industry, in addition to his medical expertise and experience on boards of directors, qualifies him to serve as a director on the Board of Directors.

Family Relationships

There are no family relationships between any of our executive officers, directors or director nominees.

Corporate Governance

Board Composition and Director Independence

Our business and affairs are managed under the direction of our Board. Following completion of this offering, our Board will be composed of directors. Our certificate of incorporation will provide that the authorized number of directors may be changed only by resolution of our Board. In addition, the Director Nomination Agreement will prohibit us from increasing or decreasing the size of our Board without the prior written consent of GTCR. Our certificate of incorporation will also provide that our Board will be divided into three classes of directors, with the classes as nearly equal in number as possible. Subject to any earlier resignation or removal in accordance with the terms of our certificate of incorporation and bylaws, our Class I directors will be , and and will serve until the first annual meeting of shareholders following the completion of this offering, our Class II directors will be , and and will serve until the second annual meeting of shareholders following the completion of this offering and our Class III directors will be , and and will serve until the third annual meeting of shareholders following the completion of this offering. Upon completion of this offering, we expect that each of our directors will serve in the classes as indicated above. This classification of our Board could have the effect of increasing the length of time necessary to change the composition of a majority of the Board. In general, at least two annual meetings of shareholders will be necessary for shareholders to effect a change in a majority of members of the Board. In addition, our certificate of incorporation will provide that our directors may be removed with or without cause by the affirmative vote of at least a majority of the voting power of our outstanding shares of stock entitled to vote thereon, voting together as a single class for so long as GTCR beneficially owns 40% or more, in the aggregate, of the total number of shares of our common stock then outstanding. If GTCR's aggregate beneficial ownership falls below 40% of the total number of shares of our common stock outstanding, then our directors may be removed only for cause upon the affirmative vote of at least 66 2/3% of the voting power of our outstanding shares of stock entitled to vote thereon.

In addition, at any time when GTCR has the right to designate at least one nominee for election to our Board, GTCR will also have the right to have one of its nominated directors hold one seat on each Board

committee, subject to satisfying any applicable stock exchange rules or regulations regarding the independence of Board committee members. The listing standards of NASDAQ require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent and that audit committee members also satisfy independence criteria set forth in Rule 10A-3 under the Exchange Act.

Our Board has also determined that , and meet the requirements to be independent directors. In making this determination, our Board considered the relationships that each such non-employee director has with Maravai and all other facts and circumstances that our Board deemed relevant in determining their independence, including beneficial ownership of our common stock.

Controlled Company Status

After completion of this offering, GTCR will continue to control a majority of the voting power in us. As a result, we will be a "controlled company." Under NASDAQ rules, a company of which more than 50% of the voting power for the election of directors 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 requirements that, within one year of the date of the listing of our common stock:

- we have a board of directors that is composed of a majority of "independent directors," as defined under the rules of such exchange;
- we have a compensation committee that is composed entirely of independent directors; and
- we have a nominating and corporate governance committee that is composed entirely of independent directors.

Following this offering, we intend to rely on this exemption. As a result, we may not have a majority of independent directors on our Board. In addition, our Compensation Committee and our Nominating and Corporate Governance Committee may not consist entirely of independent directors or be subject to annual performance evaluations. Accordingly, you may not have the same protections afforded to shareholders of companies that are subject to all of the NASDAQ corporate governance requirements.

Board Committees

Upon completion of this offering, our Board will have an Audit Committee and a Compensation and Nominating Committee. The composition, duties and responsibilities of these committees are as set forth below. In the future, our Board may establish other committees, as it deems appropriate, to assist it with its responsibilities.

Board Member	Audit Committee	Compensation and Nominating Committee
Carl Hull		
Sean Cunningham*		
Benjamin Daverman*		
Robert B. Hance*		
Gregory T. Lucier*		
Luke Marker*		
Constantine Mihas*		
Murali K. Prahalad*		

* *Denotes director nominee*

Audit Committee

Following this offering, our Audit Committee will be composed of and , with serving as chairman of the committee. We intend to comply with the audit committee requirements of the SEC and , which require that the Audit Committee be composed of at least one independent director at the closing of this offering, a majority of independent directors within 90 days following this offering and all independent directors within one year following this offering. We anticipate that, prior to the completion of this offering, our Board will determine that and meet the independence requirements of Rule 10A-3 under the Exchange Act and the applicable listing standards of NASDAQ. Our Board has determined that is an "audit committee financial expert" within the meaning of SEC regulations and applicable listing standards of . The Audit Committee's responsibilities upon completion of this offering will include:

- appointing, approving the compensation of, and assessing the qualifications, performance and independence of our independent registered public accounting firm;
- pre-approving audit and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- discusses on a periodic basis, or as appropriate, with management, our policies, programs and controls with respect to risk assessment and risk management;
- reviewing and discussing with management and the independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;
- is responsible for reviewing our management's discussion and analysis of financial condition and results of operations to be included in our annual and quarterly reports to be filed with the SEC;
- monitors the rotation of partners of the independent registered public accounting firm on our engagement team in accordance with requirements established by the SEC;
- reviews management's report on its assessment of the effectiveness of internal control over financial reporting and any changes thereto;
- reviewing the adequacy of our internal control over financial reporting;
- establishing policies and procedures for the receipt, retention, follow-up and resolution of accounting, internal controls or auditing matters, complaints and concerns;
- recommending, based upon the Audit Committee's review and discussions with management and the independent registered public accounting firm, whether our audited financial statements shall be included in our Annual Report on Form 10-K;
- monitoring our compliance with legal and regulatory requirements as they relate to our financial statements and accounting matters;
- preparing the Audit Committee report required by the rules of the SEC to be included in our annual proxy statement;
- annually reviews and assesses treasury functions including cash management process;
- investigates any matters received, and reports to the Board periodically, with respect to ethics issues, complaints and associated investigations;
- reviews the audit committee charter and the committee's performance at least annually;
- consults with management to establish procedures and internal controls relating to cybersecurity;
- reviewing all related party transactions for potential conflict of interest situations and approving all such transactions; and
- reviewing and discussing with management our earnings releases and scripts.

Compensation and Nominating Committee

Following this offering, our Compensation and Nominating Committee will be composed of and , with serving as chairman of the committee. The Compensation and Nominating Committee's responsibilities upon completion of this offering will include:

- annually reviewing and approving corporate goals and objectives relevant to the compensation of our chief executive officer;
- evaluating the performance of our chief executive officer in light of such corporate goals and objectives and determining and approving the compensation of our chief executive officer;
- reviewing and approving the compensation of our other executive officers;
- appointing, compensating and overseeing the work of any compensation consultant, legal counsel or other advisor retained by the compensation committee;
- conducting the independence assessment outlined in NASDAQ rules with respect to any compensation consultant, legal counsel or other advisor retained by the compensation committee;
- annually reviewing and reassessing the adequacy of the committee charter in its compliance with the listing requirements of NASDAQ;
- reviewing and establishing our overall management compensation, philosophy and policy;
- overseeing and administering our compensation and similar plans;
- reviewing and making recommendations to our Board with respect to director compensation;
- reviewing and discussing with management the compensation discussion and analysis to be included in our annual proxy statement or Annual Report on Form 10-K;
- developing and recommending to our Board criteria for board and committee membership;
- subject to the rights of GTCR under the Director Nomination Agreement as described in "Certain Relationships and Related Party Transactions—Director Nomination Agreement," identifying and recommending to our Board the persons to be nominated for election as directors and to each of our Board's committees;
- developing and recommending to our Board best practices and corporate governance principles;
- developing and recommending to our Board a set of corporate governance guidelines; and
- reviewing and recommending to our Board the functions, duties and compositions of the committees of our Board.

Compensation Committee Interlocks and Insider Participation

None of our executive officers currently serves, or in the past fiscal year has served, as a member of the Board or compensation committee of any entity that has one or more executive officers serving on our Board or Compensation and Nominating Committee.

Code of Business Conduct and Ethics

We have adopted a code of business conduct and ethics that applies to all of our employees, officers and directors, including those officers responsible for financial reporting. Upon the closing of this offering, our code of business conduct and ethics will be available on our website. We intend to disclose any amendments to the code, or any waivers of its requirements, on our website.

EXECUTIVE COMPENSATION

Unless we state otherwise or the context otherwise requires, in this Executive Compensation section the terms "Maravai LifeSciences," "we," "us," "our" and the "Company" refer to Topco LLC, for the period up to this offering, and for all periods following this offering, to Maravai LifeSciences Holdings, Inc.

We are currently considered an "emerging growth company" within the meaning of the Securities Act for purposes of the SEC's executive compensation disclosure rules. Accordingly, we are required to provide a Summary Compensation Table and an Outstanding Equity Awards at Fiscal Year-End Table, as well as limited narrative disclosures regarding executive compensation for our last completed fiscal year. Further, our reporting obligations extend only to the following "Named Executive Officers," who are the individuals who served as our principal executive officer during and the next two most highly compensated executive officers at the end of the fiscal year ended December 31, 2019. For the fiscal year ended December 31, 2019, our Named Executive Officers and their principal positions were as follows:

- Carl Hull, Chief Executive Officer of the Company;
- Kevin Herde, Chief Financial Officer of the Company; and
- Brian Neel, Chief Operating Officer, Nucleic Acid Production.

This discussion may contain forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. Actual compensation programs that we adopt in the future may differ materially from the currently planned programs summarized in this discussion.

Summary Compensation Table

Name and principal position	Year	Salary ($)	Option awards ($)(1)	Non-equity incentive plan compensation ($)(2)	All other compensation ($)(3)	Total ($)
Carl Hull, *Chief Executive Officer*	2019	485,417	1,743,000	600,000	—	2,828,417
Kevin Herde, *Chief Financial Officer*	2019	364,160	535,000	165,063	8,400	1,072,623
Brian Neel, *Chief Operating Officer, Nucleic Acid Production*	2019	314,673	428,000	142,436	8,400	893,509

(1) The amounts reported in the Option Awards column represent the grant date fair value of the incentive units in MLSH 1 granted to the Named Executive Officers as computed in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718. The assumptions used in calculating the grant date fair value of the incentive units in MLSH 1 reported in the Option Awards column are set forth in Note 8 to the consolidated financial statements included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for these incentive units and do not correspond to the actual economic value that may be received by the Named Executive Officers for the incentive units. See "Narrative Disclosure to Summary Compensation Table—Equity Incentives" below for additional details.

(2) The amounts reported in the Non-Equity Incentive Plan Compensation column reflect bonuses paid to the Named Executive Officers under the Bonus Plan (as defined below) with respect to the fiscal year ended December 31, 2019. Please see the section entitled "Narrative Disclosure to Summary Compensation Table—Employment Agreements" below for additional details.

(3) The amounts reported in the All Other Compensation column reflect 401(k) plan matching contributions made on behalf of the Named Executive Officers during the fiscal year ended December 31, 2019. See below under "Additional Narrative Disclosure—Retirement Benefits" for additional information regarding 401(k) plan contributions.

Narrative Disclosure to Summary Compensation Table

Employment Agreements

We have entered into employment agreements (styled as senior management agreements) with each of our Named Executive Officers that provide for annual base salary, target bonus opportunity, a purchase of capital units and an initial grant of incentive units in MLSH 1, paid vacation, reimbursement of reasonable business expenses and eligibility to participate in our benefit plans generally.

Messrs. Hull's, Herde's and Neel's annualized base salaries at the end of the 2019 fiscal year were $500,000, $367,787 and $317,369, respectively, and their target annual bonuses were 100%, 40% and 40% of base salary. For the 2019 fiscal year, Messrs. Hull, Herde and Neel received bonus payments of $600,000, $165,063 and $142,435, respectively, based in part on pre-established company performance metrics and based in part on individual achievement. The pre-established company performance metrics for the 2019 fiscal year consisted of adjusted revenue (weighted 30%), Adjusted EBITDA (weighted 50%), and achievement of corporate initiatives (weighted 20%). For the 2019 fiscal year, we achieved the pre-established company performance metrics at 102% of target. The company performance metric score was then adjusted based on individual achievement to yield total achievement scores, which corresponded to payouts of 120% of target for Mr. Hull and 112.2% of target for Messrs. Herde and Neel.

The employment agreements also provide for certain severance benefits upon a resignation by the applicable Named Executive Officer for "good reason" or upon a termination by Maravai LLC without "cause." Please see the section entitled "Additional Narrative Disclosure—Potential Payments Upon Termination or Change in Control" below for more details regarding the severance benefits provided to our Named Executive Officers under the employment agreements.

Equity Incentives

We have historically offered equity incentives to our Named Executive Officers through grants of incentive units in MLSH 1. Certain of these incentive unit awards are subject to time-based vesting requirements and are subject to accelerated vesting upon the occurrence of certain terminations of employment and certain change-in-control events, and the remaining incentive unit awards are subject to market and performance-based vesting requirements and terminate if such performance-based vesting requirements are not met upon certain change-in-control events. We do not anticipate that the consummation of this offering or any of the related transactions will trigger accelerated vesting of any of the incentive units in MLSH 1 that are subject to time-based vesting requirements, but we expect the vesting of the incentive units subject to performance-based vesting requirements to be accelerated in connection with this offering. See below under "—Additional Narrative Disclosure—Potential Payments Upon Termination or Change in Control" for additional information regarding the circumstances that could result in accelerated vesting of these awards and under "—Actions Taken in 2020 or in Connection with this Offering" for additional information regarding the expected acceleration of the units subject to performance-based vesting.

Outstanding Equity Awards at Fiscal Year-End

The following table summarizes, for each of the Named Executive Officers, the number of incentive units in MLSH 1 held as of December 31, 2019.

	Option Awards(1)			
Name	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option exercise price ($)(8)	Option expiration date(8)
Carl Hull	336,000	139,000(2)	N/A	N/A
	14,000	86,000(3)	N/A	N/A
Kevin Herde	45,000	55,000(4)	N/A	N/A
	—	25,000(5)	N/A	N/A
Brian Neel	14,000	51,000(6)	N/A	N/A
	—	20,000(7)	N/A	N/A

(1) This table reflects information regarding incentive units in MLSH 1 granted to our Named Executive Officers that were outstanding as of December 31, 2019. For more information on these incentive units, see "Narrative Disclosure to Summary Compensation Table—Equity Incentives" above.

(2) Under the terms of the applicable incentive unit award documentation, (i) 75,000 of these incentive units will vest upon achievement of a certain multiple of pre-public offering investor proceeds over initial investments, so long as Mr. Hull remains employed through the date of such achievement, but these units are expected to become vested in connection with this offering; and (ii) 64,000 of these incentive units will vest on April 5, 2021, so long as Mr. Hull remains employed through such date, and vesting of such incentive units accelerates upon a qualifying sale of MLSH 1.

(3) Under the terms of the applicable incentive unit award documentation, (i) 30,000 of these incentive units will vest upon achievement of a certain multiple of investor proceeds over initial investments, so long as Mr. Hull remains employed through the date of such achievement, but these units are expected to become vested in connection with this offering; and (ii) 56,000 of these incentive units will vest in equal installments on June 20 of each of 2021, 2022, 2023 and 2024, so long as Mr. Hull remains employed through such dates, and vesting of such incentive units accelerates upon a qualifying sale of MLSH 1.

(4) Under the terms of the applicable incentive unit award documentation, (i) 25,000 of these incentive units will vest upon achievement of a certain multiple of investor proceeds over initial investments, so long as Mr. Herde remains employed through the date of such achievement, but these units are expected to become vested in connection with this offering; and (ii) 30,000 of these incentive units will vest in equal installments on May 30 of each of 2021 and 2022, so long as Mr. Herde remains employed through such dates, and vesting of such incentive units accelerates upon a qualifying sale of MLSH 1.

(5) Under the terms of the applicable incentive unit award documentation, these incentive units will vest in equal installments on December 13 of each of 2020, 2021, 2022, 2023 and 2024, so long as Mr. Herde remains employed through such dates, and vesting of such incentive units accelerates upon a qualifying sale of MLSH 1.

(6) Under the terms of the applicable incentive unit award documentation, (i) 30,000 of these incentive units will vest upon achievement of a certain multiple of investor proceeds over initial investments, so long as Mr. Neel remains employed through the date of such achievement, but these units are expected to become vested in connection with this offering; and (ii) 21,000 of these incentive units will vest in equal installments on October 16 of each of 2020, 2021 and 2022, so long as Mr. Neel remains employed through such dates, and vesting of such incentive units accelerates upon a qualifying sale of MLSH 1.

(7) Under the terms of the applicable incentive unit award documentation, these incentive units will vest in equal installments on December 13 of each of 2020, 2021, 2022, 2023 and 2024, so long as Mr. Neel remains employed through such dates, and vesting of such incentive units accelerates upon a qualifying sale of MLSH 1.
(8) These equity awards are not traditional options and, therefore, there is no exercise price or option expiration date associated with them.

Additional Narrative Disclosure

Retirement Benefits

We do not have a defined benefit pension plan or nonqualified deferred compensation plan. We currently maintain a retirement plan intended to provide benefits under Section 401(k) of the Code, pursuant to which employees, including the Named Executive Officers, can make voluntary pre-tax contributions. We match 50% of elective deferrals up to 6% of elective deferrals for all participants. These matching contributions are vested or vest based on the participant's length of service with us, becoming fully vested on the fourth anniversary of the participant's date of hire. All contributions under the plan are subject to certain annual dollar limitations, which are periodically adjusted for changes in the cost of living.

Potential Payments Upon Termination or Change in Control

A Named Executive Officer's outstanding incentive units in MLSH 1 that vest based on time will become 100% vested upon a "sale" of MLSH 1, which is generally the sale of (i) MLSH 1's equity securities pursuant to which an independent third party or parties acquires a majority of the equity securities or voting power to elect a majority of the board of directors of MLSH 1 or (ii) all or substantially all of MLSH 1's assets on a consolidated basis. We do not anticipate that the consummation of this offering or any of the related transactions will constitute a "sale" of MLSH 1 for this purpose.

Our Named Executive Officers' employment agreements provide that upon a termination by us for any reason other than for "cause" or upon a resignation by such Named Executive Officer for "good reason," each as defined therein, subject to the execution and delivery of a fully effective release of claims in favor of the Company and continued compliance with applicable restrictive covenants, Mr. Hull will receive salary continuation payments and COBRA premium reimbursement for 12 months, Mr. Herde will receive salary continuation payments and COBRA premium reimbursement for 6 months, and Mr. Neel will receive salary continuation payments and COBRA premium reimbursement for 3 months. The employment agreements also contain certain restrictive covenants, including provisions that create restrictions, with certain limitations, on our Named Executive Officers competing with MLSH 1 and its subsidiaries during the term of the Named Executive Officer's employment with the Company (and, if the Named Executive Officer's equity is repurchased, for the one-year period following termination of employment) and soliciting any customers or other business relations or soliciting or hiring employees of MLSH 1 and its subsidiaries, in each case, during the term of the Named Executive Officer's employment with the Company and for the one-year period following termination of employment.

Actions Taken in 2020 or in Connection with This Offering

Acceleration of Incentive Units Subject to Performance-Based Vesting

In connection with this offering, we expect the vesting of incentive units held by our Named Executive Officers that are subject to performance-based vesting requirements to be accelerated. See the "Outstanding Equity Awards at Fiscal Year-End Table" above for additional details regarding the incentive units subject to performance-based vesting that are held by our Named Executive Officers.

New Employment Agreements

In connection with this offering, we expect to enter into new employment agreements with our Named Executive Officers. The terms of the new employment agreements have not yet been determined.

2020 Employee Stock Purchase Plan

In order to incentivize our employees following the completion of this offering, we anticipate that our Board will adopt the 2020 Employee Stock Purchase Plan (the "ESPP"), the material terms of which are summarized below, prior to the completion of this offering. This summary is not a complete description of all of the provisions of the ESPP and is qualified in its entirety by reference to the ESPP, a copy of which will be filed as an exhibit to the registration statement of which this prospectus forms a part.

The ESPP authorizes the grant to employees of options that are intended to qualify for favorable U.S. federal tax treatment under Section 423 of the Code.

Shares Available for Awards; Administration

A total of shares of our Class A common stock will initially be reserved for issuance under the ESPP. In addition, the number of shares available for issuance under the ESPP will be increased annually on January 1 of each calendar year beginning in 2021 and ending in and including 2030, by an amount equal to the lesser of (A) % of the shares outstanding on the final day of the immediately preceding calendar year and (B) such smaller number of shares as is determined by our Board. In no event will more than shares of our Class A common stock be available for issuance under the ESPP. Our Board or a committee of our Board will administer and will have authority to interpret the terms of the ESPP and determine eligibility of participants. We expect that the compensation committee will be the initial administrator of the ESPP.

Eligibility

We expect that all of our employees and employees of any designated subsidiary, as defined in the ESPP, will be eligible to participate in the ESPP, other than those employees who . However, an employee may not be granted rights to purchase stock under our ESPP if the employee, immediately after the grant, would own (directly or through attribution) stock possessing 5% or more of the total combined voting power of all classes of our stock.

Grant of Rights

Stock will be offered under the ESPP during offering periods. Each offering will consist of a offering period commencing on . The plan administrator may, at its discretion, choose a different length of the offering period not to exceed 27 months. Employee payroll deductions will be used to purchase shares on each purchase date during an offering period. The purchase date for each offering period will be the final trading day in the offering period. The plan administrator may, in its discretion, modify the terms of future offering periods.

The ESPP permits participants to purchase Class A common stock through payroll deductions of up to 15% of their eligible compensation. The maximum number of shares that may be purchased by a participant during any offering period will be shares. In addition, no employee will be permitted to accrue the right to purchase stock at a rate in excess of $25,000 worth of shares during any calendar year during which such a purchase right is outstanding (based on the fair market value per share of our Class A common stock as of the first day of the offering period).

On the first trading day of each offering period, each participant will automatically be granted an option to purchase shares of our Class A common stock. The option will expire at the end of the applicable offering period,

and will be exercised at that time to the extent of the payroll deductions accumulated during the offering period. The purchase price of the shares, in the absence of a contrary designation, will be 85% of the lower of the fair market value of our Class A common stock on the first trading day of the offering period or on the purchase date. Participants may voluntarily end their participation in the ESPP at any time during a specified period prior to the end of the applicable offering period, and will be paid their accrued payroll deductions that have not yet been used to purchase shares of Class A common stock. Participation ends automatically upon a participant's termination of employment.

A participant may not transfer rights granted under the ESPP other than by will or the laws of descent and distribution, and rights granted under the ESPP are generally exercisable only by the participant.

Certain Transactions

In the event of certain transactions or events affecting our Class A common stock, the plan administrator will make equitable adjustments to the ESPP and outstanding rights. In the event of certain unusual or non-recurring events or transactions, including a change in control, the plan administrator may provide for (1) either the replacement of outstanding rights with other rights or property or termination of outstanding rights in exchange for cash, (2) the assumption or substitution of outstanding rights by the successor or survivor corporation or parent or subsidiary thereof, if any, (3) an adjustment to the number and type of shares of stock subject to outstanding rights, (4) the use of participants' accumulated payroll deductions to purchase stock on a new purchase date prior to the next scheduled purchase date and termination of any rights under ongoing offering periods or (5) the termination of all outstanding rights.

Plan Amendment

The plan administrator may amend, suspend or terminate the ESPP at any time. However, stockholder approval will be obtained for any amendment that increases the aggregate number or changes the type of shares that may be sold pursuant to rights under the ESPP or changes the corporations or classes of corporations whose employees are eligible to participate in the ESPP.

Omnibus Incentive Plan

In order to incentivize our employees following the completion of this offering, we anticipate that our Board will adopt the 2020 Plan, for employees, consultants and directors prior to the completion of this offering. This summary is not a complete description of all of the provisions of the 2020 Plan and is qualified in its entirety by reference to the 2020 plan, a copy of which will be filed as an exhibit to the registration statement of which this prospectus forms a part. Our Named Executive Officers will be eligible to participate in the 2020 Plan, which we expect will become effective upon the consummation of this offering. We anticipate that the 2020 Plan will provide for the grant of options, stock appreciation rights, restricted stock, restricted stock units, stock awards, dividend equivalents, other stock-based awards, cash awards and substitute awards intended to align the interests of service providers, including our Named Executive Officers, with those of our shareholders.

Securities to be Offered

Subject to adjustment in the event of certain transactions or changes of capitalization in accordance with the 2020 Plan, a total of shares of Class A common stock will initially be reserved for issuance pursuant to awards under the 2020 Plan. The total number of shares reserved for issuance under the 2020 Plan may be issued pursuant to incentive options. Shares of Class A common stock subject to an award that expires or is canceled, forfeited, exchanged, settled in cash or otherwise terminated without delivery of shares and shares withheld to pay the exercise price of, or to satisfy the withholding obligations with respect to, an award will again be available for delivery pursuant to other awards under the 2020 Plan.

The total number of shares reserved for issuance under the 2020 Plan will be increased on January 1 of each of the first 10 calendar years during the term of the 2020 Plan, by the lesser of (i) % of the total number of shares of Class A common stock outstanding on each December 31 immediately prior to the date of increase or (ii) such number of shares of Class A common stock determined by our Board or compensation committee.

Administration

The 2020 Plan will be administered by our Board, except to the extent our Board elects a committee of directors to administer the 2020 Plan (as applicable, the "Administrator"). The Administrator has broad discretion to administer the 2020 Plan, including the power to determine the eligible individuals to whom awards will be granted, the number and type of awards to be granted and the terms and conditions of awards. The Administrator may also accelerate the vesting or exercise of any award and make all other determinations and to take all other actions necessary or advisable for the administration of the 2020 Plan. To the extent the Administrator is not our Board, our Board will retain the authority to take all actions permitted by the Administrator under the 2020 Plan.

Eligibility

Our employees, consultants and non-employee directors, and employees, consultants and non-employee directors of our affiliates, will be eligible to receive awards under the 2020 Plan.

Non-Employee Director Compensation Limits

Under the 2020 Plan, in a single calendar year,a non-employee director may not be granted awards for such individual's service on our Board having a value in excess of $. Additional awards may be granted for any calendar year in which a non-employee director first becomes a director, serves on a special committee of our Board, or serves as lead director. This limit does not apply to cash fees or awards granted in lieu of cash fees.

Types of Awards

Options. We may grant options to eligible persons, except that incentive options may only be granted to persons who are our employees or employees of one of our subsidiaries, in accordance with Section 422 of the Code. The exercise price of an option generally cannot be less than 100% of the fair market value of a share of Class A common stock on the date on which the option is granted and the option must not be exercisable for longer than ten years following the date of grant. In the case of an incentive option granted to an individual who owns (or is deemed to own) at least 10% of the total combined voting power of all classes of our equity securities, the exercise price of the option must be at least 110% of the fair market value of a share of Class A common stock on the date of grant and the option must not be exercisable more than five years from the date of grant.

SARs. A stock appreciation right ("SAR") is the right to receive an amount equal to the excess of the fair market value of one share of Class A common stock on the date of exercise over the grant price of the SAR. The grant price of a SAR generally cannot be less than 100% of the fair market value of a share of Class A common stock on the date on which the SAR is granted. The term of a SAR may not exceed ten years. SARs may be granted in connection with, or independent of, other awards. The Administrator will have the discretion to determine other terms and conditions of an SAR award.

Restricted Share Awards. A restricted share award is a grant of shares of Class A common stock subject to the restrictions on transferability and risk of forfeiture imposed by the Administrator. Unless otherwise determined by the Administrator and specified in the applicable award agreement, the holder of a restricted share award will have rights as a shareholder, including the right to vote the shares of Class A common stock subject to the restricted share award or to receive dividends on the shares of Class A common stock subject to the restricted

share award during the restriction period. In the discretion of the Administrator, dividends distributed prior to vesting may be subject to the same restrictions and risk of forfeiture as the restricted shares with respect to which the distribution was made.

Restricted Share Units ("RSU"). An RSU is a right to receive cash, shares of Class A common stock or a combination of cash and shares of Class A common stock at the end of a specified period equal to the fair market value of one share of Class A common stock on the date of vesting. RSUs may be subject to the restrictions, including a risk of forfeiture, imposed by the Administrator.

Share awards. A share award is a transfer of unrestricted shares of Class A common stock on terms and conditions, if any, determined by the Administrator.

Dividend Equivalents. Dividend equivalents entitle a participant to receive cash, shares of Class A common stock, other awards or other property equal in value to dividends or other distributions paid with respect to a specified number of shares of Class A common stock. Dividend equivalents may be granted on a free-standing basis or in connection with another award (other than a restricted share award or a share award).

Other Share-Based Awards. Other share-based awards are awards denominated or payable in, valued in whole or in part by reference to, or otherwise based on or related to, the value of our shares of Class A common stock.

Cash Awards. Cash awards may be granted on a free-standing basis or as an element of, a supplement to, or in lieu of any other award.

Substitute Awards. Awards may be granted in substitution or exchange for any other award granted under the 2020 Plan or under another equity incentive plan or any other right of an eligible person to receive payment from us. Awards may also be granted under the 2020 Plan in substitution for similar awards held for individuals who become participants as a result of a merger, consolidation or acquisition of another entity by or with us or one of our affiliates.

Certain Transactions

If any change is made to our capitalization, such as a share split, share combination, share dividend, exchange of shares or other recapitalization, merger or otherwise, which results in an increase or decrease in the number of outstanding shares of Class A common stock, appropriate adjustments will be made by the Administrator in the shares subject to an award under the 2020 Plan. The Administrator will also have the discretion to make certain adjustments to awards in the event of a change in control, such as accelerating the vesting or exercisability of awards, requiring the surrender of an award, with or without consideration, or making any other adjustment or modification to the award that the Administrator determines is appropriate in light of such transaction.

Clawback

All awards granted under the 2020 Plan will be subject to reduction, cancelation or recoupment under any written clawback policy that we may adopt and that we determine should apply to awards under the 2020 Plan.

Plan Amendment and Termination

Our Administrator may amend or terminate any award, award agreement or the 2020 Plan at any time; however, shareholder approval will be required for any amendment to the extent necessary to comply with applicable law or exchange listing standards. The Administrator will not have the authority, without the approval of shareholders, to amend any outstanding option or share appreciation right to reduce its exercise price per share. The 2020 Plan will remain in effect for a period of 10 years (unless earlier terminated by our Board).

Non-Employee Director Compensation

The following table presents the total compensation for each person who served as anon-employee member of our Board during 2019. Other than as set forth in the table and described more fully below, we did not pay any compensation, reimburse any expense of, make any equity awards or non-equity awards to, or pay any other compensation to any of, the other non-employee members of our Board in 2019.

Name	Fees earned or paid in cash ($)(1)	Total ($)
Robert B. Hance(2)	30,000	30,000
Murali K. Prahalad(3)	30,000	30,000

(1) Messrs. Hance and Prahalad are entitled to Board fees of $10,000 per meeting attended in person and $5,000 per meeting attended telephonically. In the 2019 fiscal year, Mr. Hance attended three meetings in person and Mr. Prahalad attended two meetings in person and two meetings telephonically.

(2) As of December 31, 2019, Mr. Hance held 4,000 vested incentive units and 6,000 unvested incentive units (2,000 of which vested on January 1, 2020, and the other 4,000 of which will vest in equal installments, subject to Mr. Hance's continued service, on January 1 of 2021 and 2022) in MLSH 1.

(3) As of December 31, 2019, Mr. Prahalad held 6,000 vested incentive units and 4,000 unvested incentive units (half of which vested on August 3, 2020, and the other half of which will vest, subject to Mr. Prahalad's continued service, on August 3, 2021) in MLSH 1.

Non-Employee Director Compensation Policy

We do not currently have a formal policy with respect to compensating ournon-employee directors for service as directors. Each of Messrs. Hance, Lucier and Prahalad is subject to an investment and director compensation agreement with MLSH 1, pursuant to which they have been granted restricted incentive units in MLSH 1 and are entitled to director fees ($10,000 per meeting attended in person and $5,000 per meeting attended telephonically) and reimbursement of expenses incurred in connection with their service. Following the consummation of this offering, we anticipate that directors who are not also officers or employees of the Company or of GTCR will receive compensation for their service on our Board and committees thereof. The amount and form of such compensation has not yet been determined. Each non-employee director will be reimbursed for out-of-pocket expenses incurred in connection with attending Board and committee meetings.

PRINCIPAL SHAREHOLDERS

The following table sets forth information about the beneficial ownership of our Class A common stock and Class B common stock as of , 2020, after giving effect to the Organizational Transactions:

- each person or group known to us who beneficially owns more than 5% of our Class A common stock or Class B common stock immediately prior to this offering;
- each of our directors and director nominees;
- each of our Named Executive Officers; and
- all of our directors, director nominees and executive officers as a group.

The numbers of shares of Class A common stock and Class B common stock (together with the same amount of LLC Units) beneficially owned and percentages of beneficial ownership before this offering that are set forth below are based on the number of shares and LLC Units to be issued and outstanding prior to this offering after giving effect to the Organizational Transactions. See "Organizational Structure." The numbers of shares of Class A common stock and Class B common stock (together with the same amount of LLC Units) beneficially owned and percentages of beneficial ownership after the offering that are set forth below are based on shares of Class A common stock to be issued and outstanding immediately after the offering, assuming no exercise by the underwriters of their option to purchase additional shares. This number excludes shares of Class A common stock issuable in exchange for LLC Units and upon conversion of shares of our Class B common stock, each as described under "Organizational Structure" and "Certain Relationships and Related Party Transactions—Amended and Restated Operating Agreement." If all outstanding LLC Units were exchanged and all outstanding shares of Class B common stock were converted, we would have shares of Class A common stock outstanding immediately after this offering.

Concurrently with this offering, we will issue to the LLC Unitholders shares of Class B common stock. The number of shares of Class B common stock will depend in part on the price at which shares of Class A common stock are sold in this offering after the offering. For purposes of the presentation of the total number of shares of Class B common stock beneficially owned, we have assumed that the shares of Class A common stock will be sold at $ per share, which is the midpoint of the estimated initial public offering price range set forth on the cover page of this prospectus.

Unless otherwise noted below, the address for each beneficial owner listed on the table is 10770 Wateridge Circle Suite 200, San Diego, California, 92121. We have determined beneficial ownership in accordance with the rules of the SEC. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the persons and entities named in the tables below have sole voting and investment power with respect to all Class A common stock that they beneficially own, subject to applicable community property laws.

	Shares of Common Stock Beneficially Owned Prior to this Offering					Shares of Common Stock Beneficially Owned After this Offering			
Name of Beneficial Owner	Shares of Class A Common Stock	% of Class A Common Stock Outstanding	Shares of Class B Common Stock	% of Class B Common Stock Outstanding	% of Combined Voting Power(1)	Shares of Class A Common Stock	Shares of Class B Common Stock	% of Combined Voting Power Assuming the Underwriters' Option Is Not Exercised(1)	% of Combined Voting Power Assuming the Underwriters' Option Is Exercised in Full(1)
5% Shareholders:									
GTCR(2)									
Named Executive Officers, Directors and Director Nominees:									
Carl Hull									
Kevin Herde									
Brian Neel									
Sean Cunningham									
Benjamin Daverman									
Robert B. Hance									
Gregory T. Lucier									
Luke Marker									
Constantine Mihas									
Murali K. Prahalad									
All executive officers, directors and director nominees as a group (individuals)									

(1) Each share of Class A common stock and Class B common stock entitles the registered holder thereof to one vote and each share on all matters presented to shareholders for a vote generally, including the election of directors. The Class A common stock and Class B common stock will vote as a single class on all matters except as required by law or the certificate of incorporation.

(2) Represents shares of Class A common stock held directly by MLSH 2 and shares of Class B common stock held directly by MLSH 1. MLSH 1 and MLSH 2 are each managed by a board of managers. GTCR Fund XI/C LP controls the board of managers of MLSH 2. GTCR Fund XI/B LP and GTCR Co-Invest XI LP control the board of managers of MLSH 1. This number excludes shares of Class A common stock issuable in exchange for LLC Units held by MLSH 1. These shares of Class A common stock represent approximately % of the shares of Class A common stock that would be outstanding immediately after this offering if all outstanding LLC Units were exchanged and all outstanding shares of Class B common stock were converted at that time. GTCR Partners XI/A&C LP is the general partner of GTCR Fund XI/C LP. GTCR Partners XI/B LP is the general partner of GTCR Fund XI/B LP. GTCR Investment XI LLC is the general partner of each of GTCR Co-Invest XI LP, GTCR Partners XI/A&C LP and GTCR Partners XI/B LP. GTCR Investment XI LLC is managed by a board of managers (the "GTCR Board of Managers") consisting of Mark M. Anderson, Craig A. Bondy, Aaron D. Cohen, Sean L. Cunningham, Benjamin J. Daverman, David A. Donnini, Constantine S. Mihas and Collin E. Roche, and no single person has voting or dispositive authority over the Class A common stock or Class B common stock. Each of GTCR Partners XI/A&C LP, GTCR Investment XI LLC and the GTCR Board of Managers may be deemed to share beneficial ownership of the shares held of record by MLSH 2, each of GTCR Partners XI/B LP, GTCR Investment XI LLC and the GTCR Board of Managers may be deemed to share beneficial ownership of the shares held of record by MLSH 1 and each of the individual members of the GTCR Board of Managers disclaims beneficial ownership of the shares held of record by MLSH 1 and MLSH 2 except to the extent of his pecuniary interest therein. The address for each of MLSH 1, MLSH 2, GTCR Fund XI/C LP, GTCR Fund XI/B LP, GTCR Co-Invest XI LP, GTCR Partners XI/A&C LP, GTCR Partners XI/B LP and GTCR Investment XI LLC is 300 North LaSalle Street, Suite 5600, Chicago, IL, 60654, and their telephone number is (312) 382-2200.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Policies for Approval of Related Party Transactions

Prior to completion of this offering, we intend to adopt a policy with respect to the review, approval and ratification of related party transactions. Under the policy, our Audit Committee is responsible for reviewing and approving related party transactions. In the course of its review and approval of related party transactions, our Audit Committee will consider the relevant facts and circumstances to decide whether to approve such transactions. In particular, our policy requires our Audit Committee to consider, among other factors it deems appropriate:

- the related person's relationship to us and interest in the transaction;
- the material facts of the proposed transaction, including the proposed aggregate value of the transaction;
- the impact on a director or a director nominee's independence in the event the related person is a director or an immediate family member of the director or director nominee;
- the benefits to us of the proposed transaction;
- if applicable, the availability of other sources of comparable products or services; and
- an assessment of whether the proposed transaction is on terms that are comparable to the terms available to an unrelated third party or to employees generally.

The Audit Committee may only approve those transactions that are in, or are not inconsistent with, our best interests and those of our shareholders, as the Audit Committee determines in good faith.

Amended and Restated Operating Agreement

In connection with the completion of this offering, we will amend and restate Topco LLC's existing operating agreement, which we refer to as the "LLC Operating Agreement." The operations of Topco LLC and the rights and obligations of the LLC Unitholders will be set forth in the LLC Operating Agreement. See "Organizational Structure—Amended and Restated Operating Agreement of Topco LLC."

Registration Rights Agreement

In connection with this offering, we intend to enter into a registration rights agreement with MLSH 1 and MLSH 2. MLSH 1 and MLSH 2 will be entitled to request that we register their shares of capital stock on a long-form or short-form registration statement on one or more occasions in the future, which registrations may be "shelf registrations." MLSH 1 and MLSH 2 will be entitled to participate in certain of our registered offerings, subject to the restrictions in the registration rights agreement. We will pay expenses in connection with the exercise of these rights. The registration rights described in this paragraph apply to (1) shares of our Class A common stock held by MLSH 1 and MLSH 2 and their affiliates, and (2) any of our capital stock (or that of our subsidiaries) issued or issuable with respect to the Class A common stock described in clause (1) with respect to any dividend, distribution, recapitalization, reorganization, or certain other corporate transactions ("Registrable Securities"). These registration rights are also for the benefit of any subsequent holder of Registrable Securities; provided that any particular securities will cease to be Registrable Securities when they have been sold in a registered public offering, sold in compliance with Rule 144 of the Securities Act or repurchased by us or our subsidiaries. In addition, with the consent of the company and holders of a majority of Registrable Securities, certain Registrable Securities will cease to be Registrable Securities if they can be sold without limitation under Rule 144 of the Securities Act.

Tax Receivable Agreement

We intend to enter into a Tax Receivable Agreement with MLSH 1 and MLSH 2 that will provide for the payment from time to time by us to MLSH 1 and MLSH 2, collectively, of 85% of the amount of the benefits, if

any, that we realize or, under certain circumstances, are deemed to realize as a result of (i) certain increases in the tax basis of assets of Topco LLC and its subsidiaries resulting from purchases or exchanges of LLC Units, (ii) certain tax attributes of the Blocker Entities, Topco LLC and subsidiaries of Topco LLC that existed prior to this offering and (iii) certain other tax benefits related to our entering into the Tax Receivable Agreement, including tax benefits attributable to payments that we make under the Tax Receivable Agreement. These payment obligations are obligations of Maravai LifeSciences Holdings, Inc. and not of Topco LLC. See "Organizational Structure—Tax Receivable Agreement."

Director Nomination Agreement

In connection with this offering, we will enter into a Director Nomination Agreement with GTCR. The Director Nomination Agreement will provide GTCR the right to designate: (i) all of the nominees for election to our Board for so long as GTCR controls % or more of the voting power of our stock entitled to vote generally in the election of directors; (ii) a number of directors (rounded up to the nearest whole number) equal to % of the total directors for so long as GTCR controls owns at least % and less than % of the voting power; (iii) a number of directors (rounded up to the nearest whole number) equal to % of the total directors for so long as GTCR controls at least % and less than % of the voting power; (iv) a number of directors (rounded up to the nearest whole number) equal to % of the total directors for so long as GTCR controls at least % and less than % of the voting power; and (v) one director for so long as GTCR controls at least % and less than % of the voting power. In each case, GTCR's nominees must comply with applicable law and stock exchange rules. In addition, GTCR shall be entitled to designate the replacement for any of its Board designees whose Board service terminates prior to the end of the director's term, regardless of GTCR's beneficial ownership at that time. GTCR shall also have the right to have its designees participate on committees of our Board proportionate to its stock ownership, subject to compliance with applicable law and stock exchange rules. The Director Nomination Agreement will also prohibit us from increasing or decreasing the size of our Board without the prior written consent of GTCR. This agreement will terminate at such time as GTCR controls less than % of the voting power.

Indemnification of Officers and Directors

Upon completion of this offering, we intend to enter into indemnification agreements with each of our officers, directors and director nominees. The indemnification agreements will provide the officers and directors with contractual rights to indemnification, expense advancement and reimbursement, to the fullest extent permitted under Delaware law. Additionally, we may enter into indemnification agreements with any new directors or officers that may be broader in scope than the specific indemnification provisions contained in Delaware law. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our officers and directors pursuant to the foregoing agreements, we have 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.

Relationship with GTCR

We have utilized GTCR, who upon completion of this offering will control the vote of all matters submitted to a vote of our shareholders, for certain services pursuant to an advisory services agreement. Under this agreement, GTCR provides us with financial and management consulting services in the areas of corporate strategy, budgeting for future corporate investments, acquisition and divestiture strategies and debt and equity financings. The advisory services agreement provides that we pay a $0.1 million quarterly management fee to GTCR for these services. We also reimburse GTCR for out-of-pocket expenses incurred while providing these services. The advisory services agreement also provides that we pay placement fees to GTCR of 1.0% of the gross amount of any debt or equity financings, including this offering.

We paid GTCR $0.6 million in each of the years ended December 31, 2019 and 2018. Following this offering, we may continue to engage GTCR from time to time, subject to compliance with our related party transactions policy.

During the year ended December 31, 2018, $52.0 million of capital distributions were made to the Class A unit holders of MLSC Holdings, LLC, including GTCR. No distributions were made to the Class A unit holders of MLSC Holdings, LLC during the year ended December 31, 2019.

Lease Arrangements

Cygnus Technologies, a subsidiary of Topco LLC., has an ongoing lease agreement for facilities in Southport, NC with an entity controlled by a close relative of the president of Cygnus Technologies. The close relative was also previously an employee of Cygnus Technologies who terminated their employment during the year ended December 31, 2018. The president of Cygnus Technologies also personally financed a loan to this entity, which was used to acquire the property leased by Cygnus Technologies. The lease terms are considered to be consistent with market rates.

Cygnus Technologies paid $0.2 million of rent under this lease agreement for each of the years ended December 31, 2019 and 2018.

Noncontrolling Interest

The noncontrolling interest in MLSC Holdings, LLC, the parent of Cygnus Technologies, represents equity interest that was retained by the shareholders of the MLSC Holdings, LLC entity prior to its acquisition by Maravai. The president of Cygnus Technologies is the majority owner of the noncontrolling interest.

Directed Share Program

At our request, the underwriters have reserved up to shares of our Class A common stock, or % of the shares of our Class A common stock to be offered by this prospectus for sale, at the initial public offering price, for sale to certain individuals through a directed share program, including our directors, certain employees and certain other individuals identified by management.

DESCRIPTION OF CERTAIN INDEBTEDNESS

Set forth below is a summary of the terms of the agreements governing certain of our outstanding indebtedness. This summary is not a complete description of all of the terms of the agreements. The agreements setting forth the terms and conditions of certain of our outstanding indebtedness are filed as exhibits to the registration statement of which this prospectus forms a part.

New Credit Agreement

On October 19, 2020, Maravai Intermediate Holdings, LLC ("Intermediate"), a wholly-owned subsidiary of ours, along with its subsidiaries Vector Laboratories, TriLink BioTechnologies and Cygnus Technologies (together with Intermediate, the "Borrowers"), entered into a credit agreement (the "New Credit Agreement") with Morgan Stanley Senior Funding, Inc. and certain other lenders, providing for a $600.0 million term loan (the "New Term Loan") and a $180.0 million revolving credit facility (the "New Revolving Credit Facility"). The entire amount of the New Term Loan was used on October 19, 2020 to refinance outstanding senior secured credit facilities, to make a distribution to MLSH 1, to repurchase minority interests at one of our subsidiaries, to pay transaction costs and expenses and for general corporate purposes. As of October 19, 2020, no amounts have been drawn against the New Revolving Credit Facility.

Interest Rates and Fees

Borrowings under the New Credit Agreement bear interest (a) initially, at the Borrowers' option, either (i) at the Base Rate plus 3.25% per annum or (ii) the Adjusted Eurocurrency Rate plus 4.25% per annum and (b) after delivery of the compliance certificate for the fiscal quarter ending March 31, 2021, at the Borrowers' option, either at (i) the Base Rate plus the applicable margin of 3.25% per annum with a stepdown to 3.00% based on the Borrowers' consolidated first lien net leverage ratio or (ii) the Adjusted Eurocurrency Rate plus the margin of 4.25% per annum with a stepdown to 4.00% based on the Borrowers' consolidated first lien net leverage ratio. The "Base Rate" is defined as the greatest of (i) the rate last quoted by The Wall Street Journal as the "Prime Rate" in the United States, (ii) the NYFRB Rate plus 0.50% per annum, (iii) the Adjusted Eurocurrency Rate for a one month interest period plus 1% per annum, (iv) solely with respect to the initial term loans, 2.00% per annum and (v) for any loans that are not initial term loans, 1.00% per annum. The "Adjusted Eurocurrency Rate" is defined as (a) with respect to the initial term loans, the greater of (i) the Eurocurrency Rate for such interest period multiplied by the Statutory Reserve Rate (as such term is defined in the New Credit Agreement), and (ii) 1.00% and (b) with respect to the revolving loans, the greater of (i) the Eurocurrency Rate for such interest period multiplied by the Statutory Reserve Rate (as such term is defined in the New Credit Agreement), and (ii) 0%. The "Eurocurrency Rate" is defined as LIBOR as displayed by Reuters (which if negative will be deemed to be 0%) or if LIBOR is unavailable, a rate based on historical LIBOR as determined by the administrative agent under the New Credit Agreement.

Accrued interest under the New Credit Agreement is payable (a) quarterly in arrears with respect to Base Rate loans, (b) at the end of each interest rate period (or at each three-month interval in the case of loans with interest periods greater than three months) with respect to Eurocurrency Rate loans, (c) on the date of any repayment or prepayment and (d) at maturity (whether by acceleration or otherwise). An annual commitment fee is applied to the daily unutilized amount under the New Revolving Credit Facility at 0.375% per annum, with one stepdown to 0.25% per annum based on the Borrowers' consolidated first lien net leverage ratio.

Voluntary and Mandatory Prepayments

The New Term Loan contains prepayment provisions that allow the Borrowers, at their option, to prepay all or a portion of the principal amount at any time. Subject to certain exceptions and limitations and reinvestment rights, the Borrowers are required to repay borrowings under the New Term Loan and New Revolving Credit Facility with the proceeds of certain occurrences, such as the incurrence of debt and certain asset sales or

dispositions. The New Credit Agreement also requires mandatory prepayments to be calculated commencing with the fiscal year ending December 31, 2021 upon certain excess cash flow as defined in the terms of the agreement.

Final Maturity and Amortization

The New Term Loan becomes repayable in quarterly payments of $1.5 million beginning on March 31, 2021, with all remaining outstanding principal due at maturity on October 19, 2027. All outstanding amounts drawn under the New Revolving Credit Facility will become due at maturity on October 19, 2025.

Guarantees

Borrowings under the New Credit Agreement are unconditionally guaranteed by Topco LLC, together with the existing and future material domestic subsidiaries of Topco LLC (subject to certain exceptions), as specified in the respective guaranty agreements.

Security

Borrowings under the New Credit Agreement are secured by a first-priority lien and security interest in substantially all of the assets (subject to certain exceptions) of existing and future material domestic subsidiaries of Topco LLC that are loan parties.

Certain Covenants

The New Credit Agreement requires that, as of the end of any fiscal quarter where the aggregate amount of letter of credit obligations and revolving credit loans under the New Revolving Credit Facility outstanding as of such date (excluding cash collateralized letters of credit and letter of credit obligations in an aggregate amount not in excess of $5.0 million at any time outstanding and for the first four fiscal quarters ending after October 19, 2020, borrowings of revolving credit loans made on October 19, 2020) exceeds 35% of the aggregate amount of all revolving credit commitments under the New Revolving Credit Facility in effect as of such date, the Borrower's consolidated first lien net leverage ratio shall not be greater than 8.00 to 1.00. The New Credit Agreement also contains negative and affirmative covenants, including covenants that restrict the ability of the Borrowers and their subsidiaries to, among other things, incur or prepay existing certain indebtedness, pay dividends or distributions, dispose of assets, engage in mergers and consolidations, make acquisitions or other investments and make changes in the nature of the business. The New Credit Agreement also requires Intermediate to provide audited consolidated financial statements to the lenders no later than 120 days after year-end.

Events of Default

The New Credit Agreement contains certain objective events of default, including, without limitation, nonpayment of principal, interest or other obligations, violation of the covenants, insolvency, court-ordered judgments and change in control.

DESCRIPTION OF CAPITAL STOCK

The following is a description of the material terms of our amended and restated certificate of incorporation and amended and restated bylaws, each as will be in effect at or prior to the consummation of this offering. The following description may not contain all of the information that is important to you. To understand the material terms of our Class A common stock, you should read our amended and restated certificate of incorporation and amended and restated bylaws, copies of which are or will be filed with the SEC as exhibits to the registration statement, of which this prospectus is a part.

General

At or prior to the consummation of this offering, we will file our amended and restated certificate of incorporation (our "certificate"), and we will adopt our amended and restated by-laws (our "bylaws"). Our certificate will authorize capital stock consisting of:

- shares of Class A common stock, par value $0.01 per share;
- shares of Class B common stock, par value $0.01 per share; and
- shares of preferred stock, with a par value per share that may be established by the Board in the applicable certificate of designations.

We are selling shares of Class A common stock in this offering (shares if the underwriters exercise in full their option to purchase additional shares). All shares of our Class A common stock outstanding upon consummation of this offering will be fully paid and non-assessable. We are issuing shares of Class B common stock to MLSH 1 simultaneously with this offering (shares if the underwriters exercise in full their option to purchase additional shares of our Class A common stock). Upon completion of this offering, we expect to have shares of Class A common stock outstanding (shares if the underwriters exercise in full their option to purchase additional shares) and shares of Class B common stock outstanding (shares if the underwriters exercise in full their option to purchase additional shares).

The following summary describes the material provisions of our capital stock and is qualified in its entirety by reference to the certificate and our bylaws and to the applicable provisions of the DGCL. We urge you to read our certificate and our bylaws, which are included as exhibits to the registration statement of which this prospectus forms a part.

Certain provisions of our certificate and our bylaws summarized below may be deemed to have an anti-takeover effect and may delay or prevent a tender offer or takeover attempt that a shareholder might consider in its best interest, including those attempts that might result in a premium over the market price for the shares of common stock.

Class A Common Stock

Holders of shares of our Class A common stock are entitled to one vote for each share held of record on all matters submitted to a vote of shareholders. The holders of our Class A common stock do not have cumulative voting rights in the election of directors.

Holders of shares of our Class A common stock will vote together with holders of our Class B common stock as a single class on all matters presented to our shareholders for their vote or approval, except for certain amendments to our certificate of incorporation described below or as otherwise required by applicable law or the certificate.

Holders of shares of our Class A common stock are entitled to receive dividends when and if declared by our Board out of funds legally available therefor, subject to any statutory or contractual restrictions on the payment of dividends and to any restrictions on the payment of dividends imposed by the terms of any outstanding preferred stock.

Upon our dissolution or liquidation or the sale of all or substantially all of our assets, after payment in full of all amounts required to be paid to creditors and to the holders of preferred stock having liquidation preferences, if any, the holders of shares of our Class A common stock will be entitled to receive pro rata our remaining assets available for distribution.

Holders of shares of our Class A common stock do not have preemptive, subscription, redemption or conversion rights. There will be no redemption or sinking fund provisions applicable to the Class A common stock.

Class B Common Stock

Holders of shares of our Class B common stock are entitled to one vote for each share held of record on all matters submitted to a vote of shareholders. The holders of our Class B common stock do not have cumulative voting rights in the election of directors.

Holders of shares of our Class B common stock will vote together with holders of our Class A common stock as a single class on all matters presented to our shareholders for their vote or approval, except for certain amendments to our certificate of incorporation described below or as otherwise required by applicable law or the certificate.

Holders of our Class B common stock do not have any right to receive dividends or to receive a distribution upon dissolution or liquidation or the sale of all or substantially all of our assets. Additionally, holders of shares of our Class B common stock do not have preemptive, subscription, redemption or conversion rights. There will be no redemption or sinking fund provisions applicable to the Class B common stock. Any amendment of our certificate of incorporation that gives holders of our Class B common stock (1) any rights to receive dividends or any other kind of distribution, (2) any right to convert into or be exchanged for Class A common stock or (3) any other economic rights will require, in addition to shareholder approval, the affirmative vote of holders of our Class A common stock voting separately as a class.

Upon the consummation of this offering, MLSH 1 will own 100% of our outstanding Class B common stock.

Preferred Stock

Upon the consummation of this offering, we will have no shares of preferred stock outstanding.

Under the terms of our certificate that will become effective at or prior to the consummation of this offering, our Board is authorized to direct us to issue shares of preferred stock in one or more series without shareholder approval. Our Board has the discretion to determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock.

The purpose of authorizing our Board to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a shareholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a majority of our outstanding voting stock. Additionally, the issuance of preferred stock may adversely affect the holders of our Class A common stock by restricting dividends on the Class A common stock, diluting the voting power of the Class A common stock or subordinating the liquidation rights of the Class A 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 Class A common stock.

Forum Selection

Our 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 (or, if the Court of Chancery does not have jurisdiction, the United States District Court for the District of Delaware) will be the sole and exclusive forum for any state court action for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our shareholders, (3) any action asserting a claim against Maravai LifeSciences Holdings, Inc. or any director or officer thereof arising pursuant to any provision of the DGCL, our certificate of incorporation or our bylaws or (4) any other action asserting a claim against Maravai LifeSciences Holdings, Inc. or any director or officer thereof that is governed by the internal affairs doctrine; provided that, for the avoidance of doubt, the forum selection provision that identifies the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation, including any "derivative action," will not apply to suits to enforce a duty or liability created by the Securities Act, the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and to have consented to the provisions of our certificate of incorporation described above. Although we believe these provisions benefit us by providing increased consistency in the application of Delaware law for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against us or our directors and officers. Alternatively, if a court were to find the forum selection provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable, we may incur additional costs associated with having to litigate such action in other jurisdictions, which could have an adverse effect on our business, financial condition, results of operations, cash flows and prospects and result in a diversion of the time and resources of our employees, management and board of directors.

Anti-Takeover Provisions

Our certificate, bylaws and the DGCL 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. 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 to maximize shareholder value in connection with any unsolicited offer to acquire us. However, these provisions may have an anti-takeover effect and may delay, deter or prevent a merger or acquisition of us by means of a tender offer, a proxy contest or other takeover attempt that a shareholder might consider in its best interest, including those attempts that might result in a premium over the prevailing market price for the shares of Class A common stock held by shareholders.

These provisions include:

Classified Board. Our certificate will provide that our Board will be divided into three classes of directors, with the classes as nearly equal in number as possible, and with the directors serving three-year terms. As a result, approximately one-third of our Board will be elected each year. The classification of the directors will have the effect of making it more difficult for shareholders to change the composition of our Board. Our certificate will also 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 exclusively pursuant to a resolution adopted by our Board. Upon completion of this offering, we expect that our Board will have members.

Shareholder Action by Written Consent. Our certificate will preclude shareholder action by written consent at any time when GTCR controls, in the aggregate, less than % in voting power of our outstanding common stock.

Special Meetings of Shareholders. Our certificate and bylaws will provide that, except as required by law, special meetings of our shareholders may be called at any time only by or at the direction of our Board or the chairman of our Board; provided, however, at any time when GTCR controls, in the aggregate, at least 35% in

voting power of our outstanding common stock, special meetings of our shareholders shall also be called by our Board or the chairman of our Board at the request of GTCR. Our 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 us.

Advance Notice Procedures. Our bylaws will establish advance notice procedures for shareholder proposals and nomination of candidates for election as directors, other than nominations made by or at the direction of our Board or a committee of our Board, and provided, however, that at any time when GTCR controls, in the aggregate, at least 10% of the voting power of our outstanding common stock, such advance notice procedure will not apply to GTCR. Shareholders at an annual meeting will only be able to consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of our Board or by a shareholder who was a shareholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has given our Secretary timely written notice, in proper form, of the shareholder's intention to bring that business before the meeting. Although the bylaws will not give our Board the power to approve or disapprove shareholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, the bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of us. These provisions do not apply to nominations by GTCR pursuant to the Director Nomination Agreement. See "Certain Relationships and Related Party Transactions—Director Nomination Agreement" for more details with respect to the Director Nomination Agreement.

Removal of Directors; Vacancies. Our certificate will provide that a director nominated by GTCR may be removed with or without cause by GTCR; provided, however, that at any time when GTCR controls less than 40% in voting power of our outstanding common stock, all directors, including those nominated by GTCR, 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 capital stock of the company entitled to vote thereon, voting together as a single class. In addition, our certificate will also provide that, subject to the rights granted to one or more series of preferred stock then outstanding, any newly created directorship on our Board that results from an increase in the number of directors and any vacancies on our Board 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 (and not by the shareholders).

Supermajority Approval Requirements. Our certificate and bylaws will provide that our Board is expressly authorized to make, alter, amend, change, add to, rescind or repeal, in whole or in part, our bylaws without a shareholder vote in any matter not inconsistent with the laws of the State of Delaware and our certificate. For as long as GTCR controls, in the aggregate, at least 50% in voting power of our outstanding common stock, any amendment, alteration, rescission or repeal of our bylaws by our shareholders will require the affirmative vote of a majority in voting power of the outstanding shares of our stock entitled to vote on such amendment, alteration, change, addition, rescission or repeal. At any time when GTCR controls, in the aggregate, less than 50% in voting power of our outstanding common stock, any amendment, alteration, rescission or repeal of our bylaws by our shareholders 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 the 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 requires a greater percentage.

Our certificate will provide that the following provisions in our certificate may be amended, altered, repealed or rescinded only by the affirmative vote of the holders of at least 66 2/3% (as opposed to a majority threshold) in voting power of all the then-outstanding shares of stock entitled to vote thereon, voting together as a single class:

- the provision requiring a 66 2/3% supermajority vote for shareholders 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 entering into business combinations with interested shareholders;
- the provisions regarding shareholder action by written consent;
- the provisions regarding calling special meetings of shareholders;
- the provisions regarding filling vacancies on our Board and newly created directorships;
- the provision establishing the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation;
- 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, the lack of cumulative voting and the supermajority voting requirements will make it more difficult for our existing shareholders to replace our Board as well as for another party to obtain control of us by replacing our Board. Because our Board has the power to retain and discharge our officers, these provisions could also make it more difficult for existing shareholders or another party to effect a change in management.

Authorized but Unissued Shares. Our authorized but unissued shares of common stock and preferred stock will be available for future issuance without shareholder approval, subject to stock exchange rules. These additional shares of capital stock may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. One of the effects of the existence of authorized but unissued common stock or preferred stock may be to enable our Board to issue shares of capital stock to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of the company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of our management and possibly deprive our shareholders of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

Business Combinations. Upon completion of this offering, we will not be subject to the provisions of Section 203 of the DGCL. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested shareholder" for a three-year period following the time that the person becomes an interested shareholder, unless the business combination is approved in a prescribed manner. A "business combination" includes, among other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested shareholder. An "interested shareholder" is a person who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested shareholder status, 15% or more of the corporation's voting stock.

Under Section 203, a business combination between a corporation and an interested shareholder is prohibited unless it satisfies one of the following conditions: (1) before the shareholder became an interested shareholder, the Board approved either the business combination or the transaction which resulted in the shareholder becoming an interested shareholder; (2) upon consummation of the transaction which resulted in the shareholder becoming an interested shareholder, the interested shareholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances; or (3) at or after the time the shareholder became an interested shareholder, the business combination was approved by the Board and authorized at an annual or special meeting of the shareholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested shareholder.

A Delaware corporation may "opt out" of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting from a shareholders' amendment approved by at least a majority of the outstanding voting shares.

We will opt out of Section 203; however, our certificate will contain similar provisions providing that we may not engage in certain "business combinations" with any "interested shareholder" for a three-year period following the time that the shareholder became an interested shareholder, unless:

- prior to such time, our Board approved either the business combination or the transaction which resulted in the shareholder becoming an interested shareholder;
- upon consummation of the transaction that resulted in the shareholder becoming an interested shareholder, the interested shareholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, excluding certain shares; or
- at or subsequent to that time, the business combination is approved by our Board 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 shareholder.

Under certain circumstances, this provision will make it more difficult for a person who would be an "interested shareholder" to effect various business combinations with us for a three-year period. This provision may encourage companies interested in acquiring us to negotiate in advance with our Board because the shareholder approval requirement would be avoided if our Board approves either the business combination or the transaction which results in the shareholder becoming an interested shareholder. These provisions also may have the effect of preventing changes in our Board and may make it more difficult to accomplish transactions which shareholders may otherwise deem to be in their best interests.

Our certificate of incorporation will provide that GTCR, and any of its direct or indirect transferees and any group as to which such persons are a party, do not constitute "interested shareholders" for purposes of this provision.

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 shareholders for monetary damages for breaches of directors' fiduciary duties, subject to certain exceptions. Our certificate 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 will be to eliminate the rights of us and our shareholders, through shareholders' derivative suits on our behalf, to recover monetary damages from a director for breach of fiduciary duty as a director, including breaches resulting from grossly negligent behavior. However, exculpation will not apply to any director if the director has acted in bad faith, knowingly or intentionally violated the law, authorized illegal dividends or redemptions or derived an improper benefit from his or her actions as a director.

Our 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 officers.

The limitation of liability, indemnification and advancement provisions that will be included in our certificate of incorporation and bylaws may discourage shareholders from bringing a lawsuit against directors for breaches 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 shareholders. In addition, your investment 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.

There is currently no pending material litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought.

Corporate Opportunity Doctrine

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 shareholders. Our certificate 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, specified business opportunities that are from time to time presented to certain of our officers, directors or shareholders or their respective affiliates, other than those officers, directors, shareholders or affiliates who are our or our subsidiaries' employees. Our certificate will provide that, to the fullest extent permitted by law, none of GTCR or any director who is not employed by us (including any non-employee director who serves as one of our officers in both his or her director and officer capacities) or its, his or her affiliates will have any duty to refrain from (1) engaging in a corporate opportunity in the same or similar lines of business in which we or our affiliates now engage or propose to engage or (2) otherwise competing with us or our affiliates. In addition, to the fullest extent permitted by law, in the event that GTCR or any non-employee director acquires knowledge of a potential transaction or other business opportunity which may be a corporate opportunity for itself, himself or herself or its, 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 certificate 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 Maravai LifeSciences Holdings, Inc. 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 certificate, we have sufficient financial resources to undertake the opportunity and the opportunity would be in line with our business.

Dissenters' Rights of Appraisal and Payment

Under the DGCL, with certain exceptions, our shareholders will have appraisal rights in connection with a merger or consolidation of Maravai LifeSciences Holdings, Inc. Pursuant to the DGCL, shareholders 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 of capital stock as determined by the Delaware Court of Chancery.

Shareholders' Derivative Actions

Under the DGCL, any of our shareholders may bring an action in our name to procure a judgment in our favor, also known as a derivative action, provided that the shareholder bringing the action is a holder of our shares of capital stock at the time of the transaction to which the action relates or such shareholder's stock thereafter devolved by operation of law.

Transfer Agent and Registrar

The transfer agent and registrar for our Class A common stock will be . Its address is .

Listing

We intend to apply to have our Class A common stock approved for listing on The Nasdaq Global Select Market under the trading symbol "MRVI."

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our Class A common stock. Future sales of substantial amounts of our Class A common stock in the public market (including shares of our Class A common stock issuable upon redemption or exchange of LLC Units), or the perception that such sales may occur, could adversely affect the prevailing market price of our Class A common stock. No prediction can be made as to the effect, if any, future sales of shares, or the availability of shares for future sales, will have on the prevailing market price of our Class A common stock from time to time. The number of shares available for future sale in the public market is subject to legal and contractual restrictions, some of which are described below. The expiration of these restrictions will permit sales of substantial amounts of our Class A common stock in the public market, or could create the perception that these sales may occur, which could adversely affect the prevailing market price of our Class A common stock. These factors could also make it more difficult for us to raise funds through future offerings of Class A common stock or other equity or equity-linked securities.

Sale of Restricted Shares

Upon completion of this offering, we will have shares of Class A common stock outstanding (shares if the underwriters exercise in full their option to purchase additional shares). Of these shares of Class A common stock, the shares of Class A common stock being sold in this offering, plus any shares sold upon exercise of the underwriters' option to purchase additional shares, will be freely tradable without restriction under the Securities Act of 1933, as amended (the "Securities Act"), except for any such shares which may be held or acquired by an "affiliate" of ours, as that term is defined in Rule 144 promulgated under the Securities Act ("Rule 144"), which shares will be subject to the volume limitations and other restrictions of Rule 144 described below. The remaining shares of Class A common stock (or shares of Class A common stock, including shares of Class A common stock issuable upon redemption or exchange of the LLC Units, as described below) will be "restricted securities," as that phrase is defined in Rule 144, and may be resold only after registration under the Securities Act or pursuant to an exemption from such registration, including, among others, the exemptions provided by Rule 144 and 701 under the Securities Act, which rules are summarized below. These remaining shares of Class A common stock that will be outstanding upon completion of this offering will be available for sale in the public market after the expiration of market stand-off agreements with us and the lock-up agreements described in "Underwriters," taking into account the provisions of Rules 144 and 701 under the Securities Act.

In addition, pursuant to the Exchange Agreement, MLSH 1 may from time to time after the consummation of this offering, exchange its LLC Units for shares of Class A common stock on a one-for-one basis, or, at our election, for cash, from a substantially concurrent public offering or private sale (based on the price of our Class A common stock in such public offering or private sale). MLSH 1 will also be required to deliver to us a number of shares of Class B common stock equivalent to the number of shares of Class A common stock being exchanged to effectuate an exchange. Any shares of Class B common stock so delivered will be cancelled. Upon consummation of this offering, MLSH 1 will hold LLC Units, all of which will be exchangeable for shares of our Class A common stock or, at our election, for cash from a substantially concurrent public offering or private sale (based on the price of our Class A common stock in such public offering or private sale). The shares of Class A common stock we issue upon such exchanges would be "restricted securities" as defined in Rule 144 unless we register such issuances. However, we intend to enter into a registration rights agreement with MLSH 1 that will require us to register these shares of Class A common stock, subject to certain conditions. See "—Registration Rights" and "Certain Relationships and Related Party Transactions—Registration Rights Agreement."

Under the terms of the LLC Operating Agreement, except pursuant to a valid exchange under the terms of the Exchange Agreement, all of the LLC Units received by MLSH 1 in the Organizational Transactions will be subject to restrictions on disposition.

Rule 144

Persons who became the beneficial owner of shares of our Class A common stock prior to the completion of this offering may not sell their shares until the earlier of (1) the expiration of a six-month holding period, if we have been subject to the reporting requirements of the Exchange Act and have filed all required reports for at least 90 days prior to the date of the sale, or (2) a one-year holding period.

At the expiration of the six-month holding period, a person who was not one of our affiliates at any time during the three months preceding a sale would be entitled to sell an unlimited number of shares of our Class A common stock provided current public information about us is available, and a person who was one of our affiliates at any time during the three months preceding a sale would be entitled to sell within any three-month period only a number of shares of Class A common stock that does not exceed the greater of either of the following:

- 1% of the number of shares of our Class A common stock then outstanding, which will equal approximately shares immediately after this offering, based on the number of shares of our Class A common stock outstanding after completion of this offering; or
- the average weekly trading volume of our Class A common stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

At the expiration of the one-year holding period, a person who was not one of our affiliates at any time during the three months preceding a sale would be entitled to sell an unlimited number of shares of our Class A common stock without restriction. A person who was one of our affiliates at any time during the three months preceding a sale would remain subject to the volume restrictions described above.

Sales under Rule 144 by our affiliates are also subject to 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 Class A common stock after this offering.

Rule 701

In general, under Rule 701, any of our employees, directors, officers, consultants or advisors who acquired shares of capital stock from us in connection with a compensatory stock or option plan or other compensatory written agreement before the effective date of this offering are, subject to applicable lock-up restrictions, eligible to resell such shares in reliance upon Rule 144 beginning 90 days after the date of this prospectus. If such person is not an affiliate and was not our affiliate at any time during the preceding three months, the sale may be made subject only to the manner-of-sale restrictions of Rule 144. If such a person is an affiliate, the sale may be made under Rule 144 without compliance with holding period requirements under Rule 144, but subject to the other Rule 144 restrictions described above.

Stock Plans

We intend to file one or more registration statements on FormS-8 under the Securities Act to register shares of our Class A common stock issued or reserved for issuance under the 2020 Plan. The first such registration statement is expected to be filed soon after the date of this prospectus and will automatically become effective upon filing with the SEC. Accordingly, shares of Class A common stock registered under such registration statement will be available for sale in the open market following the effective date, unless such shares are subject to vesting restrictions with us, Rule 144 restrictions applicable to our affiliates or the lock-up restrictions described below.

Lock-Up Agreements

We, each of our officers and directors and other shareholders and optionholders owning substantially all of our Class A common stock and options or other securities to acquire Class A common stock have agreed that,

without the prior written consent of on behalf of the underwriters, we and they will not, subject to limited exceptions, directly or indirectly sell or dispose of any of the shares of Class A common stock or securities convertible into or exchangeable for, or that represent the right to receive, shares of common stock, including LLC Units, during the period from the date of the first public filing of the registration statement on Form S-1 filed in connection with this offering continuing through the date that is 180 days after the date of this prospectus. The lock-up restrictions and specified exceptions are described in more detail under "Underwriters." The representatives named above may, in their sole discretion, release all or any portion of the securities subject to these lock-up agreements. See "Underwriters."

Prior to the consummation of the offering, certain of 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 thelock-up agreements relating to the offering described above.

Following the lock-up periods set forth in the agreements described above, and assuming that the representatives of the underwriters do not release any parties from these agreements, all of the shares of our Class A common stock that are restricted securities or are held by our affiliates as of the date of this prospectus will be eligible for sale in the public market in compliance with Rule 144 under the Securities Act.

Registration Rights Agreement

We intend to enter into a Registration Rights Agreement with MLSH 1 and MLSH 2 in connection with this offering. The Registration Rights Agreement will provide MLSH 1 and MLSH 2 certain registration rights whereby, following our initial public offering and the expiration of any related lock-up period, MLSH 1 and MLSH 2 can require us to register under the Securities Act shares of Class A common stock (including shares issuable to MLSH 1 upon exchange of its LLC Units). The Registration Rights Agreement will also provide for piggyback registration rights for MLSH 1 and MLSH 2. See "Certain Relationships and Related Party Transactions—Registration Rights Agreement."

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax consequences toNon-U.S. Holders (as defined below) of the ownership and disposition of our Class A common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax consequences. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. This discussion is based on the Code, Treasury regulations promulgated thereunder (the "Treasury Regulations"), judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service (the "IRS"), in each case as in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder of our common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to those discussed below regarding the tax consequences of the purchase, ownership and disposition of our Class A common stock.

This discussion is limited to Non-U.S. Holders that hold our Class A common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder's particular circumstances, including the impact of the Medicare tax on net investment income or the alternative minimum tax, or the consequences to persons subject to special tax accounting rules as a result of any item of gross income with respect to our Class A common stock being taken into account in an applicable financial statement. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the U.S.;
- persons holding our common stock as part of a straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies and other financial institutions;
- real estate investment trusts or regulated investment companies;
- brokers, dealers or certain electing traders in securities that mark their securities positions to market for tax purposes;
- "controlled foreign corporations," "passive foreign investment companies," and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- "qualified foreign pension funds" (within the meaning of Section 897(I)(2) of the Code and entities, all of the interests of which are held by qualified foreign pension funds); and
- tax-qualified retirement plans.

If any partnership or arrangement classified as a partnership for U.S. federal income tax purposes holds our Class A common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our Class A common stock and partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE OWNERSHIP AND DISPOSITION OF OUR CLASS A COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a Non-U.S. Holder

For purposes of this discussion, a "Non-U.S. Holder" is any beneficial owner of our Class A common stock that is neither a "United States person" nor an entity treated as a partnership for U.S. federal income tax purposes. A United States person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the U.S.;
- a corporation, or an entity treated as a corporation for U.S. federal income tax purposes, created or organized under the laws of the U.S. any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (1) is subject to the primary supervision of a U.S. court and the control of one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code), or (2) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

Distributions

As described in the section entitled "Dividend Policy," we do not anticipate declaring or paying dividends to holders of our Class A common stock in the foreseeable future. However, if we do make distributions of cash or property on our Class A common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will first constitute non-taxable returns of capital and be applied against and reduce a Non-U.S. Holder's adjusted tax basis in its Class A common stock, but not below zero. Any excesses will be treated as capital gains and will be treated as described below under "Sale or Other Taxable Disposition."

Subject to the discussion below on effectively connected income, backup withholding, and the Foreign Account Tax Compliance Act, dividends paid to aNon-U.S. Holder of our Class A common stock will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided that the Non-U.S. Holder will be required to furnish to the applicable withholding agent prior to the payment of dividends a valid IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate in order to avoid withholding with respect to such tax). A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the U.S. (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the U.S. to which such dividends are attributable), theNon-U.S. Holder will be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the U.S.

Any such effectively connected dividends will be subject to U.S. federal income tax on anet-income basis at the regular graduated rates. ANon-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on its effectively connected earnings and profits (as adjusted for certain items), which will include such effectively connected dividends. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or Other Taxable Disposition

Subject to the discussion below on backup withholding and the Foreign Account Tax Compliance Act, aNon-U.S. Holder generally will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our Class A common stock unless:

- the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the U.S. (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the U.S. to which such gain is attributable);
- the Non-U.S. Holder is a nonresident alien individual present in the U.S. for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our common stock constitutes a U.S. real property interest (a "USRPI"), by reason of our status as a U.S. real property holding corporation (a "USRPHC") for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. ANon-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on its effectively connected earnings and profits (as adjusted for certain items), which will include such effectively connected gain.

A Non-U.S. Holder described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on any gain derived from the disposition, which may generally be offset by U.S. source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the U.S.), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a Non-U.S. Holder of our common stock will not be subject to U.S. federal income tax if our Class A common stock is "regularly traded on an established securities market," as defined by applicable Treasury Regulations, during the calendar year in which the disposition occurs, and such Non-U.S. Holder has owned, actually and constructively, five percent or less of our Class A common stock throughout the shorter of (1) the five-year period ending on the date of the sale or other taxable disposition and (2) the Non-U.S. Holder's holding period. If we were to become a USRPHC and our Class A common stock were not considered to be "regularly traded on an established securities market" during the calendar year in which the relevant disposition by a Non-U.S. Holder occurred, such Non-U.S. Holder (regardless of the percentage of stock owned) would be subject to U.S. federal income tax on a sale or other taxable disposition of our Class A common stock and a 15% withholding tax would apply to the gross proceeds from such disposition.

Non-U.S. Holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Payments of dividends on our Class A common stock generally will not be subject to backup withholding, provided the applicable withholding agent does not have actual knowledge or reason to know the Non-U.S. Holder is a United States person and the Non-U.S. Holder either certifies its non-U.S. status, such as by furnishing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI, or otherwise establishes an exemption. However, information returns are required to be filed with the IRS in connection with any dividends on our Class A common stock paid to the Non-U.S. Holder, regardless of whether any tax was actually withheld. In addition, proceeds of the sale or other taxable disposition of our common stock within the U.S. or conducted through certain U.S.-related brokers generally will not be subject to backup withholding or information reporting if the applicable withholding agent receives the certification described above and does not have actual knowledge or reason to know that such Non-U.S. Holder is a United States person, or the Non-U.S. Holder otherwise establishes an exemption. If a Non-U.S. Holder does not provide the certification described above or the applicable withholding agent has actual knowledge or reason to know that such Non-U.S. Holder is a United States person, payments of dividends or of proceeds of the sale or other taxable disposition of our common stock may be subject to backup withholding at a rate currently equal to 24% of the gross proceeds of such dividend, sale, or taxable disposition. Proceeds of a disposition of our Class A common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Sections 1471 through 1474 of the Code and the Treasury regulations and administrative guidance promulgated thereunder (commonly referred to as the "Foreign Account Tax Compliance Act" or "FATCA") generally impose withholding at a rate of 30% in certain circumstances on dividends in respect of securities which are held by or through certain foreign financial institutions (including investment funds), unless any such institution (i) enters into, and complies with, an agreement with the IRS to report, on an annual basis, information with respect to interests in, and accounts maintained by, the institution that are owned by certain U.S. persons and by certain non-U.S. entities that are wholly or partially owned by U.S. persons and to withhold on certain payments, or (ii) if required under an intergovernmental agreement between the United States and an applicable foreign country, reports such information to its local tax authority, which will exchange such information with the U.S. authorities. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. Accordingly, the entity through which shares of our Class A common stock are held will affect the determination of whether such withholding is required. Similarly, dividends in respect of our Class A common stock held by an investor that is a non-financial non-U.S. entity that does not qualify under certain exceptions will generally be subject to withholding at a rate of 30%, unless such entity either (i) certifies to the applicable withholding agent that such entity does not have any "substantial United States owners" or (ii) provides certain information regarding the entity's "substantial United States owners," which will in turn be provided to the U.S. Department of Treasury. Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our Class A common stock.

UNDERWRITERS

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. LLC, Jefferies LLC and Goldman Sachs & Co. LLC are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares of Class A common stock indicated below:

Name	Number of Shares
Morgan Stanley & Co. LLC	
Jefferies LLC	
Goldman Sachs & Co. LLC	
BofA Securities, Inc.	
Credit Suisse Securities (USA) LLC	
UBS Securities LLC	
Robert W. Baird & Co. Incorporated	
William Blair & Company, L.L.C.	
Total:	

The underwriters and the representatives are collectively referred to as the "underwriters" and the "representatives," respectively. The underwriters are offering the shares of Class A common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of Class A common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of Class A 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 of Class A common stock covered by the underwriters' option to purchase additional shares described below.

The underwriters initially propose to offer part of the shares of Class A 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 Class A common stock, the offering price and other selling terms may from time to time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of Class A common stock at the public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. 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 Class A common stock as the number listed next to the underwriter's name in the preceding table bears to the total number of shares of Class A 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 discounts and commissions, and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Per Share	Total	
		No Exercise	Full Exercise
Public offering price	$	$	$
Underwriting discounts and commissions to be paid by us	$	$	$
Proceeds, before expenses, to us	$	$	$

Perella Weinberg Partners LP ("Perella Weinberg"), a Financial Industry Regulatory Association, Inc. ("FINRA") member, is acting as our financial advisor in connection with the offering. We expect to pay Perella Weinberg, upon the successful completion of this offering, a fee of up to $ for its services. The services provided to us by Perella Weinberg include, among other things, an independent financial valuation analysis; assisting in drafting our positioning and investment thesis; assisting us in our interactions with the underwriters; and assisting us in crafting an appropriate aftermarket trading and investor relations strategy. Apart from Perella Weinberg's role as financial advisor in connection with this offering, we have had no other relationships with Perella Weinberg. Perella Weinberg will not sell or offer to sell any securities in this offering and will not identify, solicit or engage directly with potential investors in this offering. In addition, Perella Weinberg will not purchase any of the offered shares of Class A common stock.

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately $ million. We have agreed to reimburse the underwriters for expense relating to clearance of this offering with FINRA up to $.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of shares of Class A common stock offered by them.

We intend to apply to have our Class A common stock approved for listing on The Nasdaq Global Select Market under the trading symbol "MRVI."

We and all directors and officers and the holders of substantially all of our outstanding stock and stock options have agreed that, without the prior written consent of the representatives on behalf of the underwriters, we and they will not, and will not publicly disclose an intention to or cause any affiliate 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, including LLC Units ("Lock-Up Securities");
- file or confidentially submit any registration statement with the Securities and Exchange Commission 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 anyLock-Up Securities.

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 agrees that, without the prior written consent of the representatives 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.

The restrictions described in the immediately preceding paragraph to do not apply to:

- the sale of shares to the underwriters; or
- the issuance by Maravai LifeSciences Holdings, Inc. 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 Class A common stock acquired in open market transactions after the completion of the offering of the shares; provided that no filing under Section 16(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), is required or voluntarily made in connection with subsequent sales of the Class A 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 Maravai LifeSciences Holdings, Inc. pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of Class A common stock, provided that (i) such plan does not provide for the transfer of Class A 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 Maravai LifeSciences Holdings, Inc. regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of Class A common stock may be made under such plan during the restricted period.

The representatives, 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.

In order to facilitate the offering of the Class A common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the Class A 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 described above. 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 Class A 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 Class A common stock in the open market to stabilize the price of the Class A common stock. These activities may raise or maintain the market price of the Class A common stock above independent market levels or prevent or retard a decline in the market price of the Class A common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

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 Class A 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.

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.

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. 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 Class A common stock. The initial public offering price was determined by negotiations between us and the representatives. 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.

Directed Share Program

At our request, the underwriters have reserved up to shares of our Class A common stock, or % of the shares of our Class A common stock to be offered by this prospectus for sale, at the initial public offering price, for sale to certain individuals through a directed share program, including our directors, certain employees and certain other individuals identified by management. Shares purchased through the directed share program will not be subject to a lock-up restriction, except in the case of shares purchased by any of our directors or officers and certain of our employees and existing equityholders. The number of shares of Class A common stock available for sale to the general public will be reduced to the extent these individuals or entities purchase such reserved shares. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same basis as the other shares offered by this prospectus. The underwriters will receive the same discount from such reserved shares as they will from other shares of our Class A common stock sold to the public in this offering. We have agreed to indemnify the underwriters against certain liabilities and expenses, including liabilities under the Securities Act, in connection with sales of the reserved shares.

Selling Restrictions

European Economic Area and United Kingdom

In relation to each Member State of the European Economic Area and the United Kingdom (each a "Relevant State"), no shares of our Class A common stock have been offered or will be offered pursuant to this offering to the public in that Relevant State prior to the publication of a prospectus in relation to shares of our Class A 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 our Class A common stock may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

- to any legal entity which is a qualified investor as defined in the Prospectus Regulation;
- to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Regulation), subject to obtaining the prior consent of the representatives for any such offer; or
- In any other circumstances falling within Article 1(4) of the Prospectus Regulation;

provided that no such offer of shares of our Class A common stock shall require us or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of our Class A common stock 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 our Class A common stock to be offered so as

to enable an investor to decide to purchase or subscribe for any shares of our Class A common stock, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

This selling restriction is in addition to any other selling restrictions set out below.

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 ("FSMA")) received by it in connection with the issue or sale of the shares of Class A common stock in circumstances in which Section 21(1) of the FSMA does not apply to the Company; 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 Class A common stock in, from or otherwise involving the United Kingdom.

In the United Kingdom, this prospectus is only addressed to and directed at qualified investors who are (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the Order); or (ii) high net worth entities and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). Any investment or investment activity to which this prospectus relates is available only to relevant persons and will only be engaged with relevant persons. Any person who is not a relevant person should not act or rely on this prospectus or any of its contents.

Canada

The Class A common stock may be sold in Canada 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 Instrument31-103 Registration Requirements, Exemptions, and Ongoing Registrant Obligations. Any resale of the Class A 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 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.

Hong Kong

The Class A common stock may not be offered or sold in Hong Kong 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 (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) ("Companies (Winding Up and Miscellaneous Provisions) Ordinance") or which do not constitute an invitation to the public within the

meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) ("Securities and Futures Ordinance"), (ii) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the Class A 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 securities laws of Hong Kong) other than with respect to shares of Class A common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

Japan

The shares of Class A common stock have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended) ("FIEA"). The shares of Class A common stock may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, 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 of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

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 Class A common stock may not be circulated or distributed, nor may the Class A 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 (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA")) under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, 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, in each case subject to conditions set forth in the SFA.

Where the shares of Class A common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is 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, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for 6 months after that corporation has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore ("Regulation 32").

Where the shares of Class A common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for 6 months after that trust has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer

arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

Solely for the purposes of our obligations pursuant to Section 309B of the SFA, we have determined, and hereby notify all relevant persons (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 ("CMP Regulations")) that the shares of Class common stock are "prescribed capital markets products" (as defined in the CMP Regulations) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS NoticeFAA-N16: Notice on Recommendations on Investment Products).

Switzerland

This prospectus is not intended to constitute an offer or solicitation to purchase or invest in the Class A common stock. The Class A common stock may not be publicly offered, directly or indirectly, in Switzerland within the meaning of the Swiss Financial Services Act ("FinSA") and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading venue (exchange or multilateral trading facility) in Switzerland. This document does not constitute a prospectus within the meaning of, and has been prepared without regard to, the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading venue (exchange or multilateral trading facility) in Switzerland. Neither this document nor any other offering or marketing material relating to the Class A common stock constitutes a prospectus pursuant to the FinSA, and neither this document nor any other offering or marketing material relating to the Class A common stock or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the Company, or the Class A common stock have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of Class A common stock will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA (FINMA), and the offer of Class A common stock has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes ("CISA"). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of Class A common stock.

United Arab Emirates

The Class A common stock has not been, and are not being, publicly offered, sold, promoted or advertised in the United Arab Emirates (including the Dubai International Financial Centre) other than in compliance with the laws of the United Arab Emirates (and the Dubai International Financial Centre) governing the issue, offering and sale of securities. Further, this prospectus does not constitute a public offer of securities in the United Arab Emirates (including the Dubai International Financial Centre) and is not intended to be a public offer. This prospectus has not been approved by or filed with the Central Bank of the United Arab Emirates, the Securities and Commodities Authority or the Dubai Financial Services Authority.

LEGAL MATTERS

The validity of the issuance of our Class A common stock offered in this prospectus will be passed upon for us by Kirkland & Ellis LLP, Chicago, Illinois. Certain legal matters will be passed upon for the underwriters by Davis Polk & Wardwell LLP, Menlo Park, California.

EXPERTS

The financial statements of Maravai LifeSciences Holdings, Inc. at September 1, 2020 appearing in this Prospectus and Registration Statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

The consolidated financial statements of Maravai Topco Holdings, LLC as of December 31, 2018 and 2019, and for each of the two years in the period ended December 31, 2019, appearing in this Prospectus and Registration Statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act to register our Class A common stock being offered in this prospectus. This prospectus, which forms part of the registration statement, does not contain all of the information included in the registration statement and the attached exhibits. You will find additional information about us and our Class A common stock in the registration statement. References in this prospectus to any of our contracts, agreements or other documents are not necessarily complete, and you should refer to the exhibits attached to the registration statement for copies of the actual contracts, agreements or documents.

The SEC maintains a website that contains reports, proxy statements and other information about companies like us, who file electronically with the SEC. The address of that website is http://www.sec.gov. This reference to the SEC's website is an inactive textual reference only and is not a hyperlink.

Upon the effectiveness of the registration statement, we will be subject to the reporting, proxy and information requirements of the Exchange Act, and will be required to file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information will be available on the website of the SEC referred to above, as well as on our website, https://www.maravai.com. This reference to our website is an inactive textual reference only and is not a hyperlink. The contents of, or other information accessible through, our website are not part of this prospectus, and you should not consider the contents of our website in making an investment decision with respect to our Class A common stock. We will furnish our shareholders with annual reports containing audited financial statements and quarterly reports containing unaudited interim financial statements for each of the first three quarters of each year.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholder and the Board of Directors of Maravai LifeSciences Holdings, Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheet of Maravai LifeSciences Holdings, Inc. (the Company) as of September 1, 2020 and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company at September 1, 2020 in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audit. 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 audit in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audit included performing procedures to assess the risks of material misstatement of the 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 financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2020.

Redwood City, California
September 8, 2020

MARAVAI LIFESCIENCES HOLDINGS, INC.

BALANCE SHEET
As of September 1, 2020

ASSETS	
Cash	$10
Total assets	$10
Commitments and contingencies	
STOCKHOLDER'S EQUITY:	
Common stock, $0.01 par value per share, 1,000 shares authorized, issued and outstanding	$10
Total Stockholder's equity	$10

The accompanying notes are an integral part of the financial statement.

MARAVAI LIFESCIENCES HOLDINGS, INC.

NOTES TO FINANCIAL STATEMENT

1. Organization

Maravai LifeSciences Holdings, Inc. (the "Company") was formed as a Delaware corporation on August 25, 2020. The Company was formed for the purpose of completing a public offering and related transactions in order to carry on the business of Maravai Topco Holdings, LLC and its subsidiaries ("Topco LLC"). As the manager of Topco LLC, the Company is expected to operate and control all of the business and affairs of Topco LLC, and through Topco LLC, continue to conduct the business now conducted by these subsidiaries.

2. Summary of Significant Accounting Policies

Basis of Presentation and Accounting

The financial statement has been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). Separate statements of operations, comprehensive income, changes in stockholder's equity, and cash flows have not been presented because there have been no activities in this entity as of September 1, 2020.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the balance sheet. Actual results could differ from those estimates.

3. Common Stock

On August 25, 2020, the Company was authorized to issue 1,000 shares of common stock, par value $0.01 per share, all of which have been issued or are outstanding. As of the balance sheet date, we issued, for $10.00, and had outstanding 1,000 shares all of which were owned by Maravai Life Sciences Holdings, LLC.

4. Subsequent Events

The Company has evaluated subsequent events through the date of the report of the Independent Registered Public Accounting Firm. The Company has concluded that no subsequent event has occurred that requires disclosure.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Member and the Board of Directors of Maravai Topco Holdings, LLC & Subsidiaries

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Maravai Topco Holdings, LLC & Subsidiaries (the Company) as of December 31, 2018 and 2019, the related consolidated statements of operations, comprehensive loss, changes in member'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 the Company at December 31, 2018 and 2019, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's 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 and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

Ernst & Young LLP

We have served as the Company's auditor since 2016.

Redwood City, California
September 8, 2020

MARAVAI TOPCO HOLDINGS, LLC & SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
(in thousands, except unit amounts)

	December 31, 2018	December 31, 2019
Assets		
Current assets:		
Cash	$ 21,866	$ 24,700
Accounts receivable, net	15,991	18,030
Inventory	14,308	14,202
Prepaid expenses and other current assets	1,637	3,620
Total current assets	53,802	60,552
Property and equipment, net	42,578	94,311
Goodwill	224,275	224,275
Intangible assets, net	218,127	197,853
Other assets	894	805
Total assets	$ 539,676	$ 577,796
Liabilities and member's equity		
Current liabilities:		
Accounts payable	$ 3,604	$ 7,478
Accrued expenses	11,147	18,515
Deferred revenue	1,087	841
Other current liabilities	207	228
Current portion of contingent consideration	2,000	—
Construction payable	15,374	—
Current portion of long-term debt	2,500	2,500
Total current liabilities	35,919	29,562
Long-term contingent consideration	1,678	—
Long-term debt, less current portion	335,550	334,783
Deferred tax liabilities	15,856	14,697
Lease facility financing obligation, less current portion	1,839	52,919
Other long-term liabilities	818	1,208
Total liabilities	391,660	433,169
Commitments and contingencies (Note 6)		
Member's equity		
Contributed capital, 1,000 units authorized, issued and outstanding	182,809	183,910
Accumulated deficit	(38,237)	(42,381)
Accumulated other comprehensive loss	(167)	(133)
Total member's equity attributable to Maravai Topco Holdings, LLC member	144,405	141,396
Noncontrolling interests	3,611	3,231
Total member's equity	148,016	144,627
Total liabilities and member's equity	$ 539,676	$ 577,796

The accompanying notes are an integral part of the consolidated financial statements

MARAVAI TOPCO HOLDINGS, LLC & SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands except unit and per unit amounts)

	Year Ended December 31,	
	2018	2019
Revenue	$ 123,833	$ 143,140
Operating expenses		
Cost of revenue	60,765	66,849
Research and development	4,499	3,627
Selling, general and administrative	41,194	48,354
Change in estimated fair value of contingent consideration	939	322
Total operating expenses	107,397	119,152
Income from operations	16,436	23,988
Other income (expense)		
Interest expense	(27,399)	(29,959)
Loss on extinguishment of debt	(5,622)	—
Other income	87	118
Loss before income taxes	(16,498)	(5,853)
Income tax expense (benefit)	417	(652)
Net loss	(16,915)	(5,201)
Net loss attributable to noncontrolling interests	(12,443)	(731)
Net loss attributable to the Maravai Topco Holdings, LLC member	$ (4,472)	$ (4,470)
Net loss per common unit attributable to Maravai Topco Holdings, LLC member—basic and diluted	$ (17,727)	$ (8,481)
Weighted average common units outstanding	1,000	1,000

The accompanying notes are an integral part of the consolidated financial statements

MARAVAI TOPCO HOLDINGS, LLC & SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
Years Ended December 31, 2018 and 2019
(in thousands)

	Year Ended December 31,	
	2018	2019
Net loss	$ (16,915)	$ (5,201)
Other comprehensive loss		
Foreign currency translation adjustments, net of tax	(69)	34
Comprehensive loss	(16,984)	(5,167)
Comprehensive loss attributable to noncontrolling interests	(12,443)	(731)
Comprehensive loss attributable to Maravai Topco Holdings, LLC member	$ (4,541)	$ (4,436)

The accompanying notes are an integral part of the consolidated financial statements

MARAVAI TOPCO HOLDINGS, LLC & SUBSIDIARIES

CONSOLIDATED STATEMENTS OF MEMBER'S EQUITY
(in thousands except unit amounts)

	Units	Amount	Contributed Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Noncontrolling Interests	Total Member's Equity
January 1, 2018	1,000	$ —	$ 233,379	$ (33,765)	$ (98)	$ 15,428	$ 214,944
Distributions to members	—	—	(52,056)	—	—	—	(52,056)
Repurchase of incentive units	—	—	(9)	—	—	—	(9)
Unit-based compensation	—	—	1,495	—	—	626	2,121
Net loss	—	—	—	(4,472)	—	(12,443)	(16,915)
Foreign currency translation adjustment	—	—	—	—	(69)	—	(69)
December 31, 2018	1,000	$ —	$ 182,809	$ (38,237)	$ (167)	$ 3,611	$ 148,016
Cumulative effect of adoption of ASC 606	—	—	—	326	—	—	326
Repurchase of incentive units	—	—	(227)	—	—	—	(227)
Unit-based compensation	—	—	1,328	—	—	351	1,679
Net loss	—	—	—	(4,470)	—	(731)	(5,201)
Foreign currency translation adjustment	—	—	—	—	34	—	34
December 31, 2019	1,000	$ —	$ 183,910	$ (42,381)	$ (133)	$ 3,231	$ 144,627

The accompanying notes are an integral part of the consolidated financial statements

MARAVAI TOPCO HOLDINGS, LLC & SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,	
	2018	2019
Operating activities		
Net loss	$ (16,915)	$ (5,201)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation	2,225	3,810
Amortization of intangible assets	20,122	20,274
Provision of doubtful accounts	(415)	(152)
Amortization of deferred financing costs	1,498	1,734
Unit-based compensation	2,121	1,679
Loss on debt refinancing	5,622	—
Deferred income taxes	317	(1,159)
Change in estimated fair value of contingent consideration	939	322
Other	141	518
Changes in operating assets and liabilities:		
Accounts receivable	(4,146)	(1,888)
Inventory	2,311	106
Prepaid expenses and other current assets	(696)	(1,983)
Other non-current assets	(570)	—
Accounts payable	(871)	2,470
Accrued expenses	3,123	3,505
Earn-out liability	(14,547)	—
Other long-term liabilities	354	—
Deferred revenue	(799)	80
Net cash (used in) provided by operating activities	(186)	24,115
Investing activities		
Working capital adjustment for acquisition in prior year	160	—
Acquisition of patents	(70)	—
Purchases of property and equipment	(3,541)	(17,148)
Net cash used in investing activities	(3,451)	(17,148)
Financing activities		
Distributions to members	(52,056)	—
Proceeds from borrowings of long-term debt	310,630	—
Financing costs incurred	(6,711)	—
Repurchase of vested incentive units	(9)	(227)
Principal repayments of long-term debt	(254,987)	(2,500)
Payment of contingent consideration	(5,819)	(1,300)
Payments made on facility financing lease obligation and capital lease	(215)	(140)
Net cash used in financing activities	(9,167)	(4,167)
Effects of exchange rate changes on cash	(69)	34
Net (decrease) increase in cash, and restricted cash	(12,873)	2,834
Cash, beginning of period	34,739	21,866
Cash, end of period	$ 21,866	$ 24,700
Supplemental cash flow information		
Cash paid for interest	$ 25,678	$ 28,728
Cash paid for income taxes	$ 97	$ 802
Supplemental disclosures of non-cash investing and financing activities		
Property and equipment included in accounts payable and accrued expenses	$ 196	$ 2,765
Financing cost deducted from loan proceeds	$ 3,800	$ —
Building and improvements capitalized under lease financing transaction	$ 15,374	$ 51,200
Property and equipment under new capital lease	$ 87	$ 15

The accompanying notes are an integral part of the consolidated financial statements

MARAVAI TOPCO HOLDINGS, LLC & SUBSIDIARIES

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Significant Accounting Policies

Organization and Description of Business

Maravai Topco Holdings, LLC ("Maravai," "we," "our" or the "Company") is a holding company focused on building a transformative life sciences products company by acquiring businesses and accelerating their growth through capital infusions and industry expertise. The Company was organized as a Delaware limited liability company ("LLC") on July 27, 2018, as a wholly-owned subsidiary of Maravai Life Sciences Holdings, LLC ("MLSH 1"). On this date, the Company acquired all of the equity interests of a subsidiary of MLSH 1 that held all of the operating subsidiaries of MLSH 1. This acquisition was a transfer between entities under common control in a manner consistent with the pooling-of-interest method of accounting. These consolidated and combined financial statements for the year-ended December 31, 2018 give effect to this transaction as if it had occurred at the beginning of the period presented. As this entity was considered to be the predecessor entity under common control and accordingly, the accompanying combined statement of operations, comprehensive loss, member's equity, and cash flows present the results of operations of MLSH 1 beginning on January 1, 2018.

The Company is headquartered in San Diego, California and has three principal businesses: Nucleic Acid Production, Biologics Safety Testing, and Protein Detection. Our Nucleic Acid Production business manufactures and sells products used in the fields of gene therapy, nucleoside chemistry, oligonucleotide therapy and molecular diagnostics, including reagents used in the chemical synthesis, modification, labelling and purification of deoxyribonucleic acid ("DNA") and ribonucleic acid ("RNA). Our Biologics Safety Testing business sells highly specialized analytical products for use in biologic manufacturing process development, including custom product-specific development antibody and assay development services. Our Protein Detection business sells innovative labeling and detection reagents for researchers in immunohistochemistry.

In October 2016, the Company acquired a controlling interest in MLSC Holdings, LLC ("MLSC"), the parent entity of one of our biologics safety testing operating companies, by purchasing approximately 70% of the equity interests of MLSC with the remaining 30% being recorded as noncontrolling interests in the consolidated financial statements of the Company.

Basis of Presentation

These consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). The consolidated financial statements include the accounts of the Company and its wholly-owned and majority-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of consolidated financial statements in accordance with GAAP requires the Company to make estimates and assumptions that affect the reported amounts in the consolidated financial statements and accompanying notes. These estimates form the basis for judgments the Company makes about the carrying values of assets and liabilities that are not readily apparent from other sources. The Company bases its estimates and judgments on historical experience and on various other assumptions that the Company believes are reasonable under the circumstances. These estimates are based on management's knowledge about current events and expectations about actions the Company may undertake in the future. Significant estimates include, but are not limited to, revenue recognition, the net realizable value of inventory, expected future cash flows including growth rates, discount rates, terminal values and other assumptions and estimates used to evaluate the

recoverability of long-lived assets, estimated fair values of intangible assets and goodwill, amortization methods and periods, valuation of intangible assets, the fair value of leased buildings and other assumptions associated with lease financing transactions, the estimated fair value of our long-term debt, unit-based compensation, the valuation of our and MLSH 1's incentive units, allowance for doubtful accounts, and accounting for income taxes. Actual results could differ materially from those estimates.

Revenue Recognition

The Company adopted the requirements of Accounting Standards Codification ("ASC") 606, Revenue from Contracts with Customers ("ASC 606"), effective January 1, 2019 using the modified retrospective method. Under the modified retrospective method, this guidance is applied to those contracts that were not completed as of January 1, 2019, with no restatement of contracts that were commenced and completed within fiscal years prior to January 1, 2019, and the prior period comparable financial information continues to be presented under the guidance of ASC 605, Revenue Recognition ("ASC 605"). The adoption of ASC 606 resulted in a cumulative effect adjustment of $0.3 million to reduce the opening accumulated deficit as of January 1, 2019. This adjustment primarily related to over-time recognition of revenue and associated costs for certain custom products for which revenue had previously been deferred and recognized at a point in time.

The Company generates revenue from the sale of products and services and the performance of services in the fields of nucleic acid production, biologics safety testing, and protein detection. Under ASC 606, revenue is recognized when control of promised goods or services is transferred to a customer in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. To determine revenue recognition for its arrangements with customers, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. The majority of the Company's contracts include only one performance obligation. A performance obligation is a promise in a contract to transfer a distinct good or service to the customer and is defined as the unit of account for revenue recognition under ASC 606. The Company also recognizes revenue from other contracts that may include a combination of products and services, the provision of solely services, or from license fee arrangements which may be associated with the delivery of product. Where there is a combination of products and services, the Company accounts for the promises as individual performance obligations if they are concluded to be distinct. Performance obligations are considered distinct if they are both capable of being distinct and distinct within the context of the contract. In determining whether performance obligations meet the criteria for being distinct, the Company considers a number of factors, such as the degree of interrelation and interdependence between obligations, and whether or not the good or service significantly modifies or transforms another good or service in the contract. As a practical expedient, we do not adjust the transaction price for the effects of a significant financing component if, at contract inception, the period between customer payment and the transfer of goods or services is expected to be one year or less. Contracts with customers are evaluated on a contract-by-contract basis as contracts may include multiple types of goods and services as described below.

Nucleic Acid Production

Nucleic acid production revenue is generated from the manufacture and sale of highly modified, complex nucleic acids products to support the needs of our of customers' research, therapeutic and vaccine programs. The primary offering of products include; CleanCap®, mRNA, and specialized oligonucleotides. Contracts typically consist of a single performance obligation. We also sell nucleic acid products for labeling and detecting proteins in cells and tissue samples research. The Company recognizes revenue from these products in the period in which the performance obligation is satisfied by transferring control to the customer. Revenue for nucleic acid catalog products is recognized at a single point in time, generally upon shipment to the customer. Revenue for contracts for certain custom nucleic acid products, with an enforceable right to payment and a reasonable margin for work performed to date, is recognized over time, based on a cost-to-cost input method over the manufacturing period.

Biologics Safety Testing

The Company's biologics safety testing revenue is associated with the sale of bioprocess impurity detection kit products. We also enter into contracts that include custom antibody development, assay development and antibody affinity extraction services. These products and services enable the detection of impurities and contaminants that occur in the manufacturing of biologic drugs and other therapeutics. The Company recognizes revenue from the sale of bioprocess impurity detection kits in the period in which the performance obligation is satisfied by transferring control to the customer. Custom antibody development contracts consist of a single performance obligation, typically with an enforceable right to payment and a reasonable margin for work performed to date. Revenue is recognized over time based on a cost-to-cost input method over the contract term. Where an enforceable right to payment does not exist, revenue is recognized at a point in time when control is transferred to the customer. Assay development service contracts consist of a single performance obligation, revenue is recognized at a point in time when a successful antigen test and report is provided to the customer. Affinity extraction services, which generally occur over a short period of time, consist of a single performance obligation to perform the extraction service and provide a summary report to the customer. Revenue is recognized either over time or at a point in time depending on contractual payment terms with the customer.

The Company also has certain licensing and royalty arrangements with an immaterial amount of revenue.

Protein Detection

The Company also manufactures and sells protein labeling and detection reagents to customers that are used for basic research and development. The contracts to sell these catalog products consist of a single performance obligation to deliver the reagent products. Revenue from these contracts is recognized at a point in time, generally upon shipment of the final product to the customer.

We recognize royalty revenue related to certain out-licensing and royalty arrangements in the period the sales or usage occur using third-party evidence to estimate the amount to be recorded. To date this revenue has not been material to the consolidated financial statements.

The Company has elected the practical exemption to not disclose the unfulfilled performance obligations for contracts with an original length of one year or less. The Company has no material unfulfilled performance obligations for contracts with an original length greater than one year at December 31, 2019.

The Company accepts returns only if the products do not meet customer specifications and historically, the Company's volume of product returns has not been significant. Further, no warranties are provided for promised goods and services other than assurance type warranties.

Revenue for an individual contract is recognized at the related transaction price, which is the amount the Company expects to be entitled to in exchange for transferring the products and/or services. The transaction price for product sales is calculated at the contracted product selling price. The transaction price for a contract with multiple performance obligations is allocated to the separate performance obligations on a relative standalone selling price basis. Standalone selling prices for products are determined based on the prices charged to customers, which are directly observable. Standalone selling price of services are mostly based on time and materials. Generally, payments from customers are due when goods and services are transferred. As most contracts contain a single performance obligation, the transaction price is representative of the standalone selling price charged to customers. Revenue is recognized only to the extent that it is probable that a significant reversal of the cumulative amount recognized will not occur in future periods. Since the adoption of ASC 606, variable consideration has not been material.

Sales taxes

Sales taxes collected by the Company are not included in the transaction price as revenue they are ultimately remitted to a governmental authority.

Shipping and handling costs

The Company has elected to account for shipping and handling activities related to contracts with customers as costs to fulfill the promise to transfer the associated products. Accordingly, revenue for shipping and handling is recognized at the same time that the related product revenue is recognized.

Contract costs

The Company recognizes the incremental costs of obtaining contracts as an expense when incurred when the amortization period of the assets that otherwise would have been recognized is one year or less. These costs are included in sales and marketing and general and administrative expenses. The costs to fulfill the contracts are determined to be immaterial and are recognized as an expense when incurred.

Contract balances

Contract assets are generated when contractual billing schedules differ from revenue recognition timing and the Company records contract receivable when it has an unconditional right to consideration. No contract assets balance was recorded as of January 1, 2019 and as of December 31, 2019, contract assets, which are included in prepaid and other current assets, totaled $0.8 million.

Contract liabilities are recorded when cash payments are received or due in advance of performance. Contract liabilities consist of customer deposits, which are included in accrued expenses, and deferred revenue, where the Company has unsatisfied performance obligations. As of January 1, 2019 and December 31, 2019, the contract liabilities were $0.5 million and $1.0 million, respectively, with the contract liabilities at December 31, 2019 expected to be recognized into revenue in the year ending December 31, 2020.

Disaggregation of Revenue

The following tables summarize the revenue by segment and region for the years ended December 31, 2018 and December 31, 2019, respectively (in thousands):

For the year ended December 31, 2018	Nucleic Acid Production	Biologics Safety Testing	Protein Detection	Total
North America	$ 44,883	$ 14,900	$ 14,393	$ 74,176
EMEA	9,880	11,443	6,522	27,845
Asia Pacific	5,249	11,928	4,097	21,274
Latin and Central America	45	221	272	538
Total revenue	$ 60,057	$ 38,492	$ 25,284	$ 123,833

For the year ended December 31, 2019	Nucleic Acid Production	Biologics Safety Testing	Protein Detection	Total
North America	$ 49,757	$ 18,984	$ 15,284	$ 84,025
EMEA	15,975	12,102	6,805	34,882
Asia Pacific	6,843	12,964	3,784	23,591
Latin and Central America	27	366	249	642
Total revenue	$ 72,602	$ 44,416	$ 26,122	$ 143,140

The following table provides a disaggregation of revenue for the year ended December 31, 2019 based on the pattern of revenue recognition:

	2019
Revenue recognized at a point in time	$ 133,091
Revenue recognized over time	10,049
Total revenue	$ 143,140

Prior to January 1, 2019, revenue from the sale of products and services was recognized when all of the following conditions per ASC 605*Revenue Recognition* were met: (1) there was persuasive evidence of an arrangement; (2) the product had been delivered to the customer; (3) the collection of the fees was reasonably assured; and (4) the amount of fees to be paid by the customer was fixed or determinable.

When an arrangement involved multiple elements, the multiple elements, referred to as deliverables, were evaluated to determine whether they represent separate units of accounting in accordance with ASC 605-25, Revenue Recognition—*Multiple-Element Arrangements*. The Company performed this evaluation at the inception of an arrangement and as each item was delivered in the arrangement. Generally, the Company accounted for a deliverable separately if the delivered item has stand alone value to the customer and delivery or performance of the undelivered item or service was probable and substantially in the Company's control.

When multiple elements could be separated into separate units of accounting, arrangement consideration was allocated at the inception of the arrangement, based on each unit's relative selling price, and recognized based on the method most appropriate for that unit.

Product sales

Revenue for manufacturing of products was recognized upon the delivery of the products in accordance with the terms of the contract, which specify transfer of title and risk of loss. Payments received from customers in advance of manufacturing their products was recorded as deferred revenue until the products were delivered.

Service revenue

The Company also enters into custom antibody and assay development contracts with customers. The Company performs a number of acts under these contracts for which the pattern of performance cannot be discerned and therefore the Company recognizes service revenue on a straight-line basis over the contractual term or expected term of the arrangement, whichever is longer. Payments received in advance of performing these services was recognized as deferred revenue. Revenue recognized at any point in time is limited to cash received and amounts contractually due.

Shipping and Handling Costs

Shipping and handling costs, which are charged to customers, are included in revenue. Shipping and handling charges included in revenue were approximately $2.8 million and $3.2 million and for the years ended December 31, 2018 and 2019, respectively. Freight and supplies costs directly associated with shipping products to customers are included as a component of cost of revenue.

Research and Development

Research and development ("R&D") expenses include personnel costs, including salaries, benefits and unit-based compensation for laboratory personnel, and costs of supplies. R&D costs are expensed as incurred. Payments made prior to the receipt of goods or services to be used in R&D are recognized as prepaid assets until the goods are received or services are rendered.

Advertising Costs

The Company expenses advertising costs as incurred. Advertising costs incurred were approximately $0.6 million and $1.1 million during the years ended December 31, 2018 and 2019, respectively.

Unit-Based Compensation

The Company's parent, MLSH 1, grants unit-based awards to certain executives of the Company in the form ofnon-vested units. Our controlled subsidiary, MLSC, grants unit-based awards only to certain employees of its subsidiaries (collectively, the "Incentive Units"). All awards of Incentive Units are measured based on the fair value of the award on the date of grant. The Company recognizes compensation expense for MLSH 1 awards in its consolidated financial statements as MLSH 1 is considered to be the economic interest holder in the Company. Compensation expense for the Incentive Units is recognized over their requisite service period. Forfeitures are recognized when they occur. These Incentive Units are subject to service, market and performance conditions. For Incentive Units subject to performance conditions, the Company evaluates the probability of achieving each performance condition at each reporting date and recognizes expense over the requisite service period when it is deemed probable that a performance condition will be met using the accelerated attribution method over the requisite service period. For Incentive Units that remain subject to performance conditions at December 31, 2018 and 2019, the Company concluded that it was not yet probable that the performance conditions would be met. Accordingly, the Company has not recognized any compensation expense in the accompanying consolidated statements of operations and comprehensive loss for Incentive Units that include a performance condition.

The grant date fair value of Incentive Unit awards has been determined by the Company's Board of Directors with the assistance of management and an independent third-party valuation specialist. The grant date fair value of Incentive Units was determined first by estimating an aggregate equity value using a weighting of discounted cash flows, comparable public companies, and comparable-transactions valuation methodologies. An Option-Pricing Method, which utilizes certain assumptions including volatility, time to liquidation, a risk-free interest rate, and an assumption for a discount for lack of marketability, was then used to allocate the total equity value of the Company to the different classes of equity according to their rights and preferences. In determining the fair value of the Incentive Units, the methodologies used to estimate the enterprise value of the Company were performed using methodologies, approaches, and assumptions consistent with the American Institute of Certified Public Accountants Accounting and Valuation Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation ("AICPA Accounting and Valuation Guide").

Income Taxes

The Company's wholly-owned U.S. subsidiary, Maravai LifeSciences, Inc. ("Maravai Inc.") and its subsidiaries, are taxpaying entities in the U.S., Canada, and the U.K. Accordingly, the Company provides current and deferred income taxes for these entities. The Company and its other subsidiaries are treated as pass-through entities for federal and state income tax purposes and are not subject to income tax as the LLC member is responsible for the tax consequences of its proportionate share of the pass-through income or loss. As such, the Company's tax provision consists solely of the activities of Maravai Inc. and its subsidiaries, which is taxed as a corporation for federal and state income tax purposes.

The Company's taxable subsidiaries account for income taxes using the asset and liability method, under which deferred tax liabilities and assets are recognized for the expected future tax consequences of temporary differences between the consolidated financial statement carrying amounts and the tax basis of assets and liabilities and net operating loss and tax credit carryforwards. Deferred tax assets and liabilities are classified as noncurrent on the consolidated balance sheet. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized. The Company uses a recognition threshold and measurement attribute for the consolidated financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. A tax position is recognized when it is more likely than not that the

tax position will be sustained upon examination, including the resolution of any related appeals or litigation. A tax position that meets the more-likely-than-not recognition threshold is measured at the largest amount of benefit that is greater than a 50% likelihood of being realized upon ultimate settlement with a taxing authority. Interest and penalties related to unrecognized tax benefits are recognized in benefit from income taxes in the accompanying consolidated statements of operations and comprehensive loss. No such interest and penalties were recognized for any period presented.

The Tax Cuts and Jobs Act of 2017 ("2017 Tax Act") created a Global Intangible Low Taxed Income ("GILTI") provision which requires companies to include in its U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary's tangible assets. The Company has elected to account for GILTI tax as a component of tax expense in the period in which it is incurred. For the years ended December 31, 2018 and 2019, the Company did not recognize income related to its foreign subsidiaries.

In May 2018, the FASB issued Accounting Standards Update ("ASU")2018-05—*Income Taxes (Topic 740), Amendments to SEC Paragraphs Pursuant to SECStaff Accounting Bulletin No. 118 (SEC Update)*. The amendment represents changes to certain SEC material in Topic 740 for the income tax accounting implications of the 2017 Tax Act. The ASU was effective upon issuance. As of December 22, 2018, the Company had completed its assessment and recorded an insignificant adjustment to the provisional amounts initially recognized within the one-year period provided by this ASU.

Noncontrolling Interests

Noncontrolling interests represent the portion of profit or loss, net assets and comprehensive loss that is not allocable to the member of Maravai. Noncontrolling interests arise from the Company's majority-owned subsidiary, MLSC, in which the Company holds a 70% ownership interest. MLSC is not liable, solely by reason of being a member, for the debts, obligations, or liabilities of the Company whether arising in contract or tort; under a judgment, decree, or order of a court; or otherwise. MLSC net income or loss is attributed to the noncontrolling interest using an attribution method, similar to the hypothetical liquidation at book value method, based on the distribution provisions of the MLSC Amended and Restated Limited Liability Company Agreement ("MLSC LLC Agreement").

During the year ended December 31, 2018, $52.0 million of capital distributions were made to the Class A unit holders of MLSC. The 2018 distribution was treated as a preferred return of capital per the terms of the MLSC LLC agreement, which will result in a reduction of future amounts that must be allocated to the Class A unit holders of MLSC, as controlling interest holders in MLSC, upon a liquidation of MLSC. No distributions were made to the Class A unit holders of MLSC during the year ended December 31, 2019.

Segment Information

The Company operates in three reportable segments. Operating segments are defined as components of an enterprise about which separate financial information is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and assessing performance. The Company's chief operating decision maker ("CODM"), its Chief Executive Officer, allocates resources and assesses performance based upon discrete financial information at the segment level. Substantially all of our long-lived assets are located in the United States.

Cash

Cash consists of deposits held at financial institutions.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable primarily consist of amounts due from customers for product sales and services. Estimated allowances for doubtful accounts are provided for based on an evaluation of potential uncollectible accounts. The Company evaluates accounts receivable to determine collectability. Judgments and estimates are involved in performing this evaluation, which are based on the Company's assessment of a customer's ability to pay, credit quality of the customer, age of the receivable balance and current economic conditions. As of December 31, 2018 and 2019, the allowance for doubtful accounts was approximately $0.3 million and $0.1 million, respectively. Write-offs of accounts receivable and recoveries were not significant during either 2018 or 2019.

To manage credit risk certain Company subsidiaries require select customers to prepay for product prior to shipment. Such prepayments approximated $40,000 and $0.2 million as of December 31, 2018 and 2019, respectively, and were recorded within deferred revenue and subsequently recognized as revenue upon shipment.

Inventory

Inventories consist of raw materials, work in process and finished goods. Inventories are stated at the lower of cost (weighted average cost) or net realizable value. Inventory costs include materials, direct labor and manufacturing overhead, which are related to the purchase or production of inventories. The Company regularly monitors for excess and obsolete inventory based on its estimates of expected sales volumes, production capacity and expiration of raw materials, work-in-process and finished products excess and obsolete inventories and reduces the carrying value of inventory accordingly. The Company writes down inventory that has become obsolete, inventory that has a cost basis in excess of its expected net realizable value, and inventory in excess of expected manufacturing requirements. Any write-downs of inventories are charged to cost of revenue.

A change in the estimated timing or amount of demand for the Company's products could result in reduction to the recorded value of inventory quantities on hand. Any significant unanticipated changes in demand or unexpected quality failures could have a significant impact on the value of inventory and reported operating results. During all periods presented in the accompanying consolidated financial statements, there have been no material adjustments related to a revised estimate of our inventory valuations.

Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation. Depreciation is computed using the straight-line method over the following estimated useful lives:

Assets	Useful Lives
Buildings	20-35 years
Building improvements	5-15 years
Furniture, fixtures, equipment and software	3-11 years

Leasehold improvements are amortized over the shorter of the related lease term or useful life.

Maintenance and repairs are charged to operations when incurred, while betterments or renewals are capitalized. When property and equipment are sold or otherwise disposed of, the asset account and related accumulated depreciation account are relieved, and any gain or loss is included in the results of operations.

As of December 31, 2018, property and equipment included a leased building which is recorded as construction in process during the period of construction at its fair value plus the cost of improvements incurred during the construction period. As of December 31, 2019, the construction was completed. As a result, the Company recorded constructions costs as an asset and construction costs incurred by the landlord as a financing

obligation on its consolidated balance sheet (Notes 5 and 6). The leased building is being depreciated over the lease term to a residual value that will approximate the remaining lease financing obligation at the end of the lease.

Internal-Use Software Costs

The Company capitalizes costs for acquired or developed software for internal use. Costs related to preliminary project activities and post implementation activities are expensed as incurred. Once it is probable the project will be completed, and the software will be used to perform the function intended, internal and external costs, if direct and incremental, are capitalized until the application is substantially complete and ready for use. Capitalized costs are included in property and equipment within furniture, fixtures, equipment, and software. The Company capitalized approximately $0.4 million and $0.7 million of software development costs in each of the years ended December 31, 2018 and 2019, respectively, and recognized amortization expense of $73,000 and $0.2 million for the years ended December 31, 2018 and 2019, respectively.

Goodwill

Goodwill represents the excess of consideration transferred over the estimated fair value of assets acquired and liabilities assumed in a business combination. The Company conducts a goodwill impairment analysis at least annually and more frequently if changes in facts and circumstances indicate that the fair value of the Company's reporting units may be less than carrying amount. The Company has three reporting units. For the years ended December 31, 2018 and 2019, the Company elected the qualitative assessment for two of its reporting units and a quantitative impairment test for its remaining reporting unit associated with its protein detection business. The qualitative impairment test was elected for these two reporting units because of the growth in revenue and cashflows in excess of our initial projections and quantitative impairment test was elected for the third reporting unit as a result of lowering forecasted growth projections. As a result of the 2018 and 2019 qualitative and quantitative assessments, the Company concluded that goodwill was not impaired at both December 31, 2018 and 2019.

Intangible Assets

The Company's finite-lived intangible assets represent purchased intangible assets and primarily consist of trade names, customer relationships, patents, and developed technology. Certain criteria are used in determining whether intangible assets acquired in a business combination must be recognized and reported separately. Finite-lived intangible assets are initially recognized at fair value, are subject to amortization and are subsequently stated at amortized cost. The Company's finite-lived intangible assets are amortized using a method that reflects the pattern in which the economic benefits of the intangible assets are consumed or otherwise used. If that pattern cannot be reliably determined, the intangible assets are amortized using the straight-line method over their estimated useful lives and are tested for impairment along with other long-lived assets. Amortization related to patents and developed technology is allocated to cost of revenue whereas amortization associated with trade names and customer relationships is allocated to selling, general and administrative expenses.

Impairment of Long-Lived and Intangible Assets

The Company periodically reviews long-lived assets, including property and equipment and finite-lived intangible assets, to determine whether current events or circumstances indicate that such carrying amounts may not be recoverable. If such facts or circumstances are determined to exist, an estimate of the undiscounted future cash flows of these assets is compared to the carrying value the assets to determine whether impairment exists. If the assets are determined to be impaired, the loss is measured based on the difference between the fair value and carrying value of the assets. No impairment loss was recognized for long-lived or finite-lived intangible assets during the years ended either December 31, 2018 or 2019.

Contingent Consideration

Contingent consideration relates to the potential payment for an acquisition that is contingent upon the achievement of the acquired entity meeting certain performance milestones. Contingent consideration resulting from the acquisition of a business is recorded at fair value on the acquisition date. Such contingent consideration is re-measured to its estimated fair value at each reporting date with the change in fair value recognized as an operating expense in the Company's consolidated statement of operations. Subsequent changes in the fair value of the contingent consideration are classified as an adjustment to cash flows from operating activities in the consolidated statement of cash flows because the change in fair value was is an input in determining net loss. Cash paid in settlement of contingent consideration liabilities are classified as cash flows from financing activities up to the acquisition date fair value with any excess classified as cash flows from operating activities.

Changes in the fair value of contingent consideration liabilities associated with the acquisition of a business can result from updates to assumptions such as the expected timing or probability of achieving customer related performance targets, specified sales milestones, changes in projected revenue or changes in discount rates. Significant judgment is used in determining those assumptions as of the acquisition date and for each subsequent reporting period. Therefore, any changes in the fair value will impact the Company's results of operations in such reporting period thereby resulting in potential variability in the Company's operating results until such contingencies are resolved.

Debt Issuance Costs

Costs incurred in connection with obtaining new debt financing are deferred and amortized over the life of the related financing. If such financing is settled or replaced prior to maturity with debt instruments that have substantially different terms, the settlement is treated as an extinguishment and the unamortized costs are charged to gain or loss on extinguishment of debt. If such financing is settled or replaced with debt instruments from the same lender that do not have substantially different terms, the new debt agreement is accounted for as a modification for the prior debt agreement and the unamortized costs remain capitalized, the new original issuance discount costs are capitalized, and any new third-party costs are charged to expense. Deferred costs are recognized as a direct reduction in the carrying amount of the debt instrument on the consolidated balance sheets and are amortized to interest expense over the term of the related debt using the effective interest method.

Foreign Currency

The Company translates the assets and liabilities of itsnon-U.S. dollar denominated functional currency subsidiaries into U.S. dollars using exchange rates in effect at the end of each period. Revenue and expenses for its foreign subsidiaries are translated using rates that approximate those in effect during the period. Translation gains and losses are recognized in accumulated other comprehensive loss within member's equity on the consolidated balance sheets. Foreign currency transaction gains and losses are included in net loss for the period. Foreign currency loss have not been material for the years ended December 31, 2018 and 2019.

Accumulated Other Comprehensive Loss

Comprehensive loss and its components encompass all changes in member's equity other than those with its members. Comprehensive loss for the Company consists of foreign currency translation adjustments. There were no reclassifications out of accumulated other comprehensive loss during the periods presented.

Fair Value of Financial Instruments

The Company defines fair value as the amount that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date. The Company follows accounting guidance that has a three-level hierarchy for fair value measurements based upon the transparency of

inputs to the valuation of the asset or liability as of the measurement date. Instruments with readily available actively quoted prices, or for which fair value can be measured from actively quoted prices in an orderly market, will generally have a higher degree of market price transparency and a lesser degree of judgment used in measuring fair value. The three levels of the hierarchy are defined as follows:

Level 1—Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets;

Level 2—Include other inputs that are directly or indirectly observable in the marketplace; and

Level 3—Unobservable inputs which are supported by little or no market activity.

As of December 31, 2018 and 2019, the carrying value of current assets and liabilities approximates fair value due to the short maturities of these instruments. The fair values of the Company's long-term debt approximate carrying value, excluding the effect of unamortized debt discount, as they are based on borrowing rates currently available to the Company for debt with similar terms and maturities (Level 2 inputs).

During 2017, the Company entered into two interest rate cap agreements to manage a portion of its variable interest rate risk on its amended credit agreement borrowings. During 2018, in connection with the Company's debt refinancing, the Company entered into two interest rate cap agreements bringing its total to four agreements as of both December 31, 2018 and 2019. The contracts entitle the Company to receive from the counterparty at specified dates the amount, if any, by which a specified market rate exceeds the cap strike interest rate, applied to the contracts notional principal amount of approximately $262.0 million. No principal payments are exchanged. The interest rate cap agreements have not been designated as a hedging relationship and are recognized on the consolidated balance sheet at fair value within non-current assets with changes in fair value recognized in the consolidated statements of operations and comprehensive loss. The fair value of the interest rate caps as of December 31, 2018 and 2019 were insignificant.

Leases, Deferred Rent, and Lease Facility Financing Obligation

The Company rents its office space and facilities under non-cancelable operating lease agreements and recognizes the related rent expense on a straight-line basis over the term of the lease. The Company's lease agreements contain rent holidays, scheduled rent increases, and renewal options. Rent holidays and scheduled rent increases are included in the determination of rent expense to be recorded ratably over the lease term. The Company does not assume renewals in its determination of the lease term unless they are deemed to be reasonably assured at the inception of the lease. The Company begins recognizing rent expense on the date that it obtains the legal right to use and control the leased space. Deferred rent consists of the difference between cash payments and the recognition of rent expense on a straight-line basis for the buildings the Company occupies.

In certain arrangements, the Company is involved in the construction of improvements to buildings it is leasing. To the extent the Company is involved with the structural improvements of the construction project or takes construction risk, the Company is considered to be the owner of the building and related improvements for accounting purposes during the construction period. The Company records the fair value of the building and related landlord and lessee funded improvements subject to the lease within property and equipment on the consolidated balance sheet. The Company also records a corresponding construction payable obligation on its consolidated balance sheet representing the amounts financed by the lessor for the building and lessor financed improvements. Once a construction project is complete, the Company considers the requirements for sale-leaseback accounting treatment. If the Company concludes the arrangement does not qualify for sale-leaseback accounting treatment, the building and related improvements remain on the Company's consolidated balance sheet and are subject to depreciation and assessment of impairment.

For such arrangements, at both pre and post the construction period, the Company bifurcates its lease payments into a portion allocated to the building and a portion allocated to the parcel of land on which the

building has been built considering their respective fair values. The land lease portion of the lease payments allocated to the land is treated for accounting purposes as operating lease payments, and therefore is recorded as rent expense in the consolidated statements of operations. The portion of the lease payments allocated to the building is further bifurcated into a portion allocated to interest expense and a portion allocated to reduce the lease financing obligation. The interest rate used for the lease financing obligation represents the Company's estimated incremental borrowing rate at the inception of the lease, adjusted to reduce any built-in loss.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of cash and accounts receivable. The Company maintains the majority of its cash balances at multiple financial institutions that management believes are of high-credit quality and financially stable. Cash is deposited with major financial institutions in excess of Federal Deposit Insurance Corporation ("FDIC") insurance limits. At December 31, 2018 and 2019, the Company had approximately $20.5 million and $23.6 million in six major financial institutions, respectively, in excess of FDIC insurance limitations. The Company provides credit, in the normal course of business, to international and domestic distributors and customers, which are geographically dispersed. The Company attempts to limit its credit risk by performing ongoing credit evaluations of its customers and maintaining adequate allowances for potential credit losses. For the year ended December 31, 2018, no customer represented more than 10% of total consolidated revenue. For the year ended December 31, 2019, Thermo Fisher Scientific Inc., one of the global leaders in serving life sciences represented 10% of our revenue. The Company sells multiple products to Thermo Fisher Scientific Inc. across all three of the business segments. For the year ended December 31, 2018, one single customer represented 13% of total consolidated accounts receivable. For the year ended December 31, 2019, two customers accounted for 11% and 10% of total consolidated accounts receivable.

Net Loss per Common Unit Attributable to the Member

Basic net loss per common unit attributable to the member of Maravai is calculated by dividing the net loss, adjusted for the Company's noncontrolling interest by the weighted-average number of common units outstanding during the period. The noncontrolling interest is calculated pursuant to the terms of the MLSC LLC Agreement, the Company's majority-owned subsidiary, on a fully-distributed basis, taking into account the various classes of equity of MLSC, including the cumulative yields on MLSC's preferred units. Diluted net loss per common unit attributable to the member of Maravai is computed by using the weighted-average number of common units outstanding during the period and the potential dilutive common unit equivalents as determined under the two-class method. In periods in which the Company reports a net loss attributable to the member of Maravai, diluted net loss per common unit is the same as basic net loss per common unit attributable to the member of Maravai since dilutive common units are not assumed to have been issued if their effect is anti-dilutive. The Company reported a net loss attributable to the member of Maravai for the years ended December 31, 2018 and 2019.

Emerging Growth Company Status

The Company is an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012 ("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) affirmatively and irrevocably opts out of the extended transition period provided in the JOBS Act. As a result, these consolidated financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates.

Recently Adopted Accounting Pronouncements

In August 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU")2016-15, *Statement of Cash Flows (Topic 230*) provides guidance on eight specific cash flow issues, thereby reducing the diversity in practice in how certain transactions are classified in the statement of cash flows. The amendments in ASU 2016-15 were effective for annual reporting periods beginning after December 15, 2018. The Company's adoption of this standard did not have an impact on the consolidated financial statements.

In October 2016, the FASB issued ASU2016-16, *Income Taxes—Intra-Entity Transfers of Assets Other Than Inventory.* ASU 2016-16 requires entities to recognize income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The amendments in ASU 2016-16 are effective for annual reporting periods beginning after December 15, 2018 and required a modified retrospective method of adoption. The Company's adoption of this standard did not have an impact on the consolidated financial statements.

Recent Issued Accounting Pronouncements

In February 2016, the FASB issued ASUNo. 2016-02, *Leases* ("Topic 842"), which supersedes the guidance in ASC 840,*Leases*. The new standard, as amended by subsequent ASUs on Topic 842 and recent extensions issued by the FASB in response to COVID-19, requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. Leases with a term of 12 months or less will be accounted for similar to existing guidance for operating leases today. As a result of the Company having elected the extended transition period for complying with new or revised accounting standards pursuant to Section 107(b) of the JOBS Act, and assuming the Company continues to be considered an Emerging Growth Company, Topic 842 will be effective for the Company on January 1, 2022. The Company has not yet determined the full effects of Topic 842 on its consolidated financial statements but does expect that it will result in a substantial increase in its long-term assets and liabilities and enhanced disclosures.

In June 2016, the FASB issuedASU 2016-13*, Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* which has been subsequently amended ("ASU 2016-13"). ASU 2016-13 revises the measurement of credit losses for most financial instruments measured at amortized cost, including trade receivables, from an incurred loss methodology to an expected loss methodology which results in earlier recognition of credit losses. Under the incurred loss model, a loss is not recognized until it is probable that the loss-causing event has already occurred. The new standard introduces a forward-looking expected credit loss model that requires an estimate of the expected credit losses over the life of the instrument by considering all relevant information including historical experience, current conditions, and reasonable and supportable forecasts that affect collectability. In addition, this standard also modifies the impairment model for available-for-sale debt securities, which are measured at fair value, by eliminating the consideration for the length of time fair value has been less than amortized cost when assessing credit loss for a debt security and provides for reversals of credit losses through income upon credit improvement. ASU 2016-13, is effective for the Company's January 1, 2023, with early adoption permitted. The Company is currently assessing the impact of adopting this standard on its consolidated financial statements and disclosures.

In June 2018, the FASB issued ASUNo. 2018-07, *Compensation—Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting.* ASU 2018-07 simplifies the accounting for share-based payment transactions in which a grantor acquires goods or services to be used or consumed in operations from a nonemployee. This standard is effective for annual periods beginning after December 15, 2019. The Company does not anticipate the adoption of this standard to have a material impact on its consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820)—Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"). removed the following disclosure requirements: (1) the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy; (2) the policy for timing of transfers between levels; and (3) the valuation processes for Level 3 fair value measurements. Additionally, this update added the following disclosure requirements: (1) the changes in unrealized gains and losses for the period included in other comprehensive income and loss for recurring Level 3 fair value measurements held at the end of the reporting period; (2) the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. For certain unobservable inputs, an entity may disclose other quantitative information (such as the median or arithmetic average) in lieu of the weighted average if the entity determines that other quantitative information would be a more reasonable and rational method to reflect the distribution of unobservable inputs used to develop Level 3 fair value measurements. ASU 2018-13 is effective for us on January 1, 2020, with early adoption permitted. The Company has not yet determined the potential effects of ASU 2018-13 on its consolidated financial statements and disclosures.

In August 2018, the FASB issued ASU No. 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract.* The ASU aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. This new standard also requires customers to expense the capitalized implementation costs of a hosting arrangement that is a service contract over the term of the hosting arrangement. This ASU is effective for years beginning after December 15, 2020, with early adoption permitted. The Company has not yet determined the potential effects of this ASU on its consolidated financial statements.

In December 2019, the FASB issued Accounting Standard Update No. 2019-12*, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes (ASU 2019-12)*, which eliminates certain exceptions related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. It also clarifies and simplifies other aspects of the accounting for income taxes. This guidance is effective for fiscal years beginning after December 31, 2021, and interim periods within fiscal years beginning after December 15, 2022. Early adoption is permitted. The Company is currently evaluating but has not yet determined the potential impact of the new standard on its consolidated financial statements.

In July 2017, the FASB issued ASU 2017-11, *Earnings Per Share (Topic 260), Distinguishing Liabilities from Equity (Topic 480) and Derivatives and Hedging (Topic 815): I. Accounting for Certain Financial Instruments with Down Round Features; II. Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception* ("ASU 2017-11"). Part I of this update addresses the complexity of accounting for certain financial instruments with down round features. Down round features are features of certain equity- linked instruments (or embedded features) that result in the strike price being reduced on the basis of the pricing of future equity offerings. Current accounting guidance creates cost and complexity for entities that issue financial instruments (such as warrants and convertible instruments) with down round features that require fair value measurement of the entire instrument or conversion option. Part II of this update addresses the difficulty of navigating Topic 480, *Distinguishing Liabilities from Equity*, because of the existence of extensive pending content in the FASB Accounting Standards Codification. This pending content is the result of the indefinite deferral of accounting requirements about mandatorily redeemable financial instruments of certain nonpublic entities and certain mandatorily redeemable noncontrolling interests. The amendments in Part II of this update do not have an accounting effect. The amendments in Part I of this update are effective for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. Early adoption is permitted for all entities, including adoption in an interim period. The Company is currently assessing the potential impact of adopting ASU 2017-11 on its consolidated financial statements and disclosures.

In January 2017, the FASB adopted ASU2017-04, *Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*("ASU 2017-04") which simplifies how an entity is required to test goodwill for impairment by eliminating Step 2 from the goodwill impairment test. Step 2 measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill. The implied fair value for a reporting unit is determined in the same manner as the amount of goodwill recognized in a business acquisition of the reporting unit. Under the amendments in ASU 2017-04, an entity shall recognize an impairment charge for the amount by which the carrying amount of a reporting unit exceeds its fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. The updated guidance requires adoption on a prospective basis. ASU 2017-04 is currently effective for the Company beginning January 1, 2022. Early adoption is permitted. The adoption of this standard update is not expected to have a material impact on our consolidated financial statements; however, any goodwill impairment losses recognized subsequent to adoption will be measured following the updated standard.

2. Acquisitions

Glen Research Corporation

In December 2017, the Company expanded its Nucleic Acid Production business by acquiring 100% of the outstanding equity of Glen Research via a stock purchase agreement ("Glen Research Purchase Agreement"). Pursuant to the Glen Research Purchase Agreement, all outstanding equity of Glen Research was acquired for total purchase consideration of $22.5 million.

Pursuant to the Glen Research Purchase Agreement, additional payments to the former owners of Glen Research were dependent on Glen Research meeting or exceeding defined revenue targets in each of 2018 and 2019 (together referred to as "the Glen Earn-Out") and provided for a total maximum Glen Earn-Out payment of $4.0 million. As of December 31, 2018, the portion of the Glen Earn-Out relating to the 2018 defined revenue targets had been earned and therefore, was included in the current portion of contingent consideration in the related accompanying consolidated balance sheet. In addition, the fair value of the portion relating to the 2019 defined revenue targets, classified as long-term contingent consideration, was based on revised probabilities of this remaining contingent consideration being earned based on Glen Research revenue projections, expected payout term, and risk adjusted discount rates which were Level 3 inputs. The key quantitative assumption used in the determination of fair value as of December 31, 2018 included a discount rate of approximately 11%. During the year ended December 31, 2019, upon the achievement of 2019 defined revenue targets, the liability was revalued to reflect the maximum payout of $4.0 million under the provisions of the Glen Research Purchase Agreement. The change in fair value during 2018 and 2019, approximating $0.9 million and $0.3 million, respectively, has been reflected in the consolidated statement of operations within change in fair value contingent consideration. Upon achievement of the maximum $4.0 million payout, the outstanding liability is no longer considered a Level 3 liability under the fair value hierarch. During 2019, the first $2.0 million was paid to Glen Research, and the remaining $2.0 million, which is expected to be paid in 2020, has been reclassified to accrued expenses in our consolidated balance sheet (Note 4).

As of December 31, 2018, $2.1 million remained in the Indemnification Escrow account to secure the indemnification and certain other obligations of Glen Research, pursuant to the terms of the Purchase Agreement. The entire amount was released to the former owners in June 2019. Because these amounts held in escrow were not controlled by the Company, they were not included in the accompanying consolidated balance sheet at December 31, 2018.

TriLink BioTechnologies, LLC

In September 2016, and in connection with the establishment of the Nucleic Acid Production business, the Company acquired 100% of the outstanding equity of TriLink BioTechnologies via a securities purchase agreement ("TriLink Purchase Agreement") which was partially financed with $38.6 million in third-party lender financing.

In May 2018, the intellectual property escrow of approximately $1.0 million was released to the sellers and the indemnification escrow of approximately $0.9 million was released to the Company. Pursuant to the TriLink Purchase Agreement, additional payments to the former owners of TriLink BioTechnologies were dependent on TriLink BioTechnologies meeting or exceeding defined revenue targets in each of 2017 and 2018 (the "Earn-Out"). The TriLink Purchase Agreement provided for a total maximum Earn-Out payment of $20.0 million. The portion of the Earn-Out relating to these executives has been recognized as compensation expense in the post-acquisition period, as earned. The remaining portion of the Earn-Out was recorded as contingent consideration and the fair value therein was included as part of the purchase consideration.

The Earn-Out liability of $5.8 million was paid in full during 2018, satisfying all related obligations.

The TriLink Purchase Agreement also provided for additional payments to the former owners of TriLink BioTechnologies of up to $10.0 million (the "customer holdback"). During the year ended December 31, 2017, the maximum customer holdback amount of $10.2 million was earned, of which $9.7 million was paid and approximately $0.5 million held back for certain seller related liabilities for pre-acquisition employee benefits the Company agreed to pay. The balance of $0.5 million and $0.3 million remained outstanding as of December 31, 2018 and 2019, respectively, and has been included in accrued expenses on the consolidated balance sheet.

3. Goodwill and Intangible Assets

The Company's goodwill of $224.3 million as of December 31, 2018 and 2019, respectively, represents the excess of purchase consideration over the fair value of assets acquired and liabilities assumed. Given the lack of any triggering events being identified indicating that the fair value of the goodwill may be impaired, the Company completed its qualitative goodwill impairment analysis for the nucleic acid production and biologics safety testing reporting units during the fourth quarters of 2019 and 2018 and concluded it was not more-likely-than-not that the fair value of goodwill exceeded its carrying value and no further testing was required. Having identified triggering events for the protein detection reporting unit, the Company performed a quantitative analysis and also concluding that it was not more-likely-than-not that the fair value of goodwill exceeded its carrying value and no further testing was required. No asset impairment charges were recognized during either of the years ended December 31, 2018 or 2019.

The following is a rollforward of the Company's goodwill by segment (amount in thousands):

	Nucleic Acid Production	Biologics Safety Testing	Protein Detection	Total
Balance, January 1, 2018	$ 33,000	$ 119,928	$ 71,509	$ 224,437
Completion of purchase accounting for 2017 acquisition	(162)	—	—	(162)
Balance, December 31, 2018	$ 32,838	$ 119,928	$ 71,509	$ 224,275

During the year ended December 31, 2019, there was no change in the recorded segment goodwill balances.

Intangible assets are being amortized on a straight-line basis, which reflects the expected pattern in which the economic benefits of the intangible assets are being obtained, over an estimated useful life ranging from 5 to 15 years.

The components of finite-lived intangible assets and accumulated amortization are as follows:

	As of December 31, 2018				
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Estimated Useful Life	Weighted Average Remaining Amortization Period
		(in thousands)		(in years)	(in years)
Trade Names	$ 11,490	$ 2,801	$ 8,689	5-15	8.3
Patents and Developed Technology	169,313	27,472	141,841	5-14	11.5
Customer Relationships	83,290	15,693	67,597	10-14	10.8
Total	$264,093	$ 45,966	$218,127		11.1

	As of December 31, 2019				
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Estimated Useful Life	Weighted Average Remaining Amortization Period
		(in thousands)		(in years)	(in years)
Trade Names	$ 11,490	$ 4,093	$ 7,397	5-15	7.3
Patents and Developed Technology	169,313	40,134	129,179	5-14	10.5
Customer Relationships	83,290	22,013	61,277	10-14	9.8
Total	$264,093	$ 66,240	$197,853		10.1

The Company recognized $12.1 million and $12.2 million of amortization expense from intangible assets directly linked with revenue generating activities within cost of revenue in the consolidated statement of operations for the years ended December 31, 2018 and 2019, respectively. Amortization expense for intangible assets that are not directly related to sales generating activities of $8.0 was recorded to selling, general and administrative expenses for each of the years ended December 31, 2018 and 2019.

As of December 31, 2019, the estimated future amortization expense for finite-lived intangible assets is as follows (in thousands):

2020	$ 20,191
2021	20,079
2022	19,428
2023	19,230
2024	19,230
Thereafter	99,695
Total estimated amortization expense	$ 197,853

4. Fair Value Measurements

The table below presents the Company's liabilities measured at fair value on a recurring basis aggregated by the level in the fair value hierarchy for the year ended December 31, 2018:

	Fair Value Measurements			
	Level 1	Level 2	Level 3	Total
Liabilities:				
Contingent consideration liabilities	$ —	$ —	$3,678	$3,678
Total	$ —	$ —	$3,678	$3,678

There were no material assets or liabilities measured at fair value on a recurring basis as of December 31, 2019.

The Company assesses the fair value of contingent consideration to be settled in cash related to acquisitions using probability weighted models for the various contractual earn-outs. These are Level 3 measurements. Significant unobservable inputs used in the estimated fair values of these contingent consideration liabilities include probabilities of achieving customer related performance targets, specified sales milestones, changes in projected revenue and risk adjusted discount rates.

The following table provides a reconciliation of liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) for the years ended December 31, 2018 and 2019 (in thousands):

	Contingent Consideration
Balance at January 1, 2018	$ 8,558
Change in fair value	939
Settlement	(5,819)
Balance at December 31, 2018	$ 3,678
Change in fair value	322
Settlement	(2,000)
Transfer out of Level 3 fair value hierarchy	(2,000)
Balance at December 31, 2019	$ —

During the year ended December 31, 2019, upon the achievement of the maximum liability threshold of $4.0 million, as defined in the 2017 asset purchase agreement, the total contingent purchase consideration was no longer based on significant unobservable inputs. During 2019 the first $2.0 million was paid to Glen Research, and the remaining $2.0 million, which is expected to be paid in the second half of 2020, has been reclassified out of the Level 3 fair value hierarchy to other current liabilities in our consolidated balance sheet as of December 31, 2019.

5. Balance Sheet Components

Inventory

Inventory consists of the following at December 31 (in thousands):

	2018	2019
Raw materials	$ 4,766	$ 5,037
Work in process	4,495	6,083
Finished goods	5,047	3,082
	$ 14,308	$ 14,202

Property and equipment

Property and equipment consists of the following at December 31 (in thousands):

	2018	2019
Land	$ 8,514	$ 8,516
Buildings	7,604	7,685
Buildings capitalized under lease finance obligations	2,165	61,202
Leasehold improvements	2,092	2,990
Furniture, fixtures, and equipment	8,663	12,887
Software	1,035	1,742
Total	30,073	95,022
Less accumulated depreciation	(4,289)	(8,099)
Total	25,784	86,923
Construction in-progress	1,419	7,388
Building and related construction in-progress improvements capitalized under a lease financing transaction (Note 6)	15,375	—
Property and equipment, net	$ 42,578	$ 94,311

Depreciation expense totaled approximately $2.2 million and $3.8 million for the years ended December 31, 2018 and 2019, respectively.

Accrued expenses

Accrued expenses consisted of the following at December 31 (in thousands):

	2018	2019
Employee related	$ 6,560	$ 7,660
Professional services	337	3,199
Sales and use tax liability	2,074	3,030
Accrued interest	826	475
Consideration payable	—	2,000
Other	1,350	2,151
Total accrued expenses	$ 11,147	$ 18,515

6. Commitments and Contingencies

Lease Commitments

The Company leases five facilities, including office, laboratory and manufacturing space under long-term non-cancelable operating leases. The leased facilities have initial terms of two to twelve years, and two leases have multiple five-year renewal terms and the other leases having three-year and five-year renewal terms. The Company also has capital leases for office equipment within initial terms of two to three years expiring in 2023.

Rent expense for each of the years ended December 31, 2018 and 2019 was approximately $2.0 and $2.5 million, respectively.

Prior to the Company's October 2016 acquisition of MLSC, the Southport, North Carolina facility (the "Southport Facility") leased by a subsidiary of MLSC failed to qualify for sale and leaseback accounting. As a result, MLSC recognized during construction, and retained upon the completion of construction, the value of the Southport Facility and obligation on its balance sheet as a financing obligation. Pursuant to the business combination fair value guidance, upon acquisition of MLSC, the Company recorded the fair value of the building asset, which was estimated to be $2.2 million, and the related financing obligation of $2.2 million.

In 2017, the Company amended its initial lease with the current related party landlord (Note 11) to include the lease of additional space as well as an adjustment of the base rent for the existing space. The Company continues to recognize payments under the amended lease agreement as a reduction of the facility financing obligation using the effective interest method and the ground rent as operating lease expense as notes in the schedule below. As a result of the amendment, the Company anticipates the repayment of the financing obligation by September 2024. The fair value of the leased property established at acquisition continues to be depreciated over the building's estimated useful life of thirty-five years. At the conclusion of the lease term, the Company will de-recognize both the then carrying values of the asset and financing obligation with any differences between the book value of the building asset and remaining facility financing obligation being recognized in operations at that time. For its existing arrangement for the Southport Facility, these differences are expected to be immaterial. Payments on these lease obligations for the years ended December 31, 2018 and 2019 were approximately $0.3 million. For the years ended December 31, 2018 and 2019, rent expense associated with the ground lease for the Southport Facility was not significant.

In July 2018, the Company entered into a lease for a new manufacturing facility (the "San Diego Facility Lease"). The lease included tenant improvement provisions for construction prior to occupancy. Construction on this new manufacturing facility was in progress as of December 31, 2018. As of December 31, 2018, the Company evaluated the extent of its financial and operational involvement in the tenant improvements of the new facility related to the San Diego Facility Lease to determine whether it was considered the owner of the construction project under GAAP. The Company concluded that it was deemed to be the owner of the facility for accounting purposes (even though it did not meet the definition for legal purposes) during the construction period. As of December 31, 2018, the Company recognized the fair value of the building, additional construction costs incurred to date, and related construction payable liability of approximately $15.4 million in the accompanying consolidated balance sheet. The fair value of the leased building of $11.8 million included in fixed assets was estimated using a market approach that utilized comparable observable sales for similar assets (Level 2 inputs). As of December 31, 2018, the Company had also recognized building improvements totaling $3.6 million for additions to the leased building incurred by the Company during the construction period.

During 2018, the Company recognized $0.4 million of rent expense in the consolidated statement of operations associated with the ground lease for this new manufacturing facility. During 2018, the Company was not required to recognize interest expense on the cost of the construction payable due to its short-term nature. The allocation of the San Diego Facility Lease payment to ground lease rent expense and principal and interest expense on the lease financing obligation was estimated using income and market approaches that utilized comparable observable sales for similar assets, land capitalization rates and an estimate of the Company's incremental borrowing rate (Level 2 and Level 3 inputs).

In 2019, upon completion of the construction, the Company evaluated the lease and concluded that the completed construction project failed to qualify for sale and leaseback accounting primarily due to the $8.0 million of non-recourse financing the Company provided to the lessor by reimbursing them for the $8.0 million of construction costs. The Company has accounted for the lease as a financing lease transaction. The leased building and related improvements remain on the Company's balance sheet as of December 31, 2019 and rental payments associated with the San Diego Facility Lease have been allocated to operating lease expense for the ground underlying the leased building and principal and interest payments on the Lease Facility Financing Obligation. The Company recorded the fair value of the building asset and improvements, which was estimated to be $59.0 million and the related lease facility financing obligation of $51.2 million. The difference between the gross asset value and the lease facility financing obligation represents the approximate $8.0 million of building improvement costs reimbursed by the Company.

The Company recognizes payments under the lease agreement as a reduction of the lease facility financing obligation using the effective interest method and the ground rent as operating lease expense as reflected in the schedule below. The allocation of the San Diego Facility Lease payment to ground lease rent expense and principal and interest expense on the lease facility financing obligation was estimated using income and market

approaches that utilized comparable observable sales for similar assets, land capitalization rates, and an estimate of the Company's incremental borrowing rate (Level 2 and Level 3 inputs). The fair value of the leased property, less its expected residual value, is depreciated over the term of the lease. At the conclusion of the lease term, the Company will de-recognize both the then carrying values of this asset and lease facility financing obligation with any differences between the book value of the asset and remaining lease facility financing obligation being recognized in operations at that time. For the Company's arrangement for the San Diego Facility Lease these differences are expected to be immaterial. Payments on the San Diego Facility Lease obligation for the year ended December 31, 2019 were approximately $0.9 million. For the years ended December 31, 2018 and 2019, the Company recognized rent expense associated with the ground lease for the San Diego Facility Lease of approximately $0.4 million and $0.8 million, respectively, in the consolidated statement of operations.

As of December 31, 2019, minimum annual payments under the Company's non-cancelable lease agreements, capital lease agreements, and lease financing obligations are as follows (in thousands):

	Capital Leases	Lease Facility Financing Obligations	Operating Leases
2020	$ 74	$ 2,116	$ 1,130
2021	52	3,853	1,091
2022	21	4,101	1,153
2023	1	4,401	1,203
2024	—	4,479	1,234
2025 and beyond	—	25,155	5,579
Total minimum payments	148	44,105	$ 11,390
Less: amount representing interest	(42)	(30,566)	
Present value of future minimum lease payments	106	13,539	
Residual value of lease facility financing obligation	—	39,558	
Less: short-term capital lease and lease facility financing obligations	(50)	(178)	
Long-term capital lease and lease facility financing obligations	$ 56	$ 52,919	

Operating leases in the table above includes future minimum lease payments for the ground lease for the Southport Facility and San Diego Facility Lease.

Legal Proceedings

The Company is involved in various legal proceedings arising in the normal course of business. The Company accrues for a loss contingency when it determines that it is probable, after consultation with counsel, that a liability has been incurred and the amount of such loss can be reasonably estimated. The Company believes that the results of any such contingencies, either individually or in the aggregate, will not have a material adverse effect on the Company's financial position, results of operations or cash flows.

Indemnification Agreements

In the ordinary course of business, we may provide indemnification of varying scope and terms to vendors, lessors, customers and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. These indemnities include indemnities to our directors and officers to the maximum extent permitted under applicable state laws. The maximum potential amount of future payments that we could be required to make under these indemnification agreements is, in many cases, unlimited. We have not incurred any material costs as a result of such indemnifications and are not currently aware of any indemnification claims.

7. Long-Term Debt

As of December 31, 2017, the Company had term loan and revolving obligations outstanding under an amended and restated credit agreement as well as senior subordinated notes outstanding under an amended and restated note purchase agreement. Additionally, as of December 31, 2017, a subsidiary of MLSC also had a separate term loan and revolving loan obligations outstanding under an amended note purchase agreement. These four outstanding agreements (collective referred to as the "2017 Combined Debt Agreements") remained outstanding until August 2, 2018.

In August 2018, Maravai Intermediate Holdings, LLC ("Intermediate"), a wholly-owned subsidiary of the Company, along with its subsidiaries (the "borrowers"), entered into a First Lien Credit Agreement (the "First Lien Agreement") and a Second Lien Credit Agreement (the "Second Lien Agreement") (collectively referred to as the "First and Second Lien Agreements") with lending institutions for term-loan borrowings ("First Lien Term Loan") totaling $250.0 million and for loans ("Second Lien Loan") totaling $100.0 million, (collectively referred to as the "First and Second Lien Loans") to refinance the 2017 Combined Debt Agreements (the "refinancing"), including repayment of all outstanding senior secured credit facilities and subordinated notes outstanding, and to allow for a $52.0 million distribution to the member of the Company. The First Lien Credit Agreement also provides for a revolving credit facility (the "Revolving Credit Facility") of $50.0 million for letters of credit and loans to be used for working capital and other general corporate financing purposes. Borrowings under the First and Second Lien Loans are unconditionally guaranteed by the Company, immediate parent of Intermediate, along with the existing and future domestic subsidiaries of the Company (subject to certain exceptions) as specified in the respective guaranty agreements, and are secured by a lien and security interest in substantially all of the assets of existing and future domestic subsidiaries of the Company that are loan parties.

The refinancing of the previous debt agreements was evaluated for modification and extinguishment accounting. Certain lenders participated in the Company's debt structure prior to the refinancing as well as in the Company's debt structure after the refinancing. For these lenders, to the extent that it was concluded that the present value of cash flows under the terms of the First and Second Lien Loans differed by less than 10% from the present value of the remaining cash flows of the previous debt agreements, the refinancing was accounted for as a modification of the related outstanding debt balances and for the remaining of these lenders, whose cash flows changed by greater than 10% on a present value basis, the refinancing was accounted for as an extinguishment of the related debt. Certain prior lenders did not participate in the refinancing and the repayment of their related outstanding debt balances has been accounted for as an extinguishment of debt. Proceeds of borrowings from new lenders was accounted for as a new debt financing. As part of the refinancing, the Company incurred various costs including a $4.0 million original issue discount, $6.6 million in third-party debt issuance costs, and a $1.6 million prepayment penalty related to the senior subordinated notes. Of this $12.2 million of costs, the entire $4.0 million original issue discount, $4.8 million of third-party debt issuance costs, and $0.8 million of the prepayment penalty has been capitalized in the accompanying balance sheet within long-term debt, which is subject to amortization over the term of the refinanced debt as an adjustment to interest expense using the effective interest method. Of the remaining $2.6 million of costs incurred, $0.9 million was associated with the extinguished debt and included in the loss on extinguishment of debt in the accompanying consolidated statement of operations for the year ended December 31, 2018 and $1.7 million was related to the modified debt and immediately expensed to interest expense in the accompanying consolidated statement of operations for the year ended December 31, 2018. In addition, immediately prior to the refinancing, the Company had $7.1 million of unamortized issuance costs and discounts associated with the previous debt agreements, of which $4.7 million related to the extinguished debt and has been included in the loss on extinguishment of debt in the accompanying consolidated statement of operations for the year ended December 31, 2018 and $2.4 million related to the modified debt, which remains capitalized in the accompanying consolidated balance sheet as a component of long-term debt subject to amortization over the term of the refinanced debt. The First Lien Term Loan is repayable in quarterly payments of $0.6 million beginning December 31, 2018 through June 30, 2025, with all remaining outstanding principal due in August 2025. The First Lien Term Loan includes prepayment provisions that allow the Company, at our option, to repay all or a portion of the principal amount at

any time. During the first twelve months after August 2018, prepayments are subject to a 1.00% prepayment premium. The Revolving Credit Facility allows the Borrowers to repay and borrow from time to time until August 2023, at which time all amounts borrowed must be repaid. Subject to certain exceptions and limitations, the Company is required to repay borrowings under the First Lien Term Loan and Revolving Credit Facility with the proceeds of certain occurrences, such as the incurrence of debt, certain equity contributions, and certain asset sales or dispositions.

Borrowings under the First Lien Credit Agreement bear interest (a) in the cash of the First Lien Term Loans, at the Borrowers' option either at (i) the Base Rate plus the applicable margin of 3.25% per annum based on the Company's net leverage ratio or (ii) The Adjusted Eurocurrency Rate plus the margin of 4.25% per annum and (b) in the case of the Revolving Credit Facility, at the Borrowers' option, either at (i) the Base Rate plus the applicable margin of 3.25% per annum with a stepdown to 3.00% based on the Company's first lien net leverage ratio or (ii) the Adjusted Eurocurrency Rate plus the margin of 4.25% per annum with a stepdown to 4.00% based on the Company's first lien net leverage ratio. The Base Rate is defined as the greatest of (a) the rate last quoted by The Wall Street Journal as the "Prime Rate" in the United States, (ii) the Federal Funds Rate plus 0.50% per annum, and (iii) the Adjusted Eurocurrency Rate for a one month interest period plus 1.00% per annum, (iv) solely with respect to the initial term loan. The Adjusted Eurocurrency Rate is defined as the greater of (a) with respect to the initial term loans the greater of (i) the Eurocurrency Rate for such interest period multiplied by the Statutory Reserve Rate (as such term is defined in the First Lien Credit Agreement), and (ii) 1.00% and (b) with respect to the Revolving Credit Facility, the Eurocurrency Rate for such interest period (which if negative will be deemed to be 0%) multiplied by the Statutory Reserve Rate. The "Eurocurrency Rate" is defined as the London Inter-bank Offered Rate (LIBOR) as displayed by Reuters (which if negative will be deemed to be 0.00%).

At December 31, 2018 and 2019, the interest rate on the First Lien Term Loan was 6.8125% and 6.0625%, respectively.

Accrued interest under the First Lien Credit Agreement is payable (a) quarterly in arrears with respect to Base Rate loans, (b) at the end of each interest rate period (or at each three-month interval in the case of loans with interest periods greater than three months) with respect to Eurocurrency Rate loans, (c) on the date of any repayment or prepayment, and (d) at maturity (whether by acceleration or otherwise). An annual commitment fee is applied to the daily unutilized amount under the Revolving Credit Facility at 0.50% per annum, with one stepdown to 0.375% per annum based on the Company's first lien net leverage ratio.

The Second Lien Credit Agreement includes voluntary prepayment provisions that allows the Borrowers, at their option, to repay all or a portion of the principal amount of the notes (ii) between August 2, 2019 and August 2, 2020, subject to a prepayment premium of 1.00% of the principal amount repaid.

If a change of control (as defined in the Amended and Restated Note Purchase Agreement) occurs, the Company must repay the outstanding principal amount plus a premium (calculated the same as redemption premium) and accrued and unpaid interest.

Borrowings under the Second Lien Credit Agreement bear interest, at the Company's option either at (a) the Base Rate plus the applicable margin of 7.0% per annum or (b) Adjusted Eurocurrency Rate plus the margin of 8.00% per annum. The "Base Rate" is defined as the greatest of (i) the rate last quoted by The Wall Street Journal as the "Prime Rate" in the United States, (ii) the Federal Funds Rate plus 0.50%, and (iii) Adjusted Eurocurrency Rate for a one month interest period plus 1% per annum, (iv) soley with respective to the initial term loans, 2.00% per annum and (v) for any loans that are not initial term loans, 1.00% per annum. The "Adjusted Eurocurrency Rate" is defined as (a) with respect to the initial term loans the greater of (i) the Eurocurrency Rate for such interest period multiplied by the Statutory Reserve Rate, and (ii) 1.00% and (b) with respect to the Revolving Credit Facility, the Eurocurrency Rate for such interest period (which if negative will be deemed to be 0%) multiplied by the Statutory Reserve Rate. The "Eurocurrency Rate" is defined as the London Inter-bank Offered Rate (LIBOR) as displayed by Reuters (which if negative will be deemed to be 0%).

At December 31, 2018 and 2019, the interest rate on the Second Lien Loan was 10.4% and 9.7%, respectively.

Accrued interest on Borrowings under the Second Lien Credit Agreement is payable (a) quarterly in arrears with respect to Base Rate loans, (b) at the end of each interest rate period (or at each three-month interval in the case of loans with interest periods greater than three months) with respect to Eurocurrency Rate Loans, (c) the date of any repayment or prepayment, and (iv) at maturity (whether by acceleration or otherwise).

Debt Covenants

The First Lien Credit Agreement requires that, as of the end of each fiscal quarter the net leverage ratio of Intermediate shall not be greater than 7.50 to 1.00.

The First and Second Lien Credit Agreements also contain negative and affirmative covenants in addition to the financial covenant in the First Lien Credit Agreement, including covenants that restrict the ability of the Company and its subsidiaries ability to, among other things, incur or prepay existing indebtedness, pay dividends or distributions, dispose of assets, engage in mergers and consolidations, make acquisitions or other investments, and make changes in the nature of the business. The First and Second Lien Credit Agreements contain certain objective events of default, including, without limitation, nonpayment of principal, interest or other obligations, violation of the covenants, insolvency, court ordered judgments, and change in control. The First and Second Lien Credit Agreements also require the Company to provide audited consolidated financial statements to the lenders no later than 120 days after year-end.

The First Lien Credit Agreement also requires mandatory prepayments to be calculated in 2019 upon certain excess cash flow as defined in the terms of the agreement to be paid beginning in 2020. As of December 31, 2019, no mandatory prepayment was required.

The Borrowers were in compliance with all of their debt covenants under the First and Second Lien Credit Agreements as of December 31, 2018 and 2019 and there were no events of default for the years ended December 31, 2019.

The Company's total debt at December 31 consisted of (in thousands):

	2018	2019
Term Loans	$ 249,375	$ 246,875
Senior Notes	100,000	100,000
Unamortized debt issuance costs	(11,325)	(9,592)
Total long-term debt	338,050	337,283
Less: current portion	(2,500)	(2,500)
Total long-term debt, less current portion	$ 335,550	$ 334,783

As of December 31, 2019, the aggregate future principal maturities of the Company's debt obligations for each of the next five years, based on contractual due dates, are as follows (in thousands):

2020	$ 2,500
2021	2,500
2022	2,500
2023	2,500
2024	2,500
Thereafter	334,375
Total debt	$ 346,875

Interest Rate Cap Agreements

As of December 31, 2018 and 2019, the Company has entered into four interest rate cap agreements with a financial institution to manage its variable interest rate risk on a portion of its credit borrowings under the First and Second Lien Agreements. As of December 31, 2018 and 2019, the fair value of the Company's interest rate cap agreements were insignificant and were included in other non-current assets in the accompanying consolidated balance sheets. The change in fair value during the years ended December 31, 2018 and 2019 was also insignificant and was recognized as other income (expense) in the accompanying consolidated statement of operations.

8. Member's Equity

Pursuant to the Company's limited liability company agreement, the Company has established a single class of common units with MLSH 1 as its sole member. The Company is authorized to issue up to 1,000 common units. All authorized 1,000 common unites have been issued and are outstanding. MLSH 1 as the member, is not obligated to make capital contributions to the Company. The Company's profits and losses shall be allocated to MLSH 1 as determined by the Board of Directors. MLSH 1, as the member of the Company, is not liable, solely by reason of being a member, for the debts, obligations, or liabilities of the Company whether arising in contract or tort under judgment, decree, or other of a court; or otherwise. The Company will dissolve only upon the written consent of MLSH 1. The Company's common units have no conversion rights and no explicit redemption rights. No capital contributions were received by the Company from MLSH 1 in 2018 or 2019

Pursuant to the Company's limited liability company agreement, distributions to MLSH 1 shall be made at the discretion of the Company's the Board of Directors.

The Company's Board of Directors approved and distributions were made to MLSH 1 in the amount of $52.1 million during the year-ended December 31, 2018. No distributions were made to MLSH 1 during the year ended December 31, 2019

MLSC Incentive Units

The Company's majority-owned subsidiary, MLSC, is authorized and at the discretion of the MLSC Board, under its Limited Liability Company Agreement ("MLSC LLC Agreement"), as amended in October 2016, to issue common units that can be designated as Incentive Units. The Incentive Units may be subject to either a combination of service, market or performance vesting conditions. Vested Incentive Units are treated as common units for purposes of distributions.

During the year ended December 31, 2017, MLSC awarded 1,820,000 incentive units ("MLSC Incentive Units") to several employees of its subsidiary, of which 364,000 included performance condition vesting. Awards which vest based solely on a service condition provide for cliff-vesting over five years. The MLSC Incentive Units that include performance conditions tied to the achievement of certain cash distribution multiples provide for full vesting upon meeting the performance condition. No compensation cost has been recorded for the MLSC Incentive Units with performance conditions as achieving the cash distribution multiples performance condition associated with these awards was not considered probable.

All vested MLSC Incentive Units are subject to repurchase for fair value at MLSC's option upon a voluntary or involuntary separation event that is not deemed to be for cause and only after seven months have passed since the separation event. During 2018 and 2019, the Company repurchased 12,000 and 160,000, respectively, MLSC Incentive Units for $0.2 million and an insignificant amount, respectively.

MLSC Incentive Unit activity during the periods indicated is as follows:

	Number of Unvested MLSC Incentive Units	Weighted Average Grant Date Fair Value Per Unit
Balance as of January 1, 2018	2,539,800	$ 0.88
MLSC Units forfeited	(340,000)	0.90
MLSC Units vested	(729,200)	0.87
Balance as of December 31, 2018	1,470,600	$ 0.87
MLSC Units vested	(649,200)	0.87
Balance as of December 31, 2019	821,400	$ 0.88

No MLSC Incentive Units were granted in 2018 or 2019.

Unit-based compensation expense for the years ended December 31, 2018 and 2019 was approximately $0.6 million and $0.4 million, respectively.

As of December 31, 2018 and 2019, there were 2,905,000 and 2,745,000 and MLSC Incentive Units outstanding, respectively, of which 1,470,600 and 821,400 remained unvested, respectively. The total fair value of the MLSC Incentive Units that vested in 2018 and 2019 was approximately $0.6 million in each of the periods. At December 31, 2018, and 2019, 12.1 million additional MLSC units were available for grant.

MLSH 1 Incentive Units

The Company has entered into agreements with certain executives and board members whereby those employees and board members were granted incentive units in MLSH 1, the Company's parent and sole member ("MLSH 1 Incentive Units"). All MLSH 1 Incentive Unit awards are subject to a market condition which is subject to the achievement of a certain investment return threshold that increases on a compounding basis annually and a service condition subject to their continued employment. Certain MLSH 1 Incentive Unit awards also contain performance conditions tied to the consummation of a business acquisition. Other MLSH 1 Incentive Unit awards contain a performance condition tied to the achievement of certain cash distribution multiples. The fair value of MLSH 1 Incentive Unit awards is measured at the grant date and is recognized as expense over the requisite service period for the awards.

During the years ended December 31, 2018 and 2019, all MLSH 1 Incentive Unit awards with performance conditions were subject solely to the achievement of defined cash distribution multiples. No compensation cost has been recorded for the MLSH 1 Incentive Unit awards with performance conditions as achieving the cash distribution multiples performance condition associated with these awards was still not considered probable.

Total compensation cost recognized by the Company during each of the years ended December 31, 2018 and 2019, for all MLSH 1 Incentive Unit awards, was approximately $1.5 million and $1.3 million and, respectively.

During the year ended December 31, 2018, a total of 23,000 MLSH 1 Incentive Unit awards were granted of which 3,000 included performance condition vesting. During the year ended December 31, 2019, a total of 169,500 MLSH 1 Incentive Unit awards were granted of which 34,500 included performance condition vesting. The MLSH 1 Incentive Unit awards that include market and service conditions provide for cliff-vesting generally over four or five years. The MLSH 1 Incentive Unit awards that include market and performance conditions provide for full vesting upon meeting the performance condition. No compensation cost has been recorded for the MLSH 1 Incentive Unit awards with performance conditions as achieving performance conditions associated with these awards was still not considered probable.

All vested MLSH 1 Incentive Unit awards are subject to repurchase for fair value at the Company's option upon a voluntary or involuntary separation event that is not deemed to be for cause. No MLSH 1 Incentive Unit awards were repurchased in 2018. During 2019, MLSH 1 repurchased 1,000 MLSH 1 Incentive Unit awards for an insignificant amount.

MLSH 1 Incentive Unit award activity during the periods indicated is as follows:

	Number of Unvested MLSH 1 Incentive Unit awards	Weighted Average Grant Date Fair Value
Balance as of January 1, 2018	975,500	$ 8.37
MLSH 1 Incentive Unit awards granted	23,000	10.53
MLSH 1 Incentive Unit awards forfeited	(35,000)	6.69
MLSH 1 Incentive Unit awards vested	(168,500)	6.33
Balance as of December 31, 2018	795,000	$ 8.91
MLSH 1 Incentive Unit awards granted	169,500	18.60
MLSH 1 Incentive Unit awards forfeited	(6,500)	11.68
MLSH 1 Incentive Unit awards vested	(170,900)	6.38
Balance as of December 31, 2019	787,100	$ 11.53

As of December 31, 2018 and 2019, there were 1,215,000 and 1,377,500 MLSH 1 Incentive Unit awards outstanding of which and 795,000 and 787,100 had not yet vested, respectively. The fair value of the units underlying the MLSH 1 Incentive Unit awards was estimating using the aggregate implied equity value of MLSH 1 using a weighting of discounted cash flow analysis, comparable public company analysis and comparable transactions analysis. An Option-Pricing Method ("OPM") was then used to allocate the total equity value of MLSH 1 to the different classes of equity according to their rights and preferences. To apply the OPM, volatility was estimated based on the historical volatility of similar public companies' stock price over a preceding period commensurate with the expected term of the MLSH 1 Incentive Unit awards. The Company estimated the expected term of the MLSH 1 Incentive Unit awards was estimated considering the timing and probabilities of a liquidity event. The risk-free interest rate for the expected term of the MLSH 1 Incentive Unit awards was based on the U.S. Treasury yield curve in effect at the time of grant. Compensation expense related to the MLSH 1 Incentive Unit awards during the years ended December 31, 2018 and 2019 were $0.4 million and an insignificant amount, respectively.

The following table sets forth the compensation expense related to both the MLSC Incentive Units and MLSH 1 Incentive Unit awards included in the accompanying consolidated statements of operations for the year ended December 31, (in thousands):

	2018	2019
Cost of revenue	$ 38	$ 22
Research and development	297	211
Selling, general and administrative	1,786	1,446
	$ 2,121	$ 1,679

At December 31, 2018 and 2019, there was $2.8 million and $3.7 million of total unrecognized compensation cost related to unvested MLSH 1 Incentive Units and MLSC Incentive Unit awards not subject to a performance condition that is expected to be recognized over a weighted average period of 2.5 and 1.9 years, respectively.

As of December 31, 2018 and 2019, there was $3.6 million and $4.1 million, respectively, of unrecognized compensation cost associated with the total of all MLSH 1 Incentive Units and MLSC Incentive Unit awards subject to a performance condition.

9. Income Taxes

The Company and a number of its subsidiaries are treated as flow-through entities for federal income tax purposes. The income or loss generated by these entities are not taxed at the LLC level. As required by U.S. tax law, income or loss generated by these LLCs flows through to MLSH 1, the Company's sole member. As such, the Company's income tax provision consists solely of the activities of its taxable subsidiaries which are taxed as corporations for federal income tax purposes.

The components of loss from operations for the Company's taxable subsidiaries before provision for income taxes for the years ended December 31, are as follows (in thousands):

	2018	2019
U.S.	$ (2,471)	$ (2,484)
International	(206)	(272)
	$ (2,677)	$ (2,756)

Income tax expense (benefit) consisted of the following for the years ended December 31 (in thousands):

	2018	2019
Current tax expense		
Federal	$ 87	$ 505
State	6	2
International	—	—
	93	507
Deferred tax expense (benefit)		
Federal	847	(1,224)
State	(554)	65
International	31	—
	324	(1,159)
Total income tax expense (benefit)	$ 417	$ (652)

A reconciliation between the Company's effective tax rate and the applicable U.S. federal statutory income tax rate as of December 31 (in thousands) is summarized as follows:

	2018	2019
Federal statutory rate	21.0%	21.0%
State and local taxes, net of federal benefits	20.5%	(2.4%)
Deferred tax revaluation	(52.1%)	(0.1%)
One-time transition tax	(4.3%)	—
Stock based compensation	(2.4%)	(1.7%)
Research and development credit	2.9%	1.9%
Intercompany sale of inventory	1.0%	1.2%
Uncertain tax positions	(0.6%)	5.4%
Other	(1.6%)	(1.6%)
Effective tax rate	(15.6%)	23.7%

Deferred tax assets and liabilities as of December 31 (in thousands) are summarized as follows:

	2018	2019
Deferred tax assets:		
Interest limitation	$ 1,331	$ 2,333
Tax loss and credit carryforwards	982	455
Accruals	458	454
Inventories	362	19
Other	109	—
Total deferred tax assets	3,242	3,261
Valuation allowance	(1,565)	(1,561)
Total deferred tax assets, net of valuation allowance	$ 1,677	$ 1,700
Deferred tax liabilities:		
Intangibles	$ (14,127)	$ (13,007)
Property and equipment	(3,089)	(3,064)
Transaction costs	(303)	(326)
Other	(14)	—
Total deferred tax liabilities	(17,533)	(16,397)
Total net deferred tax liabilities	$ (15,856)	$ (14,697)

The Company's valuation allowance primarily relates to Internal Revenue Code ("IRC") 163(j) interest expense and insignificant foreign NOL carryforwards. As of December 31, 2018 the Company recorded a full valuation allowance against its IRC 163(j) interest expense carryforward based on negative evidence associated with the Company's projection of income and financing plans. As of December 31, 2019, the Company only recorded a partial valuation allowance against IRC 163(j) due to expected future income generated by the sale of land, building and related building improvements in 2020 (Note 14). The net change in valuation allowance was insignificant for the year ended December 31, 2019 due to increases in the IRC 163(j) and foreign NOL carryforwards offset by the release in valuation allowance on the 163(j) carryforward due to expected future taxable income.

Based on its previous indefinite reinvestment assertion, the Company has not historically provided deferred taxes on earnings in certain non-U.S. subsidiaries because such earnings were intended to be indefinitely reinvested in its international operations. With the introduction of a modified territorial tax system in the 2017 Tax Act, the Company has reviewed its previously stated intent and no longer indefinitely reinvests the undistributed earnings of its foreign operations. For the years ending December 31, 2018 and 2019, the amount of undistributed foreign earnings was $1.4 million and $1.2 million, respectively. The Company believes any unrecorded liabilities related with these earnings are not material.

As of December 31, 2018, the Company had U.S. Federal NOL carryforwards of $2.7 million. As of December 31, 2019, the Company had no U.S. Federal NOL carryforwards. As of December 31, 2018 and 2019, the Company had state NOL carryforwards of $2.4 million and $1.4 million, respectively, available to reduce future taxable income. State NOL carryforwards to future periods begin to expire in 2034. As of December 31, 2018 and 2019, the Company had no U.S. Federal Research and Development tax credit carryforwards. As of December 31, 2018 and 2019, the Company had California Research and Development Tax Credit carryforwards of $0.1 million and $0.1 million, respectively, the California Research and Development Tax Credits are not subject to expiration.

On June 29, 2020, Assembly Bill 85 ("A.B. 85") was signed into California law. A.B. 85 provides for a three-year suspension of the use of net operating losses for medium and large businesses and a three-year cap on the use of business incentive tax credits to offset no more than $5.0 million of tax per year. A.B. 85 suspends the use of net operating losses for taxable years 2020, 2021 and 2022 for certain taxpayers with taxable income of $1.0 million or more. The carryover period for any net operating losses that are suspended under this provision will be extended.

A.B. 85 also requires that business incentive tax credits including carryovers may not reduce the applicable tax by more than $5.0 million for taxable years 2020, 2021 and 2022. The Company is currently assessing the impact of adopting this standard on its consolidated financial statements but does not expect the impact to be material.

The Company had foreign NOL carryforwards of $1.0 million and $1.3 million for the years ending December 31, 2018 and 2019, respectively. Substantially all of the foreign NOLs do not have an expiration date.

In response to the COVID-19 pandemic, the Coronavirus Aid, Relief and Economic Security Act ("CARES Act") and the Families First Coronavirus Response Act ("FFCR Act") were signed into law in March 2020. The CARES Act lifts certain deduction limitations originally imposed by the 2017 Tax Act. Corporate taxpayers may carryback NOLs originating during 2018 through 2020 for up to five years, which was not previously allowed under the 2017 Tax Act. The CARES Act also eliminates the 80% of taxable income limitations by allowing corporate entities to fully utilize NOL carryforwards to offset taxable income in 2018, 2019 or 2020. Taxpayers may generally deduct interest up to the sum of 50% of adjusted taxable income plus business interest income (30% limit under the 2017 Tax Act) for tax years beginning January 1, 2019 and 2020. The CARES Act allows taxpayers with alternative minimum tax credits to claim a refund in 2020 for the entire amount of the credits instead of recovering the credits through refunds over a period of years, as originally enacted by the 2017 Tax Act. The CARES Act and FFCR Act also included provisions related to refundable payroll tax credits, deferment of employer side social security payments.

In addition, the CARES Act raises the corporate charitable deduction limit to 25% of taxable income and makes qualified improvement property generally eligible for 15-year cost-recovery and 100% bonus depreciation. The CARES Act will be applicable to the Company in 2020 and is expected to affect the Company's ability to utilize certain tax credit carryforwards related to the deduction of interest that were limited under the 2017 Tax Act. The expected impact on the 2020 consolidated financial statements approximates $1.0 million. The Company is also evaluating other effects the CARES Act and FFCR Act will have on its consolidated financial statements.

As of December 31, 2018 and 2019, the Company had $0.1 million and $0.2 million, respectively, of unrecognized tax benefits, all of which would affect its effective tax rate if recognized. We do not expect any significant increases or decreases to our unrecognized tax benefits in the next twelve months. The Company recognizes interest as a component of income tax expense.

The aggregate changes in the balance of the Company's unrecognized tax benefits, as of December 31, were as follows (in thousands):

	2018	2019
Balance, beginning of year	$106	$136
Gross increases based on tax positions related to current year	34	5
Gross increase based on tax positions related to prior years	—	105
Gross decreases based on tax positions related to prior years	(4)	(38)
Balance, end of year	$136	$208

The Company files income tax returns in the U.S. federal jurisdiction, California, Canada, and the United Kingdom and is not under audit by any taxing authority in any of these jurisdictions. In the normal course of business the Company is subject to examination by taxing authorities throughout the world. With a few exceptions, the Company is no longer subject to U.S. federal, state, and local, or non-U.S. income tax examinations for years before 2015 except for utilization of net operating loss carryforwards.

10. Net Loss per Common Unit Attributable to the Member of Maravai

Net loss per common unit attributable to our member for the years ended December 31, 2018 and 2019 is based on the weighted average number of common units outstanding during the period. The members' equity of MLSC is

comprised of Class A and Class B preferred units, MLSC Incentive Units and common units, each with participation rights. The MLSC preferred units are entitled to cumulative dividends of 8% compounded annually, up to an additional 4%, also compounded annually, to the extent of remaining unallocated earnings. The preferred unitholders of MLSC are required, however, to share a portion of the additional 4% in dividends with the holders of MLSC Incentive Units based on a formula defined in the MLSC LLC Agreement. The Company determined that vested MLSC Incentive Units and MLSC Class A and B Preferred Units are participating securities under the two-class method at the MLSC subsidiary level, however, they do not have a contractual obligation to share in losses, and therefore no undistributed losses have been allocated to them. MLSH 1 Incentive Units are granted by the parent of the Company, and as a result, do not represent potential common units of the Company.

Diluted net loss per common unit attributable to our member is computed by adjusting the net loss and the weighted-average number of common units outstanding to give effect to potentially dilutive securities. The Company has issued potentially dilutive instruments in the form of MLSC Incentive Units granted to employees and officers of MLSC. The Company did not include these MLSC Incentive Units in its calculation of diluted loss per unit during the years ended December 31, 2018 and 2019, because to include them would be anti-dilutive due to the Company's net loss during such periods.

The following table sets forth the computation of basic and diluted net loss per common unit attributable to our member for the years ended December 31 (in thousands, except units and per unit amounts):

	2018	2019
Net loss per common unit—basic and diluted:		
Net Loss	$ (16,915)	$ (5,201)
Less: preferred unit dividends attributable to noncontrolling interest	(5,259)	(5,680)
Add: loss attributable to common noncontrolling interest	4,446	2,400
Net loss attributable to the Company common unitholder	$ (17,728)	$ (8,481)
Weighted average common units outstanding	1,000	1,000
Net loss per common unit—basic and diluted:	$ (17,727.35)	$ (8,481.36)

The following common unit equivalents have been excluded from the calculations of diluted net loss per common unit for the years ended December 31 because their inclusion would be antidilutive:

	2018	2019
Time-based incentive units	2,896,000	2,896,000
Performance-based incentive units	249,000	249,000
	3,145,000	3,145,000

11. Segments

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, or decision-making group, in deciding how to allocate resources and in assessing performance. When determining the reportable segments, the Company aggregated operating segments based on their similar economic and operating characteristics. Segment results are presented in the same manner as we present our operations internally to make operating decisions and assess performance. The accounting policies for the segments are the same as those described in Significant Accounting Policies (Note 1). The Company's financial performance is reported in three segments. A description of each segment follows:

- *Nucleic Acid Production*: focuses on the manufacturing and sale of highly modified nucleic acids products to support the needs of customers' research, therapeutic and vaccine programs. This segment also provides research products for labeling and detecting proteins in cells and tissue samples.

- *Biologics Safety Testing*: focuses on manufacturing and selling biologics safety and impurity tests and assay development services that are utilized by our customers in their biologic drug manufacturing spectrum.
- *Protein Detection*: focuses on manufacturing and selling labeling and visual detection reagents to scientific research customers for their tissue-based protein detection and characterization needs.

The Company has determined that adjusted earnings before interest, tax, depreciation, and amortization ("Adjusted EBITDA") is the profit or loss measure that the CODM uses to make resource allocation decisions and evaluate segment performance. Adjusted EBITDA assists management in comparing the segment performance on a consistent basis for purposes of business decision-making by removing the impact of certain items that management believes do not directly reflect the core operations and, therefore, are not included in measuring segment performance. The Company defines Adjusted EBITDA as net income before interest, taxes, depreciation and amortization, certain non-cash items, and other adjustments that we do not consider in our evaluation of ongoing operating performance from period to period. Corporate costs are managed on a standalone basis and not allocated to segments.

Following is financial information relating to the operating segments (in thousands):

As of and for the year ended December 31, 2018	Nucleic Acid Production	Biologics Safety Testing	Protein Detection	Corporate	Total
Revenue	$ 60,057	$ 38,492	$ 25,284	$ —	$ 123,833
Adjusted EBITDA	$ 16,751	$ 31,199	$ 13,846	$ (8,796)	$ 53,000

As of and for the year ended December 31, 2019	Nucleic Acid Production	Biologics Safety Testing	Protein Detection	Corporate	Total
Revenue	$ 72,602	$ 44,416	$ 26,122	$ —	$ 143,140
Adjusted EBITDA	$ 22,229	$ 36,371	$ 14,603	$ (11,189)	$ 62,014

There was no inter-segment activity for any of the periods presented and all of the revenue for each segment is from external customers.

The Company does not allocate assets to its reportable segments as they are not included in the review performed by the CODM for purposes of assessing segment performance and allocating resources. Excluding approximately $0.3 million associated with a building in the United Kingdom, all of the Company's long-lived assets are located within the United States.

A reconciliation of Adjusted EBITDA to net loss, the most directly comparable GAAP measure, is set forth below (in thousands):

	Year Ended December 31,	
	2018	2019
Net Loss	$ (16,915)	$ (5,201)
Add:		
Amortization	20,122	20,274
Depreciation	2,225	3,810
Interest expense	27,399	29,959
Income tax expense (benefit)	417	(652)
EBITDA	33,248	48,190
Acquisition contingent consideration	939	322
Loss on extinguishment of debt	5,622	—
Acquisition integration costs	7,529	6,170
Amortization of purchase accounting inventory step-up	2,967	1,856
Unit-based compensation	2,121	1,679
GTCR management fees	574	523
Merger and acquisition related expenses	—	3,274
Adjusted EBITDA	$ 53,000	$ 62,014

12. Employee Benefit Plans

The Company sponsors a 401(k) plan (the "Maravai LifeSciences 4019k) Plan") that stipulates that eligible employees can elect to contribute to the 401(k) Plan, subject to certain limitations, on a pretax basis. The Company provides for a match of up to 50% of employee contributions up to the first 6% of salary. The Company match vest over a four-year term. In February 2019, a retirement saving plan of one of our subsidiaries was closed and all funds in the plan were rolled over into the Maravai LifeSciences 401(k) Plan.

The Company also maintains a non-qualified Long-Term Incentive Plan ("LTIP") for legacy employees of one of their subsidies which is not subject to the Employee Retirement Income Security Act of 1974.

Total contributions by the Company to these plans were approximately and $1.0 million and $1.2 million for the years ended December 31, 2018 and 2019, respectively.

13. Related Party Transactions

MLSH 1 has an advisory services agreement with GTCR, LLC, MLSH 1's majority owner. Under this agreement GTCR provides the Company financial and management consulting services in the areas of corporate strategy, budgeting for future corporate investments, acquisition and divestiture strategies and debt and equity financings. The advisory services agreement provides that the Company pay placement fees to GTCR of 1.0% of the gross amount of any debt or equity financings. During the years ended December 31, 2018 and 2019, no placement fees were incurred. The advisory services agreement provides that the Company pay a $0.1 million quarterly management fee to GTCR commencing on the date of the first acquisition. For each of the years ended December 31, 2018 and 2019, the Company incurred approximately $0.5 million in management fees to GTCR which were paid in full as of December 31, 2019 and 2018, respectively.

The Company also reimburses GTCR for out-of-pocket expenses incurred while providing the above professional services. During the years ended December 31, 2018 and 2019, the Company incurred out-of-pocket expenses to GTCR of $0.1 million and $2.4 million, respectively. Of these balances, the amounts included in accrued expense at December 31, 2019 approximated $2.4 million. The amounts included in accounts payable and accrued expenses were insignificant as of December 31, 2018 and 2019.

The noncontrolling interest in MLSC represents equity interest that was retained by the shareholders of the MLSC entity prior to its acquisition by the Company. The President of Cygnus Technologies is the majority owner of the noncontrolling interest.

The Company leases a facility (Note 6), which is owned by an entity controlled by a close relative of the President of one of its subsidiaries. The close relative was also previously an employee of the Company who terminated their employment during the year ended December 31, 2018. The President of this subsidiary also personally financed a loan to this entity which was used to acquire the property leased by the Company. For the years ending December 31, 2018 and 2019, the Company paid $0.2 million in lease payments for the leased facility.

14. Subsequent Events

The Company has evaluated subsequent events through the date of the report of the Independent Registered Public Accounting Firm.

In January 2020, the Company completed the sale of land, building and related building improvements specific to its facility in Burlingame, California for approximately $25.2 million, net of tax. Simultaneously, with the close of the transaction, the Company leased the property for a two-and-a-half-year period. The future lease obligations under the lease, which were excluded from the future lease obligation table above in Note 6, approximate $3.1 million.

In March 2020, the Company acquired MockV Solutions, Inc. (“MockV”), a private entity, for total gross cash consideration equal to $3.0 million minus debt, transaction expenses, and half of the amount required to maintain the patents between signing and closing, plus cash held by MockV at the time of the acquisition. The acquisition also provides for the possibility of future contingent consideration up to $9.0 million, based on the entity’s achievement of long-term sales targets at various points of measurement, as defined by the purchase agreement.

In March 2020, the Company drew down approximately $15.0 million on its existing Revolving Credit Facility to provide financing for the acquisition of MockV and other operating uses.

In March 2020, the World Health Organization declared the global novel coronavirus disease 2019(“COVID-19”), outbreak a pandemic. While certain impacts of COVID-19 have been favorable to sale of the Company’s products and services, Company cannot at this time predict the specific extent, duration, or full impact that the COVID-19 outbreak will have on its financial condition and operations. The impact of theCOVID-19 coronavirus outbreak on the financial performance of the Company may depend on future developments, including the duration and spread of the outbreak and related governmental advisories and restrictions. In addition, the Company could see some limitations on employee resources that would otherwise be focused on our operation, including but not limited to sickness of employees or their families, the desire of employees to avoid contact with large groups of people, and increased reliance on working from home.

In September 2020, the Company amended its San Diego Facility lease agreement to provide for additional manufacturing and office space. The amended lease agreement provides for tenant improvements for construction prior to occupancy, rent concessions, and escalating rent payments over the life of the lease which now expires in May 2023. The total future minimum lease payments under the amended lease agreement are $55.6 million, with the option to renew subject to certain conditions.


maravai
LifeSciences

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth all costs and expenses, other than the underwriting discounts and commissions payable by us, in connection with the offer and sale of the securities being registered. All amounts shown are estimates except for the Securities and Exchange Commission ("SEC") registration fee and the FINRA filing fee.

	Amount to be Paid
SEC registration fee	$ *
FINRA filing fee	*
listing fee	*
Advisory fees payable to Perella Weinberg Partners LP	*
Printing expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent fees and registrar fees	*
Miscellaneous expenses	*
Total expenses	$ *

* To be provided by amendment.

Item 14. Indemnification of Directors and Officers

Section 102(b)(7) of 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 shareholders 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 certificate of incorporation will provide for this limitation of liability.

Section 145 of the DGCL ("Section 145") provides 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 that such person acted in good faith and in a manner he 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 conduct was illegal. A Delaware corporation may indemnify any persons who are, were or are threatened to be made 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 that such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the corporation's best interests, provided 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 against the expenses 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 him and incurred by him in such capacity, or arising out of his status as such, whether or not the corporation would otherwise have the power to indemnify him under Section 145.

Our bylaws will provide that we will indemnify our directors and officers to the fullest extent authorized by the DGCL and must also pay expenses incurred in defending any such proceeding in advance of its final disposition upon delivery of an undertaking by or on behalf of an indemnified person to repay all amounts so advanced if it should be determined ultimately that such person is not entitled to be indemnified under this section or otherwise.

Upon completion of this offering, we intend to enter into indemnification agreements with each of our executive officers and directors. The indemnification agreements will provide the executive officers and directors with contractual rights to indemnification, expense advancement and reimbursement, to the fullest extent permitted under the DGCL.

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, provision of our certificate of incorporation or bylaws, agreement, vote of shareholders or disinterested directors or otherwise.

We will maintain standard policies of insurance that provide coverage (1) to our directors and officers against loss arising 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 proposed form of Underwriting Agreement to be filed as Exhibit 1.1 to this Registration Statement provides for indemnification of our directors and officers by the underwriters party thereto against certain liabilities arising under the Securities Act of 1933 (the "Securities Act") or otherwise.

Item 15. Recent Sales of Unregistered Securities

Set forth below is information regarding securities sold by us within the past three years that were not registered under the Securities Act. Also included is the consideration, if any, received by us for such securities and information relating to the section of the Securities Act, or rule of the SEC, under which exemption from registration was claimed.

Since January 1, 2017, we have made sales of the following unregistered securities:

- On August 25, 2020, Maravai LifeSciences Holdings, Inc. issued 1,000 shares of its Class A common stock to Maravai LifeSciences Holdings, LLC for $10.00. The issuance of such shares of Class A common stock was not registered under the Securities Act of 1933, as amended, the Securities Act, because the shares were offered and sold in a transaction exempt from registration under Section 4(a)(2) of the Securities Act.

The offers and sales of the above securities were deemed to be exempt from registration under the Securities Act in reliance upon Section 4(a)(2) of the Securities Act or Regulation D promulgated thereunder, or Rule 701 promulgated under Section 3(b) of the Securities Act, as transactions by an issuer not involving any public offering or pursuant to benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the above securities represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof. Appropriate legends were placed upon any stock certificates issued in these transactions. All recipients had adequate access, through their relationships with us, to information about us. The sales of these securities were made without any general solicitation or advertising.

Item 16. Exhibits and Financial Statement Schedules

(i) Exhibits

Exhibit Number	Description
1.1*	Form of Underwriting Agreement
3.1*	Form of Amended and Restated Certificate of Incorporation of Maravai LifeSciences Holdings, Inc. to be in effect at or prior to the consummation of this offering
3.2*	Form of Amended and Restated Bylaws of Maravai LifeSciences Holdings, Inc. to be in effect upon the closing of this offering
4.1*	Form of Class A Common Stock Certificate
4.2*	Registration Rights Agreement
5.1*	Opinion of Kirkland & Ellis LLP
10.1*+	Maravai LifeSciences Holdings, Inc. 2020 Omnibus Incentive Plan
10.2+§**	Senior Management Agreement, dated as of March 18, 2014, among Maravai Life Sciences Holdings, LLC, Maravai Life Sciences, Inc. and Carl Hull
10.3+§**	Amended and Restated Senior Management Agreement, dated as of August 4, 2015, among Maravai Life Sciences Holdings, LLC, Maravai Life Sciences, Inc. and Eric Tardif
10.4+§**	Senior Management Agreement, dated as of May 30, 2017, among Maravai Life Sciences Holdings, LLC, Maravai Life Sciences, Inc. and Kevin M. Herde
10.5+§**	Senior Management Agreement, dated as of December 27, 2017, among Maravai Life Sciences Holdings, LLC, TriLink Biotechnologies, LLC and Brian Neel
10.6+§**	Senior Management Agreement, dated as of December 27, 2017, among MLSC Holdings, LLC, Cygnus Technologies, LLC and Christine Dolan
10.7*+	Form of Securities Grant Agreement
10.8*	Form of Tax Receivable Agreement
10.9*	Form of Exchange Agreement
10.10*	Form of Amended and Restated Operating Agreement of Topco LLC
10.11*+	Maravai LifeSciences Holdings, Inc. 2020 Employee Stock Purchase Plan
10.12*	Form of Director and Officer Indemnification Agreement
10.13§**	First Lien Credit Agreement, dated as of August 2, 2018, among Maravai Intermediate Holdings, LLC, Cygnus Technologies, LLC, Trilink Biotechnologies, LLC, Vector Laboratories, Inc., Maravai Topco Holdings, LLC and JPMorgan Chase Bank, N.A.
10.14§**	Second Lien Credit Agreement, dated as of August 2, 2018, among Maravai Intermediate Holdings, LLC, Cygnus Technologies, LLC, Trilink Biotechnologies, LLC, Vector Laboratories, Inc., Maravai Topco Holdings, LLC and Antares Capital LP
10.15§**	Distribution Agreement, dated January 14, 2019, between Cygnus Technologies, LLC and Beijing XMJ Scientific Co. Ltd.
10.16§**	Lease Agreement, dated as of January 10, 2020, between Shac Ingold Apartments LLC, and Vector Laboratories, Inc., as amended

Exhibit Number	Description
10.17§**	Lease Agreement, dated as of September 23, 2019, between TransDulles Center, Inc., and Glen Research Corporation, as amended
10.18§**	Lease Agreement, dated as of July 13, 2018, between 10770 Wateridge Investors LLC, and Trilink Biotechnologies, LLC, as amended
10.19§**	Lease Agreement, dated as of October 6, 2016, between Arame, LLC, and Cygnus Technologies, LLC, as amended
10.20**	Second Amended and Restated Advisory Agreement, dated September 15, 2016, between GTCR Management XI LP, Vector Laboratories, Inc. and TriLink Biotechnologies, LLC
10.21+§**	Investment and Director Compensation Agreement, dated as of January 1, 2017, between Maravai Life Sciences Holdings, LLC, and Robert B. Hance
10.22+§**	Investment and Director Compensation Agreement, dated as of January 8, 2020, between Maravai Life Sciences Holdings, LLC, and Gregory T. Lucier
10.23+§**	Investment and Director Compensation Agreement, dated as of August 10, 2016, between Maravai Life Sciences Holdings, LLC, and Murali K. Prahalad
10.24§	Credit Agreement, dated as of October 19, 2020, among Maravai Intermediate Holdings, LLC, Cygnus Technologies, LLC, Trilink Biotechnologies, LLC, Vector Laboratories, Inc., Maravai Topco Holdings, LLC and Morgan Stanley Senior Funding, Inc.
21.1*	List of subsidiaries of Maravai LifeSciences Holdings, Inc.
23.1*	Consent of Independent Registered Public Accounting Firm, as to Maravai LifeSciences Holdings, Inc.
23.2*	Consent of Independent Registered Public Accounting Firm, as to Maravai Topco Holdings, LLC
23.3*	Consent of Kirkland & Ellis LLP (included in Exhibit 5.1)
24.1*	Powers of Attorney (included on signature page)

* Indicates to be filed by amendment.
** Indicates previously filed.
\+ Indicates a management contract or compensatory plan or agreement.
§ Exhibits and schedules have been omitted pursuant to Item 601(a)(5) of Regulation S-K and will be provided on a supplemental basis to the Securities and Exchange Commission upon request.

(ii) Financial statement schedules

No financial statement schedules are provided because the information called for is not applicable or is shown in the financial statements or notes.

Item 17. Undertakings

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities 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 hereunder, 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 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.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in the 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; and

(2) 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 the time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, on , 2020.

Maravai LifeSciences Holdings, Inc.

By: _____
Name: Carl Hull
Title: Chief Executive Officer

***

POWER OF ATTORNEY

The undersigned director and officers of Maravai LifeSciences Holdings, Inc. hereby appoint each of and , asattorney-in-fact for the undersigned, with full power of substitution and resubstitution, for and in the name, place and stead of the undersigned, to sign and file with the Securities and Exchange Commission under the Securities Act of 1933 any and all amendments (including post-effective amendments) and exhibits to this registration statement on Form S-1 (or any other registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933) and any and all applications and other documents to be filed with the Securities and Exchange Commission pertaining to the registration of the securities covered hereby, with full power and authority to do and perform any and all acts and things whatsoever requisite and necessary or desirable, hereby ratifying and confirming all that said attorney-in-fact, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
_____ Carl Hull	Chief Executive Officer and Director (Principal Executive Officer)	, 2020
_____ Kevin Herde	Chief Financial Officer (Principal Financial and Accounting Officer)	, 2020

Exhibit 10.24

Execution Version

CREDIT AGREEMENT

DATED AS OF OCTOBER 19, 2020

AMONG

MARAVAI INTERMEDIATE HOLDINGS, LLC,
AS PARENT BORROWER,

CYGNUS TECHNOLOGIES, LLC, TRILINK BIOTECHNOLOGIES, LLC
AND VECTOR LABORATORIES, INC.,
AS BORROWERS,

MARAVAI TOPCO HOLDINGS, LLC,
AS HOLDINGS,

MORGAN STANLEY SENIOR FUNDING, INC.,
AS ADMINISTRATIVE AGENT, COLLATERAL AGENT AND AN L/C ISSUER,

AND

THE OTHER LENDERS AND L/C ISSUERS PARTY HERETO

MORGAN STANLEY SENIOR FUNDING, INC., GOLDMAN SACHS BANK USA, JEFFERIES FINANCE LLC AND ANTARES CAPITAL LP,
AS JOINT LEAD ARRANGERS AND JOINT BOOKRUNNERS

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This CREDIT AGREEMENT is entered into as of October 19, 2020, among MARAVAI INTERMEDIATE HOLDINGS, LLC, a Delaware limited liability company ("Parent Borrower"), CYGNUS TECHNOLOGIES, LLC, a Delaware limited liability company ("Cygnus"), TRILINK BIOTECHNOLOGIES, LLC, a Delaware limited liability company ("TriLink"), Vector Laboratories, Inc., a California corporation ("Vector"; and together with the Parent Borrower, Cygnus and TriLink, the "Borrowers" and each, a "Borrower"), MARAVAI TOPCO HOLDINGS, LLC, a Delaware limited liability company ("Holdings"), each lender from time to time party hereto (collectively, the "Lenders" and individually, a "Lender"), each L/C Issuer party hereto and MORGAN STANLEY SENIOR FUNDING, INC. ("MS"), as Administrative Agent and Collateral Agent.

PRELIMINARY STATEMENTS

The Borrowers have requested that, upon the satisfaction in full of the conditions precedent set forth in Article IV below, the applicable Lenders (a) make term loans to the Borrowers in an aggregate principal amount of $600,000,000 and (b) make available to the Borrowers a $180,000,000 revolving credit facility for the making, from time to time, of revolving loans and the issuance, from time to time, of letters of credit, in each case on the terms and subject to the conditions set forth in this Agreement.

In consideration of the mutual covenants and agreements herein contained, the parties hereto covenant and agree as follows:

ARTICLE I.
Definitions and Accounting Terms

Section 1.01 Defined Terms. As used in this Agreement, the following terms shall have the meanings set forth below:

"Accepting Lender" has the meaning specified in Section 10.01.

"Acquired Indebtedness" means, with respect to any specified Person, (a) Indebtedness of any other Person existing at the time such other Person is merged, amalgamated or consolidated with or into or becomes a Restricted Subsidiary of such specified Person, whether or not such Indebtedness is Incurred in connection with, or in contemplation of, such other Person merging, amalgamating or consolidating with or into, or becoming a Restricted Subsidiary of, such specified Person and (b) Indebtedness secured by a Lien encumbering any asset acquired by such specified Person.

"Actual Tax Liability" shall have the meaning assigned to such term in Section 7.05(13).

"Adjusted Cash" means the amount of unrestricted cash after giving effect to unrealized gains and losses under (and as determined by) any Swap Contracts in place at the time of determination (but only with respect to the then-elapsed portion of the current monthly or quarterly (as applicable under the relevant Swap Contract) calculation period thereunder).

"Adjusted Eurocurrency Rate" means, with respect to any Eurocurrency Rate Borrowing for any Interest Period, an interest rate per annum (rounded upwards, if necessary, to the next 1/16 of 1%) equal to (a) with respect to the initial Term Loans, the Eurocurrency Rate for such Interest Period (which (i) with respect to the Revolving Credit Facility, if negative, shall be deemed to be 0% and (ii) with respect to the Initial Term Loans, if less than 1.00%, shall be deemed to be 1.00%) multiplied by the Statutory Reserve Rate and (b) with respect to the Revolving Credit Facility, the Eurocurrency Rate for such Interest Period (which, if negative, shall be deemed to be 0%), multiplied by the Statutory Reserve Rate.

"Administrative Agent" means MS acting through such of its Affiliates or branches as it may designate, in its capacity as administrative agent under any of the Loan Documents, or any successor administrative agent permitted by the terms hereof.

"Administrative Agent's Office" means the Administrative Agent's address and, as appropriate, account as set forth on Schedule 10.02 or such other address or account as the Administrative Agent may from time to time notify the Parent Borrower and the Lenders.

"Administrative Questionnaire" means an Administrative Questionnaire in the form approved by the Administrative Agent.

"Affected Financial Institution" means (a) any EEA Financial Institution or (b) any UK Financial Institution.

"Affiliate" of any specified Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person. For purposes of this definition, "control" (including, with correlative meanings, the terms "controlling," "controlled by" and "under common control with"), as used with respect to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of such Person, whether through the ownership of voting securities, by agreement or otherwise. For purposes of this Agreement and the other Loan Documents, Jefferies LLC and its Affiliates shall be deemed to be Affiliates of Jefferies Finance LLC and its Affiliates.

"Affiliate Lender Assignment and Assumption" has the meaning specified in Section 10.07(i)(i).

"Affiliate Lenders" means, collectively, the Sponsor and its Affiliates (other than any Natural Person, Holdings, the Borrowers and any of Holdings' or the Borrowers' respective Subsidiaries).

"Affiliate Transaction" has the meaning specified in Section 6.18(a).

"Agent-Related Persons" means each Agent, together with its Related Parties.

"Agents" means, collectively, the Administrative Agent, the Collateral Agent, the Arrangers and the Supplemental Agents (if any).

"Aggregate Commitments" means the Commitments of all the Lenders.

"Agreement" means this credit agreement.

"Agreement Currency" has the meaning specified in Section 10.23.

"All-in Yield" means, with respect to any Indebtedness, the yield of such Indebtedness, whether in the form of interest rate, margin, OID, upfront fees, index floors or otherwise, in each case payable by the Borrowers generally to lenders of such Indebtedness, provided that (i) OID and upfront fees shall be equated to interest rate assuming a four-year life to maturity, (ii) "All-in Yield" shall not include arrangement fees, structuring fees, ticking fees, commitment fees, unused line fees, underwriting fees, success fees, advisory fees, consent fees and any amendment and similar fees (regardless of whether paid in whole or in part to the relevant lenders), (iii) any other fees not generally paid ratably to all lenders of such Indebtedness in the initial syndication thereof, (iv) with respect to any applicable Loans or any other applicable Indebtedness that includes a Eurocurrency Rate floor or Base Rate floor, (1) to the extent that the Eurocurrency Rate or Base Rate on the date that the All-In Yield is being calculated is less than such floor, the amount of such difference shall be deemed added to the All-In Yield for such Loans or such other applicable Indebtedness for the purpose of calculating the All-In Yield and (2) to the extent that the Eurocurrency Rate or Base Rate on the date that the All-In Yield is being calculated is equal to or greater than such floor, then the floor shall be disregarded in calculating the All-In Yield and (v) the "All-In Yield" shall not reflect account fluctuations in the underlying reference rate or fluctuations in currency valuations.

"Alternative Currency" means other currencies as may be approved by the Administrative Agent, the L/C Issuers (in the case of Letters of Credit to be issued by such L/C Issuers) and each of the Revolving Credit Lenders. For the avoidance of doubt, a Revolving Credit Lender shall not constitute a Defaulting Lender solely as a result of not agreeing to provide Revolving Credit Loans in other currencies pursuant to this definition.

"Alternative Currency Equivalent" means, at any time, with respect to any amount denominated in Dollars, the equivalent amount thereof in the applicable Alternative Currency, by using the rate of exchange for the purchase of dollars with the Alternative Currency in the London foreign exchange market at or about 11:00 a.m. London time (or New York time, as applicable) on a particular day as displayed by ICE Data Services as the "ask price," or as displayed on such other information service which publishes that rate of exchange from time to time in place of ICE Data Services (or if such service ceases to be available, the equivalent of such amount in dollars as determined by the Administrative Agent or an L/C Issuer, as the case may be).

"Alternative Currency Loan" means a Loan denominated in an Alternative Currency.

"Antares" means Antares Capital LP.

"Anticipated Cure Deadline" has the meaning specified in Section 8.03(a).

"Anti-Corruption Laws" has the meaning specified in Section 5.20.

"Applicable Commitment Fee" means a percentage per annum equal to (a) from the Closing Date until the first Business Day that immediately follows the date on which a Compliance Certificate is delivered pursuant to Section 6.02(b) in respect of the first full fiscal quarter ending after the Closing Date, 0.375% per annum, and (b) thereafter, the applicable percentage per annum set forth below, as determined by reference to Consolidated First Lien Net Leverage Ratio, as set forth in the most recent Compliance Certificate received by the Administrative Agent pursuant to Section 6.02(b):

Applicable Commitment Fee

Pricing Level	Consolidated First Lien Net Leverage Ratio	Applicable Commitment Fee
1	> 4.50:1.00	0.375%
2	≤ 4.50:1.00	0.250%

Any increase or decrease in the Applicable Commitment Fee resulting from a change in the Consolidated First Lien Net Leverage Ratio shall become effective as of the first Business Day immediately following the date the applicable Compliance Certificate is delivered pursuant to Section 6.02(b); provided, however, that "Pricing Level 1" shall apply without regard to the Consolidated First Lien Net Leverage Ratio (x) at any time after the date on which any annual or quarterly financial statement was required to have been delivered pursuant to Section 6.01(a) or Section 6.01(b) but was not delivered (or the Compliance Certificate related to such financial statements was required to have been delivered pursuant to Section 6.02(b) but was not delivered (in each case, after giving effect to any applicable grace period in Section 8.01)), commencing with the first Business Day immediately following such date and continuing until the first Business Day immediately following the date on which such financial statements (or, if later, the Compliance Certificate related to such financial statements) are delivered, or (y) at the election of the Majority Lenders under the Revolving Credit Facility at such time, at all times if an Event of Default shall have occurred and be continuing.

"Applicable Discount" has the meaning specified in the definition of "Dutch Auction."

"Applicable Intercreditor Arrangements" means customary intercreditor arrangements that are reasonably satisfactory to the Administrative Agent (provided that, in the case of Indebtedness secured by Liens on a junior basis to the Facilities, an intercreditor agreement substantially in the form of the First Lien/Second Lien Intercreditor Agreement shall be deemed satisfactory, and in the case of Indebtedness secured on a *pari passu* basis to the Facilities, an intercreditor agreement substantially in the form of the Pari Passu Intercreditor Agreement shall be deemed satisfactory).

"Applicable Rate" means a percentage per annum equal to, with respect to the Initial Term Loans and the Revolving Credit Facility, (a) subject to the next succeeding proviso, from the Closing Date until the first Business Day that immediately follows the date on which a Compliance Certificate is delivered pursuant to Section 6.02(b) in respect of the first full fiscal quarter ending after the Closing Date, 4.25% per annum for Eurocurrency Rate Loans

and 3.25% per annum for Base Rate Loans and (b) thereafter, the applicable percentage per annum set forth below, as determined by reference to the Consolidated First Lien Net Leverage Ratio, as set forth in the then most recent Compliance Certificate received by the Administrative Agent pursuant to Section 6.02(b):

	Applicable Rate		
Pricing Level	**Consolidated First Lien Net Leverage Ratio**	**Eurocurrency Rate Loans**	**Base Rate Loans**
1	> 4.50:1.00	4.25%	3.25%
2	≤ 4.50:1.00	4.00%	3.00%

; provided that each of the foregoing rates set forth above in this definition shall be decreased by 0.25% during any period when the Borrower's corporate family and corporate credit ratings, as applicable, are at least B2 (stable) or better from Moody's and B (stable) or better from S&P.

Any increase or decrease in the Applicable Rate resulting from a change in the Consolidated First Lien Net Leverage Ratio shall become effective as of the first Business Day immediately following the date a Compliance Certificate is delivered pursuant to Section 6.02(b); provided, however, that "Pricing Level 1" for the table set forth above shall apply without regard to the Consolidated First Lien Net Leverage Ratio (x) at any time after the date on which any annual or quarterly financial statement was required to have been delivered pursuant to Section 6.01(a) or Section 6.01(b) but was not delivered (or the Compliance Certificate related to such financial statements was required to have been delivered pursuant to Section 6.02(b) but was not delivered (in each case, after giving effect to any applicable grace period in Section 8.01)), commencing with the first Business Day immediately following such date and continuing until the first Business Day immediately following the date on which such financial statements (or, if later, the Compliance Certificate related to such financial statements) are delivered, or (y) at the election of the Majority Lenders under the applicable Tranche at such time, at all times if an Event of Default shall have occurred and be continuing. Any increase or decrease in the Applicable Rate as a result of a change in the Borrower's corporate family or corporate credit ratings shall become effective on the Business Day following announcement thereof by Moody's and/or S&P, as applicable.

"Appropriate Lender" means, at any time, (a) with respect to either the Term Facility or the Revolving Credit Facility, a Lender that has a Commitment with respect to such Facility or holds a Term Loan or a Revolving Credit Loan, respectively, at such time, (b) with respect to the Letter of Credit Sublimit, (i) each L/C Issuer and (ii) if any Letters of Credit have been issued pursuant to Section 2.03(a), the Revolving Credit Lenders, (c) with respect to any New Term Facility, a Lender that holds a New Term Loan at such time, and (d) with respect to any Specified Refinancing Debt, a Lender that holds Specified Refinancing Term Loans or Specified Refinancing Revolving Loans.

"Approved Electronic Platform" means IntraLinks™, DebtDomain, SyndTrak, ClearPar or any other electronic platform chosen by the Administrative Agent to be its electronic transmission system.

"Approved Fund" means any Fund that is administered, advised or managed by (a) a Lender, (b) an Affiliate of a Lender or (c) an entity or an Affiliate of an entity that administers, advises or manages a Lender.

"Arrangers" means each of MS, GS, Jefferies and Antares, in their respective capacities as exclusive joint lead arrangers and joint bookrunners.

"Asset Sale" means:

(a) the sale, conveyance, transfer or other Disposition (whether in a single transaction or a series of related transactions) of property or assets (including by way of a Sale/Leaseback Transaction) of the Parent Borrower or any Restricted Subsidiary, or

(b) the issuance or sale of Equity Interests (other than preferred stock of Restricted Subsidiaries issued in compliance with Section 7.01 and directors' qualifying shares or shares or interests required to be held by foreign nationals or other third parties to the extent required by applicable law) of any Restricted Subsidiary (other than to a Borrower or another Restricted Subsidiary) (whether in a single transaction or a series of related transactions).

Notwithstanding the preceding, none of the following items will be deemed to be an Asset Sale:

(a) a sale, exchange or other disposition of cash, Cash Equivalents or Investment Grade Securities, or of obsolete, damaged, unnecessary, unsuitable or worn out equipment or other assets in the ordinary course of business, or dispositions of property no longer used, useful or economically practicable to maintain in the conduct of the business of the Borrowers and the Restricted Subsidiaries (including allowing any registrations or any applications for registration of any intellectual property to lapse or become abandoned);

(b) the sale, conveyance, lease or other disposition of all or substantially all of the assets of the Borrowers and their Subsidiaries in compliance with the provisions of Section 7.03;

(c) any Restricted Payment that is permitted to be made, and is made, pursuant to Section 7.05 or any Permitted Investment;

(d) any Disposition of assets or issuance or sale of Equity Interests of any Borrower or Restricted Subsidiary, in a single transaction or series of related transactions, with an aggregate Fair Market Value that is less than or equal to the greater of (x) 10,000,000 and (y) 10% of Consolidated EBITDA on a Pro Forma Basis;

(e) any transfer or Disposition of property or assets or issuance or sale of Equity Interests by a Restricted Subsidiary to a Borrower or by a Borrower or a Restricted Subsidiary to another Restricted Subsidiary;

(f) the creation of any Lien permitted under this Agreement;

(g) any issuance, sale, pledge or other disposition of Equity Interests in, or Indebtedness or other securities of, an Unrestricted Subsidiary;

(h) the sale, lease, assignment, license or sublease of inventory, equipment, accounts receivable, notes receivable or other current assets held for sale in the ordinary course of business or the conversion of accounts receivable to notes receivable or dispositions of accounts receivable in connection with the collection or compromise thereof;

(i) the lease, assignment, license, sublicense or sublease of any real or personal property in the ordinary course of business;

(j) a sale, assignment or other transfer of Receivables Assets, or participations therein, and related assets (i) to a Receivables Subsidiary in a Qualified Receivables Financing or (ii) to any other Person in a Qualified Receivables Factoring;

(k) a sale, assignment or other transfer of Receivables Assets, or participations therein, and related assets by a Receivables Subsidiary in a Qualified Receivables Financing;

(l) any exchange of assets for Related Business Assets (including a combination of Related Business Assets and cash or Cash Equivalents) of comparable or greater market value than the assets exchanged, as determined in good faith by the Parent Borrower; provided that if any cash and Cash Equivalents received are more than a *de minimis* amount, such cash and Cash Equivalents shall be treated as having been received on account of an Asset Sale unless a separate exclusion in this definition applies);

(m) (i) non-exclusive licenses, sublicenses or cross-licenses of intellectual property or other general intangibles and (ii) exclusive licenses, sublicenses or cross-licenses of intellectual property or other general intangibles in the ordinary course of business of the Borrowers and the Restricted Subsidiaries of the Borrowers;

(n) any transfer in a Sale/Leaseback Transaction of any property acquired or built after the Closing Date;provided that such sale is for at least Fair Market Value;

(o) the surrender or waiver of obligations of trade creditors or customers or other contract rights that were incurred in the ordinary course of business of the Borrowers or any Restricted Subsidiary of the Borrowers, including pursuant to any plan of reorganization or similar arrangement upon the bankruptcy or insolvency of any trade creditor or customer or compromise, settlement, release or surrender of a contract, tort or other litigation claim, arbitration or other disputes;

(p) Dispositions arising from foreclosures, condemnations, eminent domain, seizure, nationalization or any similar action with respect to assets, dispositions of property subject to casualty events (except for purposes of calculating Net Cash Proceeds of any Asset Sale under the second and third paragraphs of Section 7.04);

(q) Dispositions of Investments (including Equity Interests) in joint ventures to the extent required by, or made pursuant to customary buy/sell arrangements or rights of first refusal between, the joint venture parties set forth in joint venture arrangements and similar binding arrangements;

(r) to the extent allowable under Section 1031 of the Code, any exchange of like property (excluding any boot thereon) for use in a Similar Business;

(s) the issuance of directors' qualifying shares and shares issued to foreign nationals to the extent required by applicable law;

(t) Dispositions of property to the extent that (i) such property is exchanged for credit against the purchase price of similar replacement property that is promptly purchased or (ii) the proceeds of such Asset Sale are promptly applied to the purchase price of such replacement property (which replacement property is actually promptly purchased);

(u) a sale or transfer of equipment receivables, or participations therein, and related assets; and

(v) the Disposition of (i) assets that are necessary or advisable (as determined by the Parent Borrower in good faith) in order to obtain or increase the likelihood of obtaining the approval of any Governmental Authority to consummate or avoid the prohibition or other restriction on the consummation of any permitted acquisition of any Person, business or assets and (ii) non-core assets acquired in a permitted acquisition.

For the avoidance of doubt, the unwinding of Swap Contracts shall not be deemed to constitute an Asset Sale.

"Assignee Group" means two or more Eligible Assignees that are Affiliates of one another or two or more Approved Funds managed by the same investment advisor.

"Assignment and Assumption" means an assignment and assumption entered into by a Lender and an assignee (with the consent of any party whose consent is required by Section 10.07), and accepted by the Administrative Agent, in the form of Exhibit E-1 or any other form (including electronic records generated by the use of an electronic platform) approved by the Administrative Agent.

"Auction Amount" has the meaning specified in the definition of "Dutch Auction."

"Auction Notice" has the meaning specified in the definition of "Dutch Auction."

"Auto-Renewal Letter of Credit" has the meaning specified in Section 2.03(c)(iii).

"Available Tenor" means, as of any date of determination and with respect to the then-current Benchmark, any tenor for such Benchmark or payment period for interest calculated with reference to such Benchmark, as applicable, that is or may be used for determining the length of an Interest Period pursuant to this Agreement as of such date and, for the avoidance of doubt, shall exclude any tenor for such Benchmark that is removed from the definition of "Interest Period" pursuant to Section 3.04(e).

"Bail-In Action" means the exercise of any Write-Down and Conversion Powers by the applicable Resolution Authority in respect of any liability of an Affected Financial Institution.

"Bail-In Legislation" means (a) 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, rule, regulation or requirement for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule and (b) with respect to the United Kingdom, Part I of the United Kingdom Banking Act 2009 (as amended from time to time) and any other law, regulation or rule applicable in the United Kingdom relating to the resolution of unsound or failing banks, investment firms or other financial institutions or their affiliates (other than through liquidation, administration or other insolvency proceedings).

"Bankruptcy Event" means, with respect to any Person, such Person becomes the subject of a voluntary or involuntary bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee, administrator, custodian, assignee for the benefit of creditors or similar Person charged with the reorganization or liquidation of its business appointed for it, or, in the good faith determination of the Administrative Agent, has taken any action in furtherance of, or indicating its consent to, approval of, or acquiescence in, any such proceeding or appointment or has had any order for relief in such proceeding entered in respect thereof, provided that a Bankruptcy Event shall not result solely by virtue of any ownership interest, or the acquisition of any ownership interest, in such Person by a Governmental Authority or instrumentality thereof, unless such ownership interest results in or provides such Person with immunity from the jurisdiction of courts within the United States or from the enforcement of judgments or writs of attachment on its assets or permits such Person (or such Governmental Authority or instrumentality) to reject, repudiate, disavow or disaffirm any contracts or agreements made by such Person.

"Base Rate" means, for any day, a rate per annum equal to the greatest of (a) the Prime Rate in effect on such day, (b) the NYFRB Rate in effect on such day *plus* ½ of 1% per annum, (c) the Adjusted Eurocurrency Rate for a one month Interest Period on such day (or if such day is not a Business Day, the immediately preceding Business Day) *plus* 1% per annum; provided that for the purpose of this clause (c), the Adjusted Eurocurrency Rate for any day shall be based on the Screen Rate (or if the Screen Rate is not available for such one month Interest Period, the Interpolated Rate) at approximately 11:00 a.m. London time on such day, (d) solely with respect to Initial Term Loans, 2.00% per annum and (e) for any Loans that are not Initial Term Loans, 1.00% per annum. Any change in the Base Rate due to a change in the Prime Rate, the NYFRB Rate or the Adjusted Eurocurrency Rate shall be effective from and including the effective date of such change in the Prime Rate, the NYFRB Rate or the Adjusted Eurocurrency Rate, respectively. If the Base Rate is being used as an alternate rate of interest pursuant to Section 3.04 hereof, then the Base Rate shall be the greater of clauses (a) and (b) above and shall be determined without reference to clause (c) above.

"Base Rate Borrowing" means a Borrowing comprising Base Rate Loans.

"Base Rate Loan" means a Loan that bears interest based on the Base Rate.

"Benchmark" means, initially, the Screen Rate; provided that if a Benchmark Transition Event or an EarlyOpt-in Election, as applicable, and its related Benchmark Replacement Date have occurred with respect to the Screen Rate or the then-current Benchmark, then "Benchmark" means the applicable Benchmark Replacement to the extent that such Benchmark Replacement has replaced such prior benchmark rate pursuant to Section 3.04.

"Benchmark Replacement" means the sum of: (a) the alternate benchmark rate (which may be a SOFR-Based Rate) that has been selected by the Administrative Agent and the Parent Borrower giving due consideration to (i) any selection or recommendation of a replacement rate or the mechanism for determining such a rate by the Relevant Governmental Body or (ii) any evolving or then-prevailing market convention for determining a rate of interest as a replacement to the Benchmark for U.S. dollar-denominated syndicated credit facilities and (b) the Benchmark Replacement Adjustment; *provided* that, if the Benchmark Replacement as so determined would be less than (i) in the case of the Initial Term Loans, 1.00%, the Benchmark Replacement will be deemed to be 1.00 for the purposes of this Agreement and (ii) otherwise, 0.00%, the Benchmark Replacement will be deemed to be 0.00% for the purposes of this Agreement.

"Benchmark Replacement Adjustment" means, with respect to any replacement of Adjusted Eurocurrency Rate with an Unadjusted Benchmark Replacement for each applicable Interest Period, the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected by the Administrative Agent and the Parent Borrower giving due consideration to (i) any selection or recommendation of a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of the Benchmark with the applicable Unadjusted Benchmark Replacement by the Relevant Governmental Body or (ii) any evolving or then-prevailing market convention for determining a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of the Benchmark with the applicable Unadjusted Benchmark Replacement for U.S. dollar-denominated syndicated credit facilities at such time.

"Benchmark Replacement Conforming Changes" means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of "Base Rate," the definition of "Interest Period," timing and frequency of determining rates and making payments of interest and other administrative matters) that the Administrative Agent decides may be appropriate to reflect the adoption and implementation of such Benchmark Replacement and to permit the administration thereof by the Administrative Agent in a manner substantially consistent with market practice (or, if the Administrative Agent decides that adoption of any portion of such market practice is not administratively feasible or if the Administrative Agent determines that no market practice for the administration of the Benchmark Replacement exists, in such other manner of administration as the Administrative Agent decides is reasonably necessary in connection with the administration of this Agreement).

"Benchmark Replacement Date" means the earlier to occur of the following events with respect to the Benchmark:

(1) in the case of clause (1) or (2) of the definition of "Benchmark Transition Event," the later of (a) the date of the public statement or publication of information referenced therein and (b) the date on which the administrator of the Benchmark permanently or indefinitely ceases to provide the Benchmark; or

(2) in the case of clause (3) of the definition of "Benchmark Transition Event," the date of the public statement or publication of information referenced therein.

"Benchmark Transition Event" means the occurrence of one or more of the following events with respect to the Benchmark:

(1) a public statement or publication of information by or on behalf of the administrator of the Benchmark announcing that such administrator has ceased or will cease to provide the Benchmark, permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark;

(2) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark, the U.S. Federal Reserve System, an insolvency official with jurisdiction over the administrator for the Benchmark, a resolution authority with jurisdiction over the administrator for the Benchmark or a court or an entity with similar insolvency or resolution authority over the administrator for the Benchmark, which states that the administrator of the Benchmark has ceased or will cease to provide the Benchmark permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark; or

(3) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark announcing that the Benchmark is no longer representative.

"Benchmark Transition Start Date" means (a) in the case of a Benchmark Transition Event, the earlier of (i) the applicable Benchmark Replacement Date and (ii) if such Benchmark Transition Event is a public statement or publication of information of a prospective event, the 90th day prior to the expected date of such event as of such public statement or publication of information (or if the expected date of such prospective event is fewer than 90 days after such statement or publication, the date of such statement or publication) and (b) in the case of an Early Opt-in Election, the date specified by the Administrative Agent or the Required Lenders, as applicable, by notice to the Borrower, the Administrative Agent (in the case of such notice by the Required Lenders) and the Lenders.

"Benchmark Unavailability Period" means, if a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to the Benchmark and solely to the extent that the Benchmark has not been replaced with a Benchmark Replacement, the period (x) beginning at the time that such Benchmark Replacement Date has occurred if, at such time, no Benchmark Replacement has replaced the Benchmark for all purposes hereunder in accordance with the Section 3.04 and (y) ending at the time that a Benchmark Replacement has replaced the Benchmark for all purposes hereunder pursuant to the Section 3.04.

"Beneficial Ownership Certification" means a certification regarding beneficial ownership as required by the Beneficial Ownership Regulation.

"Beneficial Ownership Regulation" means 31 C.F.R. § 1010.230.

"Benefit Plan" means any of (a) an "employee benefit plan" (as defined in ERISA) that is subject to Title I of ERISA, (b) a "plan" as defined in and subject to Section 4975 of the Code or (c) any Person whose assets include (for purposes of ERISA Section 3(42) or otherwise for purposes of Title I of ERISA or Section 4975 of the Code) the assets of any such "employee benefit plan" or "plan".

"Board of Directors" means as to any Person, the board of directors, board of managers, sole member or managing member or other governing body of such Person, or if such Person is owned or managed by a single entity or has a general partner, the board of directors, board of managers, sole member or managing member or other governing body of such entity or general partner, or in each case, any duly authorized committee thereof, and the term "directors" means members of the Board of Directors.

"Borrower Joinder Agreement" means a joinder agreement substantially in the form of Exhibit O or such other form as may be agreed between the Parent Borrower and the Administrative Agent.

"Borrower Materials" has the meaning specified in Section 6.02.

"Borrower Parties" means the collective reference to the Borrowers and the Restricted Subsidiaries, and "Borrower Party" means any one of them.

"Borrowers" has the meaning specified in the introductory paragraph to this Agreement and shall include any Restricted Subsidiary that is a Domestic Subsidiary that, after the Closing Date becomes a Borrower by executing a Borrower Joinder Agreement; provided that any Subsidiary that has become a Borrower after the Closing Date (a "Subsidiary Borrower") may have its status as a Borrower terminated by delivering a notice to the Administrative Agent from the Parent Borrower and such Subsidiary Borrower electing to terminate such Subsidiary's status as a Borrower, provided, further, that no such termination shall affect any obligation of such Subsidiary as a Guarantor or as a "Grantor" under any Loan Document.

"Borrowing" means a Revolving Credit Borrowing or a Term Borrowing, as the context may require.

"Business Day" means:

(1) 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;

(2) if such day relates to any interest rate settings as to a Eurocurrency Rate Loan denominated in Dollars, Euros or Pounds Sterling, means any such day described in clause (1) above that is also a London Banking Day;

(3) if such day relates to any interest rate settings as to a Eurocurrency Rate Loan denominated in Canadian Dollars, any day other than a Saturday, Sunday or other day on which commercial banks are authorized to close under the Laws of the Province of Ontario, or are in fact closed in Toronto, Ontario, that is also a day on which banks are open for foreign exchange business in Toronto, Ontario; and

(4) if such day relates to any interest rate settings as to a Eurocurrency Rate Loan denominated in an Alternative Currency other than Euros, Pounds Sterling or Canadian Dollars, any fundings, disbursements, settlements or payments in such Alternative Currency, or any other dealings in such Alternative Currency to be carried out pursuant to this Agreement in respect of any such Eurocurrency Rate Loan (other than any interest rate settings), means any such day on which banks are open for foreign exchange business in the principal financial center of the country of such currency.

"Canadian Dollars" means freely transferable lawful money of Canada (expressed in Canadian dollars).

"Capital Stock" means:

(1) in the case of a corporation or company, corporate stock or share capital;

(2) in the case of an association or business entity, any and all shares, interests, participations, rights or other equivalents (however designated) of corporate stock;

(3) in the case of a partnership or limited liability company, partnership or membership interests (whether general or limited); and

(4) any other interest or participation that confers on a Person the right to receive a share of the profits and losses of, or distributions of assets of, the issuing Person (it being understood and agreed, for the avoidance of doubt, that "cash-settled phantom appreciation programs" in connection with employee benefits that do not require a dividend or distribution shall not constitute Capital Stock).

"Capitalized Lease Obligation" means at the time any determination thereof is to be made, the amount of the liability in respect of a capital lease that would at such time be required to be capitalized and reflected as a liability on a balance sheet (excluding the footnotes thereto) in accordance with GAAP.

"Cash-Capped Incremental Facility" has the meaning specified in Section 2.14(a).

"Cash Collateralize" means to pledge and deposit with or deliver to the Administrative Agent, for the benefit of the Administrative Agent or L/C Issuer (as applicable) and the Lenders, as collateral for L/C Obligations or obligations of Lenders to fund participations in respect of either thereof (as the context may require), cash, Cash Equivalents (if reasonably acceptable to the Administrative Agent and the applicable L/C Issuer) or deposit account balances (in the case of L/C Obligations in the respective currency or currencies in which the applicable L/C Obligations are denominated, unless otherwise agreed by the Administrative Agent or L/C Issuer benefitting from such collateral) or, if the Administrative Agent or L/C Issuer benefiting from such collateral shall agree in its sole discretion, other credit support (including by backstop with a letter of credit satisfactory to the applicable L/C Issuer or by being deemed reissued under another agreement acceptable to the applicable L/C Issuer), in each case pursuant to documentation in form and substance reasonably satisfactory to (a) the Administrative Agent and (b) the applicable L/C Issuer (which documents are hereby consented to by the Lenders). "Cash Collateral" shall have a meaning correlative to the foregoing and shall include the proceeds of such cash collateral and other credit support.

"Cash Contribution Amount" means the aggregate amount of cash contributions made to the capital of the Borrowers or any Subsidiary Guarantor (other than from a Restricted Subsidiary) and designated as a "Cash Contribution Amount" as described in the definition of "Contribution Indebtedness."

"Cash Equivalents" means:

(1) Dollars, Canadian Dollars, Pounds Sterling, euros, the national currency of any participating member state of the European Union and, with respect to any Foreign Subsidiaries, other currencies held by such Foreign Subsidiary in the ordinary course of business;

(2) securities issued or directly guaranteed or insured by the government of the United States, United Kingdom or any country that is a member of the European Union (as it is constituted on the Closing Date) or any agency or instrumentality thereof in each case with maturities not exceeding two years from the date of acquisition;

(3) money market deposits, certificates of deposit, time deposits and eurodollar time deposits with maturities of two years or less from the date of acquisition, bankers' acceptances, in each case with maturities not exceeding two years, and overnight bank deposits, in each case with any commercial bank having capital and surplus in excess of $250,000,000 in the case of domestic banks or $100,000,000 (or the dollar equivalent thereof) in the case of foreign banks;

(4) repurchase obligations for underlying securities of the types described in clauses (2) and (3) above and clause (6) below entered into with any financial institution or securities dealers of recognized national standing meeting the qualifications specified in clause (3) above;

(5) commercial paper or variable or fixed rate notes issued by a corporation or other Person (other than an Affiliate of the Borrower) rated at least "A-2" or the equivalent thereof by Moody's or S&P (or reasonably equivalent ratings of another internationally recognized ratings agency) and in each case maturing within two years after the date of acquisition;

(6) readily marketable direct obligations issued by any state, commonwealth or territory of the United States of America or any political subdivision or taxing authority thereof having an Investment Grade Rating from either Moody's or S&P (or reasonably equivalent ratings of another internationally recognized ratings agency) in each case with maturities not exceeding two years from the date of acquisition;

(7) Indebtedness issued by Persons (other than the Sponsor) with a rating of "A" or higher from S&P or"A-2" or higher from Moody's (or reasonably equivalent ratings of another internationally recognized ratings agency) in each case with maturities not exceeding two years from the date of acquisition, and marketable short-term money market and similar securities having a rating of at least "A-2" or "P-2" from either S&P or Moody's (or reasonably equivalent ratings of another internationally recognized ratings agency);

(8) investment funds investing at least 95% of their assets in investments of the types described in clauses (1) through (7) above and (9) and (10) below;

(9) 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 reasonably equivalent ratings of another internationally recognized ratings agency); and

(10) in the case of investments by any Foreign Subsidiary or investments made in a country outside the United States of America, other investments of comparable tenor and credit quality to those described in the foregoing clauses (1) through (9) customarily utilized in the countries where such Foreign Subsidiary is located or in which such investment is made.

Notwithstanding the foregoing, Cash Equivalents shall include amounts denominated in currencies other than those set forth in clause (1) above; provided that such amounts are converted into any currency listed in clause (1) as promptly as practicable and in any event within ten Business Days following the receipt of such amounts.

"Cash Interest Coverage Ratio" means, with respect to any Person as of any date, the ratio of (1) Consolidated EBITDA of such Person for the most recent period of four consecutive fiscal quarters for which internal financial statements are available immediately preceding the date on which such calculation of the Cash Interest Coverage Ratio is made, calculated on a Pro Forma Basis for such period to (2) Consolidated Interest Expense of such Person for such period. In the event that the Parent Borrower or any of its Restricted Subsidiaries Incurs or redeems or repays any Indebtedness (other than in the case of revolving credit borrowings or revolving advances under any Qualified Receivables Financing unless the related commitments have been terminated and such Indebtedness has been permanently repaid and has not been replaced) or issues or redeems Preferred Stock or Disqualified Stock subsequent to the commencement of the period for which the Cash Interest Coverage Ratio is being calculated but prior to, substantially simultaneously with or in connection with, the event for which the calculation of the Cash Interest Coverage Ratio is made, then the Cash Interest Coverage Ratio shall be calculated on a Pro Forma Basis; *provided* that, in the event that the Borrowers shall classify Indebtedness Incurred on the date of determination as Incurred in part as Ratio Debt and in part pursuant to one or more clauses of the definition of "Permitted Debt" (other than in respect of clause (o) of such definition), any calculation of Consolidated Interest Expense pursuant to this definition on such date (but not in respect of any future calculation following such date) shall not include any such Indebtedness (and shall not give effect to any repayment, repurchase, redemption, defeasance or other acquisition, retirement or discharge of Indebtedness from the proceeds thereof) to the extent Incurred pursuant to any such other clause of such definition.

"Cash Management Agreement" means any agreement or arrangement to provide Cash Management Services to Holdings or any Restricted Subsidiary.

"Cash Management Bank" means (a) any Person that (i) at the time it enters into a Cash Management Agreement, is a Lender or an Agent or an Affiliate of a Lender or an Agent, (ii) in the case of any Cash Management Agreement in effect on or prior to the Closing Date, is, as of the Closing Date or within 30 days thereafter, a Lender or an Agent or an Affiliate of a Lender or an Agent and a party to a Cash Management Agreement or (iii) within 30 days after the time it enters into the applicable Cash Management Agreement, becomes a Lender or an Affiliate of a Lender or an Agent, in each case, in its capacity as a party to such Cash Management Agreement and (b) any other financial institution so long as it is a party to a Cash Management Agreement with a Loan Party and has delivered to the Administrative Agent a written notice (1) appointing the Administrative Agent as its agent under the applicable Loan Documents and (2) agreeing to be bound by Article IX and Sections 10.05, 10.15 and 10.17 as if such Person were a Lender; provided that this clause (b) shall not create in favor of such Person any rights in connection with the terms of the Loan Documents or management or release of Collateral or the obligations of any Loan Party under the Loan Documents.

"Cash Management Services" means any of the following to the extent not constituting a line of credit (other than an overnight draft facility that is not in default); automated clearing house transactions, treasury and/or cash management services, including, without limitation, treasury, depository, overdraft, credit, purchasing or debit card, non-card e-payable services, electronic funds transfer, treasury management services (including controlled disbursement services, overdraft automatic clearing house fund transfer services, return items and interstate depository network services), other demand deposit or operating account relationships, foreign exchange facilities, and merchant services.

"Casualty Event" means any event that gives rise to the receipt by the Parent Borrower or any Restricted Subsidiary of any casualty insurance proceeds or condemnation awards or that gives rise to a taking by a Governmental Authority in respect of any equipment, fixed assets or real property (including any improvements thereon) to replace, restore or repair, or compensate for the loss of, such equipment, fixed assets or real property.

"CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

"CERCLIS" means the Comprehensive Environmental Response, Compensation, and Liability Information System maintained by the U.S. Environmental Protection Agency.

"Change in Law" means the occurrence after the date of this Agreement or, with respect to any Lender, such later date on which such Lender becomes a party to this Agreement of (a) the adoption of or taking effect of any law, rule, regulation or treaty, (b) any change in any law, rule, regulation or treaty or in the administration, interpretation,

implementation or application thereof by any Governmental Authority or (c) compliance by any Lender or L/C Issuer (or, for purposes of Section 2.15(b), by any lending office of such Lender or by such Lender's or L/C Issuer'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 date of this Agreement; provided that, notwithstanding anything herein to the contrary, (x) the Dodd-Frank Wall Street Reform and Consumer Protection Act and all requests, rules, guidelines or directives thereunder or issued in connection therewith or in the implementation thereof and (y) all requests, rules, guidelines or directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority) or the United States or foreign regulatory authorities, in each case pursuant to Basel III, shall, in each case, be deemed to be a "Change in Law," regardless of the date enacted, adopted, issued or implemented.

"Change of Control" will be deemed to occur if:

(a) at any time, Holdings ceases to own, directly or indirectly, beneficially or of record, 100% of the issued and outstanding Equity Interests of the Parent Borrower; or

(b) at any time prior to the consummation of a Qualified IPO, the Permitted Holders, taken together, shall cease to beneficially own (within the meaning of Rule 13d-5 under the Exchange Act), directly or indirectly, at least a majority of the Voting Stock of Holdings (determined on a fully diluted basis); or

(c) at any time after the consummation of a Qualified IPO, the Parent Borrower becomes aware of (by way of a report or any other filing pursuant to Section 13(d) of the Exchange Act, proxy, vote, written notice or otherwise) any "person" (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act as in effect on the Closing Date), other than one or more Permitted Holders or a Parent Holding Company, that is or becomes the "beneficial owner" (as defined in Rules 13d-3 and 13d-5 of the Exchange Act as in effect on the Closing Date) of more than 50% of the total voting power of the Voting Stock of the Parent Borrower; provided that (x) so long as the Parent Borrower is a Subsidiary of any Parent Holding Company, no Person shall be deemed to be or become a beneficial owner of more than 50% of the total voting power of the Voting Stock of the Parent Borrower unless such Person shall be or become a beneficial owner of more than 50% of the total voting power of the Voting Stock of such Parent Holding Company (other than a Parent Holding Company that is a Subsidiary of another Parent Holding Company) and (y) any Voting Stock of which any Permitted Holder is the beneficial owner shall not in any case be included in any Voting Stock of which any such Person is the beneficial owner.

Notwithstanding the preceding or any provision of Section 13d-3 of the Exchange Act, (i) a Person or group shall not be deemed to beneficially own Voting Stock subject 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 the Voting Stock in connection with the transactions contemplated by such agreement so long as such Person does not have the right to direct the voting of such Voting Stock prior to the consummation of such acquisition, (ii) if any group includes one or more Permitted Holders, the issued and outstanding Voting Stock of the Parent Borrower owned, directly or indirectly, by any 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 determining whether a Change of Control has occurred, (iii) a Person or group will not be deemed to beneficially own the Voting Stock of another Person as a result of its ownership of Voting Stock or other securities of such other Person's parent entity (or related contractual rights) unless it owns 50% or more of the total voting power of the Voting Stock entitled to vote for the election of directors of such parent entity having a majority of the aggregate votes on the board of directors (or similar body) of such parent entity and (iv) the right to acquire Voting Stock (so long as such Person does not have the right to direct the voting of the Voting Stock subject to such right) or any veto power in connection with the acquisition or disposition of Voting Stock will not cause a party to be a beneficial owner.

"Closing Date" means October 19, 2020.

"Code" means the U.S. Internal Revenue Code of 1986, as amended.

"Collateral" means all of the "Collateral" (or similar term) referred to in the Collateral Documents and all of the other property and assets that are or are required under the terms of the Collateral Documents to be subject to Liens in favor of the Collateral Agent for the benefit of the Secured Parties.

"Collateral Agent" means MS, acting through such of its Affiliates or branches as it may designate, in its capacity as collateral agent under any of the Loan Documents, or any successor collateral agent permitted by the terms hereof.

"Collateral Documents" means, collectively, the Security Agreement, the Intellectual Property Security Agreement, the Mortgages (if any), each of the mortgages, collateral assignments, Security Agreement Supplements, Intellectual Property Security Agreement Supplements, security agreements, pledge agreements or other similar agreements delivered to the Collateral Agent pursuant to Section 6.12, Section 6.14 or Section 6.16, and each of the other agreements, instruments or documents that creates or purports to create a Lien in favor of the Collateral Agent for the benefit of the Secured Parties.

"Commitment" means a Term Commitment, a Revolving Credit Commitment or a Letter of Credit Commitment, as the context may require.

"Committed Loan Notice" means a notice of (a) a Term Borrowing, (b) a Revolving Credit Borrowing, (c) a conversion of Loans from one Type to the other or (d) a continuation of Eurocurrency Rate Loans, pursuant to Section 2.02(a), which shall be substantially in the form of Exhibit A-1.

"Commodity Exchange Act" means the Commodity Exchange Act (7 U.S.C. § 1 *et. seq.*), as amended from time to time, and any successor statute.

"Company Competitor" means any Person that competes with the business of Holdings, the Borrowers and their direct and indirect Subsidiaries from time to time.

"Compliance Certificate" means a certificate substantially in the form of Exhibit D or such other form as may be agreed between the Parent Borrower and the Administrative Agent.

"Compounded SOFR" means the compounded average of SOFR for the applicable Corresponding Tenor, with the rate, or methodology for this rate, and conventions for this rate (which may include compounding in arrears with a lookback and/or suspension period as a mechanism to determine the interest amount payable prior to the end of each Interest Period) being established by the Administrative Agent in accordance with:

(1) the rate, or methodology for this rate, and conventions for this rate selected or recommended by the Relevant Governmental Body for determining compounded SOFR; *provided* that:

(2) if, and to the extent that, the Administrative Agent determines that Compounded SOFR cannot be determined in accordance with clause (1) above, then the rate, or methodology for this rate, and conventions for this rate that the Administrative Agent determines are substantially consistent with prevailing market convention for determining Compounded SOFR for U.S. dollar-denominated syndicated credit facilities at such time (as a result of amendment or as originally executed);

provided, *further*, that if the Administrative Agent decides that any such rate, methodology or convention determined in accordance with clause (1) or clause (2) is not administratively feasible for the Administrative Agent, then Compounded SOFR will be deemed unable to be determined for purposes of the definition of "Benchmark Replacement".

"Consolidated Current Assets" means, with respect to any Person and its Restricted Subsidiaries on a consolidated basis, all assets of such Person and its Restricted Subsidiaries on a consolidated basis that, in accordance with GAAP, would be classified as current assets on the balance sheet of a company conducting a business the same as or similar to that of such Person and its Restricted Subsidiaries on a consolidated basis, after deducting appropriate and adequate reserves therefrom in each case in which a reserve is proper in accordance with GAAP, but excluding

(i) cash, (ii) Cash Equivalents, (iii) Swap Contracts to the extent that the mark-to-market Swap Termination Value would be reflected as an asset on the consolidated balance sheet of such Person, (iv) deferred financing fees, (v) amounts related to current or deferred taxes (but excluding assets held for sale, loans (permitted) to third parties, pension assets, deferred bank fees and derivative financial instruments) (so long as the items described in clauses (iv) and (v) are non-cash items) and (vi) in the event that a Qualified Receivables Factoring or Qualified Receivables Financing is accounted for off balance sheet, (x) gross accounts receivable comprising part of the receivables and other related assets subject to such Qualified Receivables Factoring or Qualified Receivables Financing, as applicable, *minus* (y) collection by such Person against the amounts sold pursuant to clause (x) above.

"Consolidated Current Liabilities" means, with respect to any Person and its Restricted Subsidiaries on a consolidated basis, all liabilities in accordance with GAAP that would be classified as current liabilities on the consolidated balance sheet of such Person, but excluding (a) the current portion of Indebtedness (including the Swap Termination Value of any Swap Contracts) to the extent reflected as a liability on the consolidated balance sheet of such Person, (b) the current portion of interest, (c) accruals for current or deferred taxes based on income or profits, (d) accruals of any costs or expenses related to restructuring reserves or severance, (e) deferred revenue, (f) escrow account balances, (g) the current portion of pension liabilities, (h) liabilities in respect of unpaid earn-outs, (i) amounts related to derivative financial instruments and assets held for sale and (j) any L/C Obligations or Revolving Credit Loans and any letter of credit obligations, swing line loans or revolving loans under any other revolving credit facility.

"Consolidated EBITDA" means, with respect to any Person and its Restricted Subsidiaries on a consolidated basis for any period, the Consolidated Net Income of such Person and its Restricted Subsidiaries for such period:

(1) *increased*, in each case (other than with respect to clauses (k) and (m) below) to the extent deducted and not added back or excluded in calculating such Consolidated Net Income (and without duplication), by:

(a) provision for taxes based on income, profits or capital, including federal, state, franchise, excise, property and similar taxes and foreign withholding taxes paid or accrued, including giving effect to any penalties and interest with respect thereto, and state taxes in lieu of business fees (including business license fees) and payroll tax credits, income tax credits and similar credits and including an amount equal to the amount of tax distributions actually made to the holders of Equity Interests of such Person or its Restricted Subsidiaries or any direct or indirect parent of such Person or its Subsidiaries in respect of such period (in each case, to the extent attributable to the operations of such Person and its Restricted Subsidiaries), which shall be included as though such amounts had been paid as income taxes directly by such Person or its Restricted Subsidiaries; *plus*

(b) Consolidated Interest Expense; *plus*

(c) all depreciation and amortization charges and expenses, including amortization or expense recorded for upfront payments related to any contract signing and signing bonus and incentive payments; *plus*

(d) minority interest expense and the amount of any non-controlling interest expense consisting of income attributable to non-controlling interests of third parties in any Restricted Subsidiary of such Person that is not a Wholly Owned Restricted Subsidiary of such Person; *plus*

(e) the amount of management, monitoring, consulting, transaction and advisory fees (including termination fees) and related indemnities, charges and expenses paid or accrued to or on behalf of any direct or indirect parent of the Borrowers or any of the Permitted Holders, in each case, to the extent permitted by Section 6.18; *plus*

(f) earn-out obligations incurred in connection with any acquisition or other Investment and paid or accrued during the applicable period, including any mark to market adjustments; *plus*

(g) all charges, costs, expenses, accruals or reserves in connection with the rollover, acceleration or payout of equity interests held by management and all losses, charges and expenses related to payments made to holders of options or other derivative equity interests in the common equity of such Person or any direct or indirect parent of the Parent Borrower in connection with, or as a result of, any distribution being made to equityholders of such Person or any of its direct or indirect parents, which payments are being made to compensate such optionholders as though they were equityholders at the time of, and entitled to share in, such distribution; *plus*

(h) all non-cash losses, charges and expenses, including any write-offs or write-downs; provided that if any such non-cash loss, charge or expense represents an accrual or reserve for potential cash items in any future four-fiscal quarter period, (i) such Person may determine not to add back such non-cash loss, charge or expense in the period for which Consolidated EBITDA is being calculated and (ii) to the extent such Person does decide to add back such non-cash loss, charge or expense, the cash payment in respect thereof in such future four-fiscal quarter period will be subtracted from Consolidated EBITDA for such future four-fiscal quarter period; *plus*

(i) all costs and expenses in connection with pre-opening and opening and closure and/or consolidation of facilities; *plus*

(j) restructuring charges, accruals or reserves and business optimization expense, including any restructuring costs and integration costs incurred in connection with the Transactions and any other acquisitions, start-up costs (including entry into new market/channels and new service offerings), costs related to the closure, relocation, reconfiguration and/or consolidation of facilities and costs to relocate employees, integration and transaction costs, retention charges, severance, contract termination costs, recruiting and signing bonuses and expenses, future lease commitments, systems establishment costs, conversion costs and excess pension charges and consulting fees, expenses attributable to the implementation of costs savings initiatives, costs associated with tax projects/audits, expenses relating to any decommissioning or reconfiguration of fixed assets for alternative uses and costs consisting of professional consulting or other fees relating to any of the foregoing; *plus*

(k) Pro Forma Cost Savings; *plus*

(l) with respect to any joint venture that is not a Restricted Subsidiary, an amount equal to the proportion of those items described in clauses (a), (b) and (c) above relating to such joint venture corresponding to such Person's and the Restricted Subsidiaries' proportionate share of such joint venture's Consolidated Net Income (determined as if such joint venture were a Restricted Subsidiary) solely to the extent Consolidated Net Income was reduced thereby; *plus*

(m) the amount of loss or discount on sale of receivables and related assets to the Receivables Subsidiary in connection with a Receivables Financing;

(2) *decreased* (without duplication and to the extent increasing such Consolidated Net Income for such period) by (i) non-cash gains or income, excluding any non-cash gains that represent the reversal of any accrual of, or cash reserve for, anticipated cash charges that were deducted (and not added back) in the calculation of Consolidated EBITDA for any prior period ending after the Closing Date and (ii) the amount of any minority interest income consisting of a Subsidiary loss attributable to minority equity interest of third parties in any non-Wholly Owned Subsidiary (to the extent not deducted from Consolidated Net Income for such period);

(3) *increased* (with respect to losses) or *decreased* (with respect to gains) by, without duplication, any net realized gains and losses relating to (i) amounts denominated in foreign currencies resulting from the application of FASB ASC 830 (including net realized gains and losses from exchange rate fluctuations on intercompany balances and balance sheet items, net of realized gains or losses from related Swap Contracts (entered into in the ordinary course of business or consistent with past practice)) or (ii) any other amounts denominated in or otherwise trued-up to provide similar accounting as if it were denominated in foreign currencies; and

(4) *increased* (with respect to losses) or *decreased* (with respect to gains) by, without duplication, any gain or loss relating to Swap Contracts (excluding Swap Contracts entered into in the ordinary course of business or consistent with past practice);

provided, that the Borrowers may, in their sole discretion, elect to not make any adjustment for any item pursuant to the foregoing clauses (1) through (4) above if any such item individually is less than $1,350,000 in any four fiscal quarter period.

In addition, to the extent not already included in the Consolidated EBITDA in any period, notwithstanding anything to the contrary in the foregoing, Consolidated EBITDA shall include additional adjustments of the type (1) evidenced by or contained in the Sponsor Model and/or (2) evidenced by or contained in a due diligence quality of earnings report made available to the Administrative Agent (who may share with the Lenders, if permitted) (subject, in each case, to customary access letters) prepared with respect to the target of a permitted acquisition or other investment permitted hereunder by (A) a "big-four" nationally recognized accounting firm or (B) any other accounting firm that shall be reasonably acceptable to the Administrative Agent.

Notwithstanding the foregoing, Consolidated EBITDA (a) for the fiscal quarter ended September 30, 2019, shall be deemed to be $17,649,473.38, (b) for the fiscal quarter ended December 31, 2019, shall be deemed to be $13,864,810.34, (c) for the fiscal quarter ended March 31, 2020, shall be deemed to be $26,842,352.67 and (d) for the fiscal quarter ended June 30, 2020, shall be deemed to be $16,611,433.07 (which amounts, for the avoidance of doubt, shall be adjusted to give effect to calculations on a Pro Forma Basis in accordance with this Agreement in respect of Specified Transactions (including the cost savings, synergies and "run-rate" adjustments described above, in the definition of Pro Forma Cost Savings or in Section 1.10 (subject in each case to the applicable limitations set forth therein) that in each case may become applicable due to actions taken on or after the Closing Date)).

"Consolidated First Lien Net Leverage Ratio" means, on any date of determination, with respect to the Borrower Parties on a consolidated basis, the ratio of (a) Consolidated Funded First Lien Indebtedness (less the amount of Adjusted Cash and unrestricted Cash Equivalents (without duplication) of the Borrower Parties as of such date) of the Borrower Parties on such date to (b) Consolidated EBITDA of the Borrower Parties for the four fiscal quarter period most recently then ended for which internal financial statements are available (as determined in good faith by the Parent Borrower), calculated on a Pro Forma Basis.

"Consolidated Funded First Lien Indebtedness" means Consolidated Funded Indebtedness that is secured by a Lien on the Collateral that does not rank junior in priority (but without regard to the control of remedies) to the Liens on the Collateral securing the Obligations. For the avoidance of doubt, Consolidated Funded First Lien Indebtedness shall not include Capitalized Lease Obligations other than those that are secured by the Collateral on an equal priority basis with the Liens on the Collateral securing the Obligations.

"Consolidated Funded Indebtedness" means all Indebtedness of the type described in clauses (a)(i), (a)(ii) (but excluding surety bonds, performance bonds or other similar instruments), (a)(iv) (but solely in respect of the amount of outstanding Indebtedness of the type described in (a)(iv) that is in excess of $5,000,000 in the aggregate) and (b) (solely in respect of the foregoing Indebtedness) of the definition of "Indebtedness," of a Person and its Restricted Subsidiaries on a consolidated basis, in an amount that would be reflected on a balance sheet prepared as of such date on a consolidated basis in accordance with GAAP (but (x) excluding the effects of any discounting of Indebtedness resulting from the application of purchase accounting in connection with the Transactions or any acquisition and (y) any Indebtedness that is issued at a discount to its initial principal amount shall be calculated based on the entire stated principal amount thereof, without giving effect to any discounts or upfront payments), excluding obligations in respect of letters of credit (including Letters of Credit), bank guarantees and guarantees on first demand, in each case, except to the extent of unreimbursed amounts thereunder. For the avoidance of doubt, it is understood that obligations (i) under Swap Contracts, Cash Management Agreements, and any Receivables Financing and (ii) owed by Unrestricted Subsidiaries, do not constitute Consolidated Funded Indebtedness.

"Consolidated Funded Senior Secured Indebtedness" means Consolidated Funded Indebtedness that is secured by a Lien on the Collateral.

"Consolidated Interest Expense" means, with respect to any Person for any period, the sum, without duplication, of:

(a) the aggregate interest expense of such Person and its Restricted Subsidiaries for such period, calculated on a consolidated basis in accordance with GAAP, to the extent such expense was deducted (and not added back) in computing Consolidated Net Income (including pay in kind interest payments, amortization of original issue discount, the interest component of Capitalized Lease Obligations and net payments and receipts (if any) pursuant to interest rate Swap Contracts (other than in connection with the early termination thereof) but excluding any non-cash interest expense attributable to the movement in the mark-to-market valuation of Indebtedness, Swap Contracts or other derivative instruments, all amortization and write-offs of deferred financing fees, debt issuance costs, commissions, discounts, fees and expenses and expensing of any bridge, commitment or other financing fees, costs of surety bonds, charges owed with respect to letters of credit, bankers' acceptances or similar facilities, and all discounts, commissions, fees and other charges associated with any Receivables Financing); *plus*

(b) consolidated capitalized interest of the referent Person and its Restricted Subsidiaries for such period, whether paid or accrued*;less*

(c) interest income of the referent Person and its Restricted Subsidiaries for such period;

provided that (a) when determining Consolidated Interest Expense in respect of any four-quarter period ending prior to the first anniversary of the Closing Date, Consolidated Interest Expense will be calculated by multiplying the aggregate Consolidated Interest Expense accrued since the Closing Date by 365 and then dividing such product by the number of days from and including the Closing Date to and including the last day of such period and (b) in the case of any Person that became a Restricted Subsidiary of such Person after the commencement of such four-quarter period, the interest expense of such Person paid in cash prior to the date on which it became a Restricted Subsidiary of such Person will be disregarded. For purposes of this definition, interest on Capitalized Lease Obligations will be deemed to accrue at the interest rate reasonably determined by such Person to be the rate of interest implicit in such Capitalized Lease Obligations in accordance with GAAP.

"Consolidated Net Income" means, with respect to any Person for any period, the aggregate of the net income (or loss) of such Person and its Restricted Subsidiaries for such period, calculated on a consolidated basis in accordance with GAAP and before any reduction in respect of Preferred Stock dividends; provided that (without duplication):

(a) all net after-tax extraordinary, nonrecurring, infrequent, exceptional or unusual gains, losses, income, expenses and charges, and in any event including, without limitation, all restructuring, severance, relocation, retention and completion bonuses or payments, consolidation, integration or other similar charges and expenses, contract termination costs, system establishment charges, conversion costs, start-up or closure or transition costs, expenses related to any reconstruction, decommissioning, recommissioning or reconfiguration of fixed assets for alternative uses, fees, expenses or charges relating to curtailments, settlements or modifications to pension and post-retirement employee benefit plans in connection with any acquisition or Permitted Investment, expenses associated with strategic initiatives, facilities shutdown and opening costs, and any fees, expenses, charges or change in control payments related to the Transactions, a Qualified IPO, any acquisition or Permitted Investment (including any transition-related expenses (including retention or transaction-related bonuses or payments) incurred before, on or after the Closing Date), will be excluded;

(b) all (i) losses, charges and expenses related to the Transactions, (ii) transaction fees, costs and expenses incurred in connection with the consummation of any equity issuances, investments, acquisitions, dispositions, recapitalizations, mergers, amalgamations, option buyouts and the Incurrence, modification or repayment of Indebtedness permitted to be Incurred under this Agreement (including any Refinancing Indebtedness in respect thereof) or any amendments, waivers or other modifications under the agreements relating to such Indebtedness or similar transactions, and (iii) without duplication of any of the foregoing, non-operating or non-recurring professional fees, costs and expenses for such period will be excluded;

(c) all net after-tax income, loss, expense or charge from abandoned, closed or discontinued operations and any netafter-tax gain or loss on the disposal of abandoned, closed or discontinued operations (and all related expenses) other than in the ordinary course of business (as determined in good faith by such Person) will be excluded;

(d) all net after-tax gain, loss, expense or charge attributable to business dispositions and asset dispositions, including the sale or other disposition of any Equity Interests of any Person, other than in the ordinary course of business (as determined in good faith by such Person), will be excluded;

(e) all net after-tax income, loss, expense or charge attributable to the early extinguishment or cancellation of Indebtedness, Swap Contracts or other derivative instruments (including deferred financing costs written off and premiums paid) will be excluded;

(f) all non-cash gains, losses, expenses or charges attributable to the movement in themark-to-market valuation of Indebtedness, Swap Contracts or other derivative instruments will be excluded;

(g) any non-cash or unrealized currency translation gains and losses related to changes in currency exchange rates (including, without limitation, remeasurements of Indebtedness and any net loss or gain resulting from (i) Swap Contracts for currency exchange risk and (ii) intercompany Indebtedness), will be excluded;

(h) (i) the net income for such period of any Person that is not a Restricted Subsidiary of the referent Person, will be included only to the extent of the amount of dividends or distributions to the referent Person or a Restricted Subsidiary thereof in respect of such period; and (ii) the net income for such period will include any ordinary course dividends or distributions received from any such Person during such period in excess of the amounts included in subclause (i) above;

(i) the cumulative effect of a change in accounting principles and changes as a result of the adoption or modification of accounting policies will be excluded;

(j) the effects of purchase accounting, fair value accounting or recapitalization accounting adjustments (including the effects of such adjustments pushed down to the referent Person and its Restricted Subsidiaries) resulting from the application of purchase accounting, fair value accounting or recapitalization accounting in relation to the Transactions or any acquisition consummated before or after the Closing Date, and the amortization, write-down or write-off of any amounts thereof, net of taxes, will be excluded;

(k) all non-cash impairment charges and asset write-ups, write-downs and write-offs, in each case pursuant to GAAP, and the amortization of intangibles arising from the application of GAAP will be excluded;

(l) all non-cash expenses realized in connection with or resulting from equity or equity-linked compensation plans, employee benefit plans or agreements or post-employment benefit plans or agreements, or grants or sales of stock, stock appreciation or similar rights, stock options, restricted stock, preferred stock or other similar rights will be excluded;

(m) any costs or expenses incurred in connection with the payment of dividend equivalent rights to option holders pursuant to any management equity plan, stock option plan or any other management or employee benefit plan or agreement or post-employment benefit plan or agreement will be excluded;

(n) accruals and reserves for liabilities or expenses that are established or adjusted as a result of the Transactions within 24 months after the Closing Date will be excluded;

(o) all amortization and write-offs of deferred financing fees, debt issuance costs, commissions, fees and expenses, costs of surety bonds, charges owed with respect to letters of credit, bankers' acceptances or similar facilities, and expensing of any bridge, commitment or other financing fees (including in connection with a transaction undertaken but not completed), will be excluded;

(p) all discounts, commissions, fees and other charges (including interest expense) associated with any Receivables Financing will be excluded;

(q) (i) the non-cash portion of "straight-line" rent expense will be excluded and (ii) the cash portion of "straight-line" rent expense that exceeds the amount expensed in respect of such rent expense will be included;

(r) expenses and lost profits with respect to liability or casualty events or business interruption will be disregarded to the extent covered by insurance and actually reimbursed, or, so long as such Person has made a determination that there exists reasonable evidence that such amount will in fact be reimbursed by the insurer, but only to the extent that such amount (i) has not been denied by the applicable carrier in writing and (ii) is in fact reimbursed within 365 days of the date on which such liability was discovered or such casualty event or business interruption occurred (with a deduction for any amounts so added back that are not reimbursed within such 365-day period); provided that any proceeds of such reimbursement when received will be excluded from the calculation of Consolidated Net Income to the extent the expense or lost profit reimbursed was previously disregarded pursuant to this clause (r);

(s) losses, charges and expenses that are covered by indemnification or other reimbursement provisions in connection with any asset disposition will be excluded to the extent actually reimbursed, or, so long as such Person has made a determination that a reasonable basis exists for indemnification or reimbursement, but only to the extent that such amount is in fact indemnified or reimbursed within 365 days of such determination (with a deduction in the applicable future period for any amount so added back to the extent not so indemnified or reimbursed within such 365 days);

(t) non-cash charges relating to increases or decreases of deferred tax asset valuation allowances will be excluded;

(u) cash dividends or returns of capital from Investments (such return of capital not reducing the ownership interest in the underlying Investment), in each case received during such period, to the extent not otherwise included in Consolidated Net Income for that period or any prior period subsequent to the Closing Date will be included;

(v) solely for the purpose of determining the amount available for Restricted Payments under clause (c) of the first paragraph of Section 7.05, and without duplication of provisions under clause (c) of the first paragraph of Section 7.05 with respect to returns on Investments, the net income (or loss) for such period of any Restricted Subsidiary (other than a Guarantor) will be excluded to the extent that the declaration or payment of dividends or similar distributions by that Restricted Subsidiary is not at the date of determination permitted without any prior governmental approval (which has not been obtained) or, directly or indirectly, by the operation of its charter or any agreement, instrument, judgment, decree, order, statute, rule or governmental regulation applicable to that Restricted Subsidiary or its stockholders, unless such restriction with respect to the payment of dividends or similar distributions has been legally waived; provided that Consolidated Net Income of such Person will be increased by the amount of dividends or other distributions or other payments actually paid in cash (or to the extent converted into cash) to such Person or any of its Restricted Subsidiaries in respect of such period, to the extent not already included therein (subject, in the case of a dividend to another Restricted Subsidiary (other than a Guarantor), to the limitation contained in this clause);

(w) any Initial Public Company Costs will be excluded;

(x) any (a) severance or relocation costs or expenses, (b) one-time non-cash compensation charges, (c) the costs and expenses related to employment of terminated employees, or (d) costs or expenses realized in connection with or resulting from stock appreciation or similar rights, stock options or other rights of officers, directors and employees, in each case of such Person or any of its Restricted Subsidiaries, shall be excluded; and

(y) any non-cash interest expense and non-cash interest income, in each case to the extent there is no associated cash disbursement or receipt, as the case may be, before the then applicable Latest Maturity Date, shall be excluded;

provided that the Parent Borrower may, in its sole discretion, elect to not make any adjustment for any item pursuant to clauses (a) through (y) above if any such item individually is less than $1,350,000 in any four fiscal quarter period.

For the purpose of Section 7.05 only, there shall be excluded from Consolidated Net Income any income arising from the sale or other disposition of Restricted Investments, from repurchases or redemptions of Restricted Investments, from repayments of loans or advances which constituted Restricted Investments or from any dividends, repayments of loans or advances or other transfers of assets from Unrestricted Subsidiaries, in each case to the extent such amounts are applied (at the election of the Parent Borrower) to increase the amount of Restricted Payments permitted under clauses (c)(v) or (c)(vi) of the first paragraph of Section 7.05.

"Consolidated Net Tangible Assets" means the aggregate amount of assets (including deferred tax assets (without reducing such deferred tax assets by deferred tax liabilities), and less applicable reserves and other properly deductible items) after deducting therefrom all goodwill, trade names, service marks, trademarks, patents, unamortized debt discount and expense, investments and other like intangibles, all as set forth in the most recent consolidated balance sheet of the Parent Borrower and its Restricted Subsidiaries, determined on a Pro Forma Basis.

"Consolidated Senior Secured Net Leverage Ratio" means, on any date of determination, with respect to the Borrower Parties on a consolidated basis, the ratio of (a) Consolidated Funded Senior Secured Indebtedness (less the amount of Adjusted Cash and unrestricted Cash Equivalents (without duplication) of the Borrower Parties as of such date) of the Borrower Parties on such date, calculated on a Pro Forma Basis to (b) Consolidated EBITDA of the Borrower Parties for the four fiscal quarter period most recently then ended for which internal financial statements are available (as determined in good faith by the Parent Borrower) calculated on a Pro Forma Basis.

"Consolidated Total Net Leverage Ratio" means, on any date of determination, with respect to the Borrower Parties on a consolidated basis, the ratio of (a) Consolidated Funded Indebtedness (less the amount of Adjusted Cash and unrestricted Cash Equivalents (without duplication) of the Borrower Parties as of such date) of the Borrower Parties on such date, calculated on a Pro Forma Basis to (b) Consolidated EBITDA of the Borrower Parties for the four fiscal quarter period most recently then ended for which internal financial statements are available (as determined in good faith by the Parent Borrower), calculated on a Pro Forma Basis.

"Contingent Obligations" means, with respect to any Person, any obligation of such Person guaranteeing any leases, dividends or other obligations that do not constitute Indebtedness ("primary obligations") of any other Person (the "primary obligor") in any manner, whether directly or indirectly, including, without limitation, any obligation of such Person, whether or not contingent:

(1) to purchase any such primary obligation or any property constituting direct or indirect security therefor,

(2) to advance or supply funds:

(a) for the purchase or payment of any such primary obligation; or

(b) to maintain working capital or equity capital of the primary obligor or otherwise to maintain the net worth or solvency of the primary obligor; or

(3) to purchase property, securities or services primarily for the purpose of assuring the owner of any such primary obligation of the ability of the primary obligor to make payment of such primary obligation against loss in respect thereof.

"Contractual Obligation" means, as to any Person, any provision of any security issued by such Person or of any agreement, loan agreement, indenture, mortgage, deed of trust, lease, instrument or other undertaking to which such Person is a party or by which it or any of its property is bound.

"Contribution Indebtedness" means Indebtedness of the Borrowers or any Restricted Subsidiary in an aggregate principal amount not greater than 200% of the aggregate amount of cash contributions (other than Excluded Contributions) made to the capital of the Parent Borrower (other than Cure Equity) or any Restricted Subsidiary (other than, in the case of such Restricted Subsidiary, contributions by the Parent Borrower or any other Restricted Subsidiary to its capital) after the Closing Date and designated as a Cash Contribution Amount; provided that such Contribution Indebtedness (a) is incurred within 210 days after the date of such cash contribution and (b) is designated as Contribution Indebtedness pursuant to a certificate signed by a Responsible Officer of the Parent Borrower on the incurrence date thereof.

"Control Investment Affiliate" means, as to any Person, any other Person that (a) directly or indirectly, is in control of, is controlled by, or is under common control with, such Person and (b) is organized by such Person primarily for the purpose of making equity investments in one or more companies.

"Controlled Foreign Subsidiary" means any Subsidiary of the Parent Borrower (or of any Subsidiary Guarantor) that is a "controlled foreign corporation" within the meaning of Section 957 of the Code.

"Corresponding Tenor" with respect to a Benchmark Replacement means a tenor (including overnight) having approximately the same length (disregarding business day adjustment) as the applicable tenor for the applicable Interest Period with respect to the Benchmark.

"Covered Party" has the meaning specified in Section 10.26.

"Credit Extension" means each of the following: (a) a Borrowing and (b) an L/C Credit Extension.

"Cure Amount" has the meaning specified in Section 8.03(a).

"Cure Equity" has the meaning specified in Section 8.03(a).

"Cure Right" has the meaning specified in Section 8.03(a).

"Daily Simple SOFR" means, for any day, SOFR, with the conventions for this rate (which may include a lookback) being established by the Administrative Agent in accordance with the conventions for this rate selected or recommended by the Relevant Governmental Body for determining "Daily Simple SOFR" for syndicated business loans; provided that, if the Administrative Agent decides that any such convention is not administratively feasible for the Administrative Agent, then the Administrative Agent may establish another convention in its reasonable discretion.

"Debt Fund Affiliate" means any Affiliate of the Sponsor (other than Holdings and its Subsidiaries) that is primarily engaged in, or advises funds or other investment vehicles that are 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 the Sponsor does not, directly or indirectly, possess the power to direct or cause the direction of the investment policies of any such Affiliate. Notwithstanding the foregoing, in no event shall a Natural Person be a Debt Fund Affiliate.

"Debtor Relief Laws" means the Bankruptcy Code of the United States, and all other liquidation, conservatorship, bankruptcy, assignment for the benefit of creditors, moratorium, rearrangement, receivership, insolvency, reorganization, or similar debtor relief Laws of the United States or other applicable jurisdictions from time to time in effect and affecting the rights of creditors generally.

"Declined Amounts" has the meaning specified in Section 2.05(c).

"Declining Lender" has the meaning specified in Section 2.05(c).

"Default" means any event or condition that constitutes an Event of Default or that, with the giving of any notice, the passage of time, or both, would be an Event of Default (other than any event or condition that, with the giving of any notice, the passage of time, or both, would become an Event of Default solely as a result of Section 8.01(e)).

"Default Rate" means an interest rate equal to (after as well as before judgment), (a) with respect to any overdue principal for any Loan, the applicable interest rate for such Loan plus 2.00% per annum (provided that with respect to Eurocurrency Rate Loans, the determination of the applicable interest rate is subject to Section 2.02(c) to the extent that Eurocurrency Rate Loans may not be converted to, or continued as, Eurocurrency Rate Loans, pursuant thereto) and (b) with respect to any other overdue amount, including overdue interest, the interest rate applicable to Base Rate Loans that are Term Loans plus 2.00% per annum, in each case, to the fullest extent permitted by applicable Laws.

"Defaulting Lender" means, subject to Section 2.17(b), any Lender that (a) has failed to perform any of its funding obligations hereunder, including in respect of its Loans or participations in respect of Letters of Credit within two Business Days of the date required to be funded by it hereunder, (b) has notified the Parent Borrower or the Administrative Agent in writing that it does not intend or expect to comply with any of its funding obligations or has made a public statement to that effect with respect to its funding obligations hereunder or, solely with respect to a Revolving Credit Lender, under other agreements generally in which it commits to extend credit, (c) has failed, within two Business Days after reasonable request by the Administrative Agent, to confirm in a manner satisfactory to the Administrative Agent that it will comply with its funding obligations (provided that the Administrative Agent shall request such confirmation upon reasonable request from any L/C Issuer; provided, further, that such Lender shall cease to be a Defaulting Lender pursuant to this clause (c) upon receipt of such confirmation by the Administrative Agent) or (d) has, or has a direct or indirect parent company that has, other than via an Undisclosed Administration, (i) become the subject of a Bankruptcy Event, (ii) had a receiver, conservator, trustee, administrator, assignee for the benefit of creditors or similar Person charged with reorganization or liquidation of its business or a custodian appointed for it, (iii) taken any action in furtherance of, or indicated its consent to, approval of or acquiescence in any such proceeding or appointment or (iv) become the subject of a Bail-in Action; provided that no Lender shall be a Defaulting Lender solely by virtue of (x) the ownership or acquisition by a Governmental Authority of any Equity Interest in that Lender or any direct or indirect parent company thereof so long as such ownership interest does not result in or provide such Lender with immunity from the jurisdiction of courts within the United States 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 contracts or agreements made with such Lender, or (y) the occurrence of any of the events described in clause (d)(i), (d)(ii) or (d)(iii) of this definition which in each case has been dismissed or terminated prior to the date of this Agreement. Any determination by the Administrative Agent that a Lender is a Defaulting Lender under any one or more of clauses (a) through (d) above shall be conclusive and binding absent manifest error, and such Lender shall be deemed to be a Defaulting Lender (subject to Section 2.17(b)) upon delivery of written notice of such determination to the Parent Borrower, each L/C Issuer and each Lender.

"Derivative Instrument" means with respect to a Person, any contract or instrument to which such Person is a party (whether or not requiring further performance by such Person), the value and/or cash flows of which (or any portion thereof) are based on the value and/or performance of the Loans and/or any Deliverable Obligations or "Obligations" (as defined in the ISDA CDS Definitions) with respect to the Loan Parties; provided that a "Derivative Instrument" will not include any contract or instrument that is entered into pursuant to bona fide market-making activities.

"Designated Non-Cash Consideration" means the Fair Market Value of non-cash consideration received by the Parent Borrower or any of the Restricted Subsidiaries in connection with a Disposition made pursuant to Section 7.04(2)(c) that is designated as "Designated Non-Cash Consideration" on the date received pursuant to a certificate of a Responsible Officer of the Parent Borrower, less the amount of cash or Cash Equivalents received in connection with a subsequent sale of or collection on such Designated Non-Cash Consideration.

"Designated Preferred Stock" means Preferred Stock of Holdings or any direct or indirect parent of Holdings, as applicable (other than Excluded Equity), that is issued after the Closing Date for cash and is so designated as Designated Preferred Stock, pursuant to an officer's certificate of the Parent Borrower, on the issuance date thereof, the cash proceeds of which are contributed to the capital of the Parent Borrower (if issued by Holdings or any other direct or indirect parent of Holdings) and excluded from the calculation set forth in clause (c) of the first paragraph of Section 7.05.

"Discount Range" has the meaning specified in the definition of "Dutch Auction."

"Discretionary Guarantor" shall mean any Restricted Subsidiary that is a Domestic Subsidiary that, at the option of the Parent Borrower, in its sole discretion, has been designated (or redesignated) as a Guarantor unless and until such time, if any, that such Restricted Subsidiary has been redesignated, at the option of the Parent Borrower, in its sole discretion, as an Excluded Subsidiary, in each case, in accordance with Section 6.12(b).

"Disposition" or "Dispose" means the sale, transfer, license, lease or other disposition of any property by any Person (including any sale and leaseback transaction and any issuance of Capital Stock by a Restricted Subsidiary of such Person), including any sale, assignment, transfer or other disposal, with or without recourse, of any notes or accounts receivable or any rights and claims associated therewith; provided, however, that "Disposition" and "Dispose" shall not be deemed to include any issuance by Holdings of any of its Capital Stock to another Person.

"Disqualified Institution" means (a) each person identified as a "Disqualified Institution" on a list delivered to the Administrative Agent by the Parent Borrower on or prior to the Closing Date, (b) any Company Competitor identified on a list delivered to the Administrative Agent by the Parent Borrower from time to time, (c) at any time, or with respect to any action (or proposed action) in connection with which, a Net Short Representation is required to be made (or deemed made) hereunder, any Lender (or prospective Lender) that the Parent Borrower has designated in a written notice to the Administrative Agent as a Disqualified Institution on the basis that the Parent Borrower has determined in good faith that such Person has breached its Net Short Representation at such time or in connection with such action (or proposed action) and (d) as to any entity referenced in each of clauses (a), (b) and (c) above (the "Primary Disqualified Institution"), any of such Primary Disqualified Institution's Affiliates readily identifiable as an Affiliate solely on the basis of the similarity of its name, but excluding (in the case of this clause (d)) any Affiliate that is primarily engaged in, or that advises funds or other investment vehicles that are 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 the Primary Disqualified Institution does not, directly or indirectly, possess the power to direct or cause the direction of the investment policies of such entity; provided that any additional designation, modification or deletion permitted by the foregoing shall not apply (i) retroactively to any prior assignment to any Lender or Participant and (ii) until two Business Days following receipt of such list by the Administrative Agent from the Parent Borrower. Notwithstanding the foregoing, any list of Disqualified Institutions shall only be required to be available to any Lender upon written request by an assigning Lender or prospective assignee or Participant. For the purposes of clause (b), such list shall be made available to the Administrative Agent pursuant to Section 10.02.

"Disqualified Stock" means, with respect to any Person, any Equity Interests of such Person that, by its terms (or by the terms of any security into which it is convertible or for which it is puttable, redeemable or exchangeable), in each case, at the option of the holder thereof or upon the happening of any event:

(1) matures or is mandatorily redeemable, pursuant to a sinking fund obligation or otherwise (other than as a result of a change of control, initial public offering, asset sale or similar event; provided that any purchase requirement triggered thereby may not become operative until compliance with, in the case of an asset sale, the provisions of Section 7.04 or, in the case of a change of control, the repayment in full of the Obligations),

(2) is convertible or exchangeable for Indebtedness or Disqualified Stock, or

(3) is redeemable at the option of the holder thereof, in whole or in part,

in each case prior to the date that is 91 days after the Latest Maturity Date of the Term Loans at the time of issuance of the respective Disqualified Stock; provided that only the portion of Equity Interests that so matures or is mandatorily redeemable, is so convertible or exchangeable or is so redeemable at the option of the holder thereof prior to such date shall be deemed to be Disqualified Stock; provided, further, that any Equity Interests held by any future, current or former employee, director, officer, member of management, independent contractor or consultant of any of the Borrowers, any their respective Subsidiaries, any direct or indirect parent thereof or any other entity in which any Borrower or any of their Subsidiaries has an Investment and is designated in good faith as an "affiliate" by the Board of Directors (or the compensation committee thereof) of the Parent Borrower, in each case pursuant to any co-invest agreement, equity subscription or shareholders' agreement, any management, shareholder, director or employee equity plan, any stock option plan or any other management or employee benefit plan or agreement shall not constitute Disqualified Stock solely because it may be required to be repurchased by any Borrower, any of their Subsidiaries or any direct or indirect parent thereof in order to satisfy applicable statutory or regulatory obligations or as a result of such employee's, director's, officer's, management member's, independent contractor's or consultant's termination of employment or service, as applicable, death or disability; provided, further, that any class of Equity Interests of such Person that by its terms authorizes such Person to satisfy its obligations thereunder by delivery of Equity Interests that are not Disqualified Stock shall not be deemed to be Disqualified Stock.

"Dollar" and "$" mean lawful money of the United States.

"Dollar Equivalent" means, for any amount, at the time of determination thereof, (a) if such amount is expressed in Dollars, such amount, (b) if such amount is expressed in an Alternative Currency, the equivalent of such amount in Dollars determined by using the rate of exchange for the purchase of Dollars with the Alternative Currency in the London foreign exchange market at or about 11:00 a.m. London time (or New York time, as applicable) on a particular day as displayed by ICE Data Services as the "ask price", or as displayed on such other information service which publishes that rate of exchange from time to time in place of ICE Data Services (or if such service ceases to be available, the equivalent of such amount in Dollars as determined by the Administrative Agent or the L/C Issuer, as the case may be, using any method of determination it deems appropriate in its sole discretion) and (c) if such amount is denominated in any other currency, the equivalent of such amount in Dollars as determined by the Administrative Agent or the L/C Issuer, as the case may be, using any method of determination it deems appropriate in its sole discretion.

"Domestic Subsidiary" means any Subsidiary of the Parent Borrower that is organized under the laws of the United States, any state thereof or the District of Columbia.

"Dutch Auction" means an auction (an "Auction") conducted by Holdings or one of its Subsidiaries in order to purchase any Term Loans under a Tranche (the "Purchase") in accordance with the following procedures or such other procedures as may be agreed to between the Administrative Agent and the Parent Borrower:

(a) Notice Procedures. In connection with any Auction, the Parent Borrower shall provide notification to the Administrative Agent (for distribution to the Appropriate Lenders) of the Term Loans under such Tranche that will be the subject of the Auction (an "Auction Notice"). Each Auction Notice shall be in a form reasonably acceptable to the Administrative Agent and shall specify (i) the total cash value of the bid, in a minimum amount of $5,000,000 with minimum increments of $1,000,000 in excess thereof (the "Auction Amount") and (ii) the discounts to par, which shall be expressed as a range of percentages of the par principal amount of the Term Loans under such Tranche at issue (the "Discount Range"), representing the range of purchase prices that could be paid in the Auction.

(b) Reply Procedures. In connection with any Auction, each applicable Lender may, in its sole discretion, participate in such Auction by providing the Administrative Agent with a notice of participation (the "Return Bid") which shall be in a form reasonably acceptable to the Administrative Agent and shall specify (i) a discount to par that must be expressed as a price (the "Reply Discount"), which must be within the Discount Range, and (ii) a principal amount of the applicable Loans such Lender is willing to sell, which must be in increments of $1,000,000 or in an amount equal to such Lender's entire remaining amount of the applicable Loans (the "Reply Amount"). Lenders may only submit one Return Bid per Auction. In addition to the Return Bid, each Lender wishing to participate in such Auction must execute and deliver, to be held in escrow by the Administrative Agent, an assignment and acceptance agreement in a form reasonably acceptable to the Administrative Agent.

(c) Acceptance Procedures. Based on the Reply Discounts and Reply Amounts received by the Administrative Agent, the Administrative Agent, in consultation with the Parent Borrower, will determine the applicable discount (the "Applicable Discount") for the Auction, which shall be the lowest Reply Discount for which Holdings or its Subsidiary, as applicable, can complete the Auction at the Auction Amount; provided that, in the event that the Reply Amounts are insufficient to allow Holdings or its Subsidiary, as applicable, to complete a purchase of the entire Auction Amount (any such Auction, a "Failed Auction"), Holdings or such Subsidiary shall either, at its election, (i) withdraw the Auction or (ii) complete the Auction at an Applicable Discount equal to the highest Reply Discount. Holdings or its Subsidiary, as applicable, shall purchase the applicable Loans (or the respective portions thereof) from each applicable Lender with a Reply Discount that is equal to or greater than the Applicable Discount ("Qualifying Bids") at the Applicable Discount; provided that if the aggregate proceeds required to purchase all applicable Loans subject to Qualifying Bids would exceed the Auction Amount for such Auction, Holdings or its Subsidiary, as applicable, shall purchase such Loans at the Applicable Discount ratably based on the principal amounts of such Qualifying Bids (subject to adjustment for rounding as specified by the Administrative Agent). Each participating Lender will receive notice of a Qualifying Bid as soon as reasonably practicable but in no case later than five Business Days from the date the Return Bid was due.

(d) Additional Procedures. Once initiated by an Auction Notice, Holdings or any of its Subsidiaries, as applicable, may not withdraw an Auction other than a Failed Auction. Furthermore, in connection with any Auction, upon submission by a Lender of a Qualifying Bid, such Lender will be obligated to sell the entirety or its allocable portion of the Reply Amount, as the case may be, at the Applicable Discount. The Purchase shall be consummated pursuant to and in accordance with Section 10.07 and, to the extent not otherwise provided herein, shall otherwise be consummated pursuant to procedures (including as to timing, rounding and minimum amounts, Interest Periods, and other notices by Holdings or such Subsidiary, as applicable) reasonably acceptable to the Administrative Agent and the Parent Borrower.

"Early Opt-in Election" means the occurrence of:

(1) (i) a determination by the Administrative Agent and the Parent Borrower or (ii) a notification by the Required Lenders to the Administrative Agent (with the consent of the Parent Borrower) that the Required Lenders have determined that U.S. dollar-denominated syndicated credit facilities being executed at such time, or that include language similar to that contained in Section 3.04, are being executed or amended, as applicable, to incorporate or adopt a new benchmark interest rate to replace the Benchmark, and

(2) (i) the election by the Administrative Agent and the Parent Borrower or (ii) the election by the Required Lenders (with the consent of the Parent Borrower) to declare that an Early Opt-in Election has occurred and the provision, as applicable, by the Administrative Agent of written notice of such election to the Parent Borrower and the Lenders or by the Required Lenders of written notice of such election to the Administrative Agent.

"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 clause (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.

"Electronic Signature" means an electronic sound, symbol, or process attached to, or associated with, a contract or other record and adopted by a person with the intent to sign, authenticate or accept such contract or record.

"Eligible Assignee" means any Person that meets the requirements to be an assignee under Section 10.07(b) (subject to receipt of such consents, if any, as may be required for the assignment of the applicable Loan and/or Commitments to such Person under Section 10.07(b)(iii)).

"EMU" means the economic and monetary union as contemplated in the EU Treaty.

"EMU Legislation" means the legislative measures of the EMU for the introduction of, changeover to, or operation of the Euro in one or more member states.

"Environment" shall mean ambient air, indoor air, surface water, groundwater, drinking water, land surface, sediments, and subsurface strata and natural resources such as wetlands, flora and fauna.

"Environmental Laws" means any and all applicable federal, state, local and foreign statutes, laws, including common law, regulations, ordinances, rules, judgments, orders, decrees, permits, concessions, grants, franchises, licenses or governmental restrictions relating to pollution, the protection of the Environment, human health and safety (to the extent relating to exposure to Hazardous Materials), including those related to Hazardous Materials, air emissions and discharges to public pollution control systems.

"Environmental Liability" means any liability, contingent or otherwise (including any liability for damages, costs of environmental remediation, monitoring or oversight by a Governmental Authority, fines, penalties or indemnities), of the Parent Borrower, any other Loan Party or any of their respective Subsidiaries directly or indirectly resulting from or based upon (a) any actual or alleged violation of any Environmental Law, (b) the generation, use, handling, transportation, storage or treatment of any Hazardous Materials, (c) human 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 binding consensual arrangement to the extent liability is assumed or imposed with respect to any of the foregoing.

"Environmental Permit" means any permit, approval, identification number, license or other authorization required under any Environmental Law.

"Equity Interests" means Capital Stock and all warrants, options or other rights to acquire Capital Stock (but excluding any Capital Stock that arises only by reason of the happening of a contingency or any debt security that is convertible into, or exchangeable for, Capital Stock).

"Equity Issuance" means any issuance by any Person to any other Person of (a) its Equity Interests for cash, (b) any of its Equity Interests pursuant to the exercise of options or warrants, (c) any of its Equity Interests pursuant to the conversion of any debt securities to equity or (d) any options or warrants relating to its Equity Interests.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended or modified from time to time.

"ERISA Affiliate" means any Person who together with any Loan Party is treated as a single employer within the meaning of Section 414(b) or (c) of the Code (and Sections 414(m) and (o) of the Code for purposes of provisions relating to Section 412 of the Code) or Section 4001 of ERISA.

"ERISA Event" means (a) a Reportable Event with respect to a Plan; (b) the withdrawal of any Loan Party or any ERISA Affiliate from a Plan subject to Section 4063 of ERISA during a plan year in which such entity was a "substantial employer" (as defined in Section 4001(a)(2) of ERISA) or a cessation of operations that is treated as such a withdrawal under Section 4062(e) of ERISA; (c) a complete or partial withdrawal by any Loan Party or any ERISA Affiliate from a Multiemployer Plan or written notification that a Multiemployer Plan is insolvent (within the meaning of Section 4245 of ERISA); (d) the filing of a written notice of intent to terminate or the treatment of a plan amendment as a termination under Section 4041 or 4041A of ERISA, respectively; (e) the institution by the PBGC of proceedings

to terminate a Plan or Multiemployer Plan; (f) 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 Plan or Multiemployer Plan; (g) the determination that any Plan is considered an at-risk plan within the meaning of Section 430 of the Code or Section 303 of ERISA; (h) the determination that any Multiemployer Plan is considered a plan in "endangered," "critical," or "critical and declining" status within the meaning of Section 432 of the Code or Section 305 of ERISA; (i) 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 Loan Party or any ERISA Affiliate; (j) the conditions for the imposition of a Lien under Section 430(k) of the Code or Section 303(k) of ERISA shall have been met with respect to any Plan; or (k) any Foreign Benefit Event.

"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.

"EU Treaty" means the Treaty on European Union.

"Euro" and "€" shall mean the single currency of the Participating Member States introduced in accordance with the provisions of Article 109(i)4 of the EU Treaty.

"Eurocurrency Rate" means, with respect to any Eurocurrency Rate Borrowing in Dollars and for any Interest Period, the Screen Rate at approximately 10:00 a.m., London time, two Business Days prior to the commencement of such Interest Period; provided that if the Screen Rate shall not be available at such time for such Interest Period (an "Impacted Interest Period") with respect to Dollars then the Eurocurrency Rate shall be the Interpolated Rate.

"Eurocurrency Rate Borrowing" means a Borrowing comprising Eurocurrency Rate Loans.

"Eurocurrency Rate Loan" means a Loan, whether denominated in Dollars or in an Alternative Currency, that bears interest at a rate based on the applicable Adjusted Eurocurrency Rate.

"Event of Default" has the meaning specified in Section 8.01.

"Excess Cash Flow" means, with respect to any Excess Cash Flow Period, an amount, not less than zero, equal to:

(a) Consolidated Net Income of the Borrower Parties for such Excess Cash Flow Period,*minus*

(b) the sum, without duplication (in each case, for the Borrower Parties on a consolidated basis), of:

(i) Restricted Payments (excluding (x) Restricted Payments made pursuant to clause (c) of the first paragraph of Section 7.05 and pursuant to clauses (2), (3), (7), (8), (9), (17), (18), and (22) of the second paragraph of Section 7.05 (other than such Restricted Payments made to pay interest expense for Qualified Holding Company Indebtedness or any other Indebtedness of Holdings), and (y) any Permitted Investments pursuant to clauses (1), (2), (3), (5), (9), (14), (15), (17), (18), (20), (23) and (24) of the definition thereof); *minus*

(ii) all cash payments and other cash expenditures made by such Person or any of its Restricted Subsidiaries during such period (A) with respect to items that were excluded in the calculation of such Consolidated Net Income pursuant to clauses (a) through (y) of the definition of "Consolidated Net Income" or (B) that were not expensed during such period in accordance with GAAP; *minus*

(iii) all non-cash credits or gains included in calculating such Consolidated Net Income (including insured or indemnified losses referred to in clauses (r) and (s) of the definition of "Consolidated Net Income" to the extent not reimbursed in cash during such period); *minus*

(iv) an amount equal to the sum of (A) the increase in the Working Capital of such Person during such period (measured as the excess, if any, of Working Capital at the end of such Excess Cash Flow Period minus Working Capital at the beginning of such Excess Cash Flow Period), if any, *plus* (B) the increase in long-term accounts receivable of such Person and its Restricted Subsidiaries, if any*minus*

(v) cash payments made in satisfaction of noncurrent liabilities (excluding payments of Indebtedness for borrowed money) not made directly or indirectly using proceeds, payments or any other amounts available from events or circumstances that were not included in determining Consolidated Net Income during such period; *minus*

(vi) the amount of cash payments made in respect of pensions and other postemployment benefits in such period to the extent not deducted in arriving at such Consolidated Net Income; *minus*

(vii) cash payments made by such Person or any of its Restricted Subsidiaries during such period in respect of items for which an accrual or reserve was established in a prior period, in each case to the extent such payments are not expensed during such period or are not deducted in calculating Consolidated Net Income; *plus*

(viii) all non-cash charges, losses and expenses (including, without limitation, taxes) of such Person or any of its Restricted Subsidiaries that were deducted in calculating 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 in such future period); *plus*

(ix) an amount equal to the sum of (A) the decrease in Working Capital of such Person during such period (measured as the excess, if any, of Working Capital at the beginning of such Excess Cash Flow Period minus Working Capital at the end of such Excess Cash Flow Period), if any, plus (B) the decrease in long-term accounts receivable of such Person and its Restricted Subsidiaries, if any (other than any such decreases contemplated by clauses (A) and (B) of this clause (xii) that are directly attributable to dispositions of a Person or business unit by the Parent Borrower and its Restricted Subsidiaries during such period); *plus*

(x) all amounts referred to in clauses (b)(i) and (b)(ii) above to the extent funded with the proceeds of the issuance or the incurrence of long term funded Indebtedness (other than proceeds of revolving loans).

"Excess Cash Flow Period" means any fiscal year of the Parent Borrower, commencing with the fiscal year ending on December 31, 2021.

"Exchange Act" means the U.S. Securities Exchange Act of 1934, as amended, and the rules and regulations of the SEC promulgated thereunder.

"Exchange Agent" means (a) the Administrative Agent or (b) any other financial institution or advisor employed by the Parent Borrower (whether or not an Affiliate of the Administrative Agent), after consultation with the Administrative Agent, to act as an arranger in connection with any Permitted Debt Exchange pursuant to Section 2.19; provided that the Parent Borrower shall not designate the Administrative Agent as the Exchange Agent without the written consent of the Administrative Agent (it being understood that the Administrative Agent shall be under no obligation to agree to act as the Exchange Agent); provided, further, that neither the Parent Borrower nor any of their Affiliates may act as the Exchange Agent.

"Excluded Contributions" means the net cash proceeds and Cash Equivalents, or the Fair Market Value of other assets, received by the Parent Borrower after the Closing Date from:

(1) contributions to its common equity capital, and

(2) the sale of Capital Stock (other than Excluded Equity) of the Parent Borrower,

in each case designated as Excluded Contributions pursuant to an officer's certificate of a Responsible Officer on or promptly after such contribution or sale, or that has been utilized to make a Restricted Payment pursuant to clause (2) of the second paragraph of Section 7.05. Excluded Contributions will be excluded from the calculation set forth in clause (c) of the first paragraph of Section 7.05.

"Excluded Equity" means (i) Disqualified Stock, (ii) any Equity Interests issued or sold to a Restricted Subsidiary or any employee stock ownership plan or trust established by Holdings or any of its Subsidiaries or a direct or indirect parent of Holdings (to the extent such employee stock ownership plan or trust has been funded by Holdings or any Subsidiary or a direct or indirect parent of Holdings) and (iii) any Equity Interest that has already been used or designated (x) as (or the proceeds of which have been used or designated as) a Cash Contribution Amount, Designated Preferred Stock, an Excluded Contribution or Refunding Capital Stock, or (y) to increase the amount available under clause (5)(a) of the second paragraph under Section 7.05 or clause (14) of the definition of "Permitted Investments" or is proceeds of Indebtedness referred to in clause (14)(b) of the second paragraph in Section 7.05.

"Excluded Property" means, with respect to any Loan Party, (a) (i) any fee-owned real property not constituting Material Real Property, (ii) any real property leasehold or subleasehold interests and (iii) [reserved], (b) motor vehicles and other assets subject to certificates of title to the extent a Lien thereon cannot be perfected by filing a UCC financing statement, letter of credit rights (other than letter of credit rights that can be perfected by the filing of a UCC financing statement) with a value not in excess of $4,050,000 individually and commercial tort claims with a value not in excess of $4,050,000 individually, (c) assets to the extent a security interest in such assets would result in adverse tax consequences (that are not de minimis) (including, without limitation, as a result of the operation of Section 956 of the Code or any similar law or regulation in any applicable jurisdiction), or adverse regulatory consequences (that are not de minimis), in each case, as reasonably determined by the Parent Borrower and notified to the Administrative Agent, (d) pledges of, and security interests in, assets in favor of the Collateral Agent which are prohibited by applicable Law; provided, that (i) any such limitation described in this clause (d) on the security interests granted shall only apply to the extent that any such prohibition could not be rendered ineffective pursuant to the Uniform Commercial Code of any applicable jurisdiction or any other applicable Law or principles of equity and shall not apply to any proceeds or receivables thereof, the assignment of which is expressly deemed effective under the UCC of any applicable jurisdiction notwithstanding such prohibition and (ii) in the event of the termination or elimination of any such prohibition contained in any applicable Law, a security interest in such assets shall be automatically and simultaneously granted under the applicable Collateral Documents and such asset shall be included as Collateral, (e) any governmental licenses (but not the proceeds thereof) or state or local franchises, charters and authorizations, to the extent security interests in favor of the Collateral Agent in such licenses, franchises, charters or authorizations are prohibited or restricted thereby, in each case, except to the extent such prohibition is unenforceable after giving effect to the applicable anti-assignment provisions of the Uniform Commercial Code of any applicable jurisdiction and other than proceeds and receivables thereof, the assignment of which is expressly deemed effective under the Uniform Commercial Code of any applicable jurisdiction notwithstanding such prohibition; provided that (i) any such limitation described in this clause (e) on the security interests granted shall only apply to the extent that any such prohibition or restriction could not be rendered ineffective pursuant to the Uniform Commercial Code of any applicable jurisdiction or any other applicable Law or principles of equity and (ii) in the event of the termination or elimination of any such prohibition or restriction contained in any applicable license, franchise, charter or authorization, a security interest in such licenses, franchises, charters or authorizations shall be automatically and simultaneously granted under the applicable Collateral Documents and such licenses, franchises, charters or authorizations shall be included as Collateral, (f) Equity Interests in (A) any Person (other than the Parent Borrower and Wholly Owned Restricted Subsidiaries of the Parent Borrower), (B) any not-for-profit Subsidiary, (C) any captive insurance Subsidiary, (D) any special purpose securitization vehicle (or similar entity), including any Receivables Subsidiary, (E) any Unrestricted Subsidiary, (F) any Person which is acquired after the date hereof to the extent and for so long as such Equity Interests are pledged in respect of Acquired Indebtedness and such pledge constitutes a Permitted Lien and (G) any Person that is an Excluded Subsidiary pursuant to clause (e) of the definition of Excluded Subsidiary, (g) any lease, license or other agreement or any property subject to a purchase money security interest, Capitalized Lease Obligation or similar arrangement in each case permitted to be incurred under this Agreement, to the extent that a grant of a security interest therein would violate or invalidate such lease, license or agreement or

purchase money arrangement or create a right of termination in favor of any other party thereto (other than a Loan Party or their Wholly Owned Subsidiaries), in each case, except to the extent such prohibition is unenforceable after giving effect to the applicable anti-assignment provisions of the Uniform Commercial Code of any applicable jurisdiction, other than proceeds and receivables thereof, the assignment of which is expressly deemed effective under the Uniform Commercial Code of any applicable jurisdiction notwithstanding such prohibition, (h) "intent-to-use" trademark applications prior to the filing of a "Statement of Use" or "Amendment to Allege Use" filing, (i) any Receivables Assets sold pursuant to a Qualified Receivables Factoring or Qualified Receivables Financing, (j) voting Equity Interests in excess of 66% of the voting Equity Interests of (A) any Controlled Foreign Subsidiary or (B) any FSHCO, (k) Margin Stock, (l) trust accounts (held for third parties), payroll accounts and escrow accounts (held for third parties), in each case, as long as used solely for such purposes and (m) segregated cash to secure letter of credit reimbursement obligations (other than in respect of Letters of Credit) to the extent such letters of credit are permitted by this Agreement. Other assets shall be deemed to be "Excluded Property" if the Administrative Agent and the Parent Borrower agree in writing that the cost of obtaining or perfecting a security interest in such assets (including, without limitation, any flood insurance compliance matters) is excessive in relation to the benefit of the Lenders of the security afforded thereby. Notwithstanding anything herein or the Collateral Documents to the contrary, Excluded Property shall not include any Proceeds (as defined in the UCC), substitutions or replacements of any Excluded Property (unless such Proceeds, substitutions or replacements would otherwise constitute Excluded Property referred to above).

"Excluded Subsidiary" means any direct or indirect Subsidiary of a Borrower that is (a) an Unrestricted Subsidiary, (b) not wholly owned by a Borrower or one or more Wholly Owned Restricted Subsidiaries of a Borrower, (c) an Immaterial Subsidiary that is designated in writing to the Administrative Agent as such by the Parent Borrower, (d) a FSHCO (or any Subsidiary of a FSHCO or Controlled Foreign Subsidiary), (e) established or created pursuant to clause (14)(g) of the second paragraph of Section 7.05 and meeting the requirements of the proviso thereto; (f) a Foreign Subsidiary, (g) a Subsidiary that is prohibited by applicable Law from guaranteeing the Facilities, or which would require governmental (including regulatory) consent, approval, license or authorization to provide a guarantee unless, such consent, approval, license or authorization has been received, in each case so long as the Administrative Agent shall have received a certification from a Responsible Officer of Holdings as to the existence of such prohibition or consent, approval, license or authorization requirement, (h) a Subsidiary that is prohibited from guaranteeing the Facilities by any Contractual Obligation in existence on the Closing Date (but not entered into in contemplation thereof) and is listed on Schedule 1.01(e) hereto and for so long as any such Contractual Obligation exists (or, in the case of any newly-acquired Subsidiary, in existence at the time of acquisition thereof but not entered into in contemplation thereof and for so long as any such Contractual Obligation exists), (i) a Subsidiary with respect to which a guarantee by it of the Facilities would result in adverse tax consequences to Holdings (that are not de minimis), the Parent Borrower (or any member of a consolidated or affiliated tax group with the Parent Borrower) or one or more of its Restricted Subsidiaries, as reasonably determined by the Parent Borrower and notified in writing to the Administrative Agent, (j) any Receivables Subsidiary, (k) not-for-profit subsidiaries, (l) Subsidiaries that are special purpose entities, and (m) any other Subsidiary with respect to which, in the reasonable judgment of the Administrative Agent and the Parent Borrower, the cost or other consequences of guaranteeing the Facilities would be excessive in view of the benefits to be obtained by the Lenders therefrom; provided that, if a Subsidiary executes the Subsidiary Guaranty as a "Subsidiary Guarantor," then it shall not constitute an "Excluded Subsidiary" (unless released from its obligations under the Subsidiary Guaranty as a "Subsidiary Guarantor" in accordance with the terms hereof and thereof); provided, further, that no Subsidiary of a Borrower shall be an Excluded Subsidiary if such Subsidiary is a guarantor with respect to any Refinancing Notes or any New Incremental Notes, in each case, with an aggregate outstanding principal amount in excess of $35,000,000; provided, further, that notwithstanding the foregoing, "Excluded Subsidiary" shall not include any Discretionary Guarantor for so long as such Discretionary Guarantor constitutes a Discretionary Guarantor in accordance with this Agreement.

"Excluded Swap Obligation" means, with respect to any Guarantor, (a) any Swap Obligation if, and to the extent that, all or a portion of the Guarantee of such Guarantor of, or the grant by such Guarantor of a security interest to secure, such Swap Obligation (or any Guarantee 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) (i) by virtue of such Guarantor's failure to constitute an "eligible contract participant," as defined in the Commodity Exchange Act and the regulations thereunder (determined after giving effect to any applicable keepwell, support, or other agreement for the benefit of such Guarantor), at the time the guarantee of (or grant of such security interest by, as applicable) such Guarantor becomes or would become effective with respect to such Swap Obligation or (ii) in the case of a Swap Obligation that is subject to a clearing requirement pursuant to

section 2(h) of the Commodity Exchange Act, because such Guarantor is a "financial entity," as defined in section 2(h)(7)(C) the Commodity Exchange Act, at the time the guarantee of (or grant of such security interest by, as applicable) such Guarantor becomes or would become effective with respect to such Swap Obligation or (b) any other Swap Obligation designated as an "Excluded Swap Obligation" of such Guarantor as specified in any agreement between the relevant Loan Parties and Hedge Bank applicable to such Swap Obligation.

"Excluded Taxes" means any of the following Taxes imposed on or with respect to a Recipient or required to be withheld or deducted from a payment to a Recipient: (a) Taxes imposed on or measured by such Recipient's net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (i) imposed as a result of such Recipient being organized under the laws of, or having its principal office or, in the case of any Lender, its applicable lending office located in, the jurisdiction imposing such Tax or (ii) that are Other Connection Taxes, (b) in the case of a Lender, any U.S. federal withholding Taxes imposed pursuant to a Law in effect on the date on which such Lender becomes a party hereto (other than any Lender becoming a party hereto pursuant to a request by any Loan Party under Section 3.08) or changes its lending office, except in each case to the extent that, pursuant to Section 3.01, additional amounts with respect to such Taxes were payable either to such Lender's assignor immediately before such Lender became a party hereto or to such Lender immediately before it changes its lending office, (c) Taxes attributable to such Recipient's failure to comply with Section 3.01(g) and (d) any Taxes imposed under FATCA.

"Executive Order" means Executive Order No. 13224 of September 23, 2001, entitled Blocking Property and Prohibiting Transactions With Persons Who Commit, Threaten to Commit, or Support Terrorism (66 Fed. Reg. 49079 (2001)).

"Existing Credit Agreements" means each of that certain (i) First Lien Credit Agreement, dated as of August 2, 2018, among Holdings, the Borrowers, the lenders party thereto from time to time, JPMorgan Chase Bank, N.A., as administrative agent, and the other parties thereto (as such agreement may be amended, restated, supplemented, waived or otherwise modified from time to time prior to the date hereof) and (ii) Second Lien Credit Agreement, dated as of August 2, 2018, among Holdings, the Borrowers, the lenders party thereto from time to time, Antares Capital LP, as administrative agent, and the other parties thereto (as such agreement may be amended, restated, supplemented, waived or otherwise modified from time to time prior to the date hereof).

"Extendable Bridge Loans" means customary "bridge" loans which by their terms will be converted into loans that have, or extended such that they have, a maturity date later than the Latest Maturity Date then in effect.

"Facility" means the Term Facilities, the Revolving Credit Facility or the Letter of Credit Sublimit, as the context may require.

"Factoring Transaction" means any transaction or series of transactions that may be entered into by the Parent Borrower or any Restricted Subsidiary pursuant to which the Parent Borrower or such Restricted Subsidiary may sell, convey, assign or otherwise transfer Receivables Assets (which may include a backup or precautionary grant of security interest in such Receivables Assets so sold, conveyed, assigned or otherwise transferred or purported to be so sold, conveyed, assigned or otherwise transferred) to any Person other than a Receivables Subsidiary.

"Failed Auction" has the meaning specified in the definition of "Dutch Auction."

"Fair Market Value" means, with respect to any asset or property, the price that could be negotiated in an arm's-length, free market transaction, for cash, between a willing seller and a willing and able buyer, neither of whom is under undue pressure or compulsion to complete the transaction (as determined in good faith by the senior management or the Board of Directors of the Parent Borrower, Holdings or any Parent Holding Company, whose determination will be conclusive for all purposes under the Loan Documents).

"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 Treasury regulations or official administrative interpretations thereof, any agreements entered into pursuant to current Section 1471(b)(1) of the Code (or any amended or successor version described above) and any intergovernmental agreements implementing the foregoing (together with any Laws implementing such agreements).

"Federal Funds Effective Rate" means, for any day, the rate calculated by the NYFRB based on such day's federal funds transactions by depositary institutions, as determined in such manner as the NYFRB shall set forth on its public website from time to time, and published on the next succeeding Business Day by the NYFRB as the effective federal funds rate, provided that if the Federal Funds Effective Rate as so determined would be less than zero, such rate shall be deemed to zero for the purposes of this Agreement.

"Federal Reserve Bank of New York's Website" means the website of the NYFRB at http://www.newyorkfed.org, or any successor source.

"Federal Reserve Board" means the Board of Governors of the Federal Reserve System of the United States of America.

"Fee Letter" means that certain Fee Letter, dated as of October 19, 2020, by and among MS and Parent Borrower.

"Financial Covenant" has the meaning specified in Section 7.08.

"Financial Covenant Event of Default" has the meaning specified in Section 8.01(b).

"First Lien/Second Lien Intercreditor Agreement" means the First Lien/Second Lien Intercreditor Agreement substantially in the form of Exhibit M, or otherwise in form and substance reasonably satisfactory to the Administrative Agent.

"Fixed GAAP Date" means the Closing Date; provided that at any time after the Closing Date, the Parent Borrower may by written notice to the Administrative Agent elect to change the Fixed GAAP Date to be the date specified in such notice, and upon such notice, the Fixed GAAP Date shall be such date for all periods beginning on and after the date specified in such notice; provided further, that with respect to Capitalized Lease Obligations, the "Fixed GAAP Date" shall be December 31, 2018.

*"*Fixed GAAP Terms*"* means (a) the definitions of the terms "Capitalized Lease Obligation," "Cash Interest Coverage Ratio," "Consolidated Cash Interest Expense," "Consolidated Net Income," "Consolidated Net Tangible Assets," "Consolidated First Lien Net Leverage Ratio," "Consolidated Total Net Leverage Ratio," "Consolidated Senior Secured Net Leverage Ratio," "Consolidated Funded Indebtedness," "Consolidated Funded First Lien Indebtedness," "Consolidated Funded Senior Secured Indebtedness," "Consolidated EBITDA" and "Indebtedness," (b) all defined terms in this Agreement to the extent used in or relating to any of the foregoing definitions, and all ratios and computations based on any of the foregoing definitions, and (c) any other term or provision of this Agreement that, at the Parent Borrower's election, may be specified by the Parent Borrower by written notice to the Administrative Agent from time to time; provided that the Parent Borrower may elect to remove any term from constituting a Fixed GAAP Term.

"Flood Insurance Laws" means, collectively, (i) the National Flood Insurance Act of 1994 (which comprehensively revised the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973) as now or hereafter in effect or any successor statute thereto, (ii) the Flood Insurance Reform Act of 2004 as now or hereafter in effect or any successor statute thereto, (iii) the Biggert-Waters Flood Insurance Reform Act of 2012 as now or hereafter in effect or any successor statute thereto, and (iv) all other applicable laws relating to policies and procedures that address requirements placed on federally regulated lenders relating to flood matters, in each case, as now or hereafter in effect or any successor statute thereto.

"Floor" means the applicable benchmark rate floor, if any, provided for in this Agreement with respect to the Screen Rate.

"Foreign Benefit Event" means, with respect to any Foreign Plan, (a) the existence of unfunded liabilities in excess of the amount permitted under any applicable Law, or in excess of the amount that would be permitted absent a waiver from a Governmental Authority, (b) the failure to make the required contributions or payments, under any applicable Law, on or before the due date for such contributions or payments, (c) the receipt of a notice from a

Governmental Authority relating to the intention to terminate any such Foreign Plan or to appoint a trustee or similar official to administer any such Foreign Plan, or alleging the insolvency of any such Foreign Plan, (d) the incurrence of any liability by the Borrowers or any of their Restricted Subsidiaries under applicable Law on account of the complete or partial termination of such Foreign Plan or the complete or partial withdrawal of any participating employer therein or (e) the occurrence of any transaction that is prohibited under any applicable Law and that could reasonably be expected to result in the incurrence of any liability by the Borrowers or any of their Restricted Subsidiaries, or the imposition on the Borrowers or any of their Restricted Subsidiaries of, any fine, excise tax or penalty resulting from any noncompliance with any applicable Law.

"Foreign Casualty Event" shall have the meaning assigned to such term in Section 2.05(b)(viii).

"Foreign Disposition" shall have the meaning assigned to such term in Section 2.05(b)(viii).

"Foreign Lender" means a lender that is not a U.S. Person.

"Foreign Plan" means any pension plan, benefit plan, fund (including any superannuation fund) or other similar program established, maintained or contributed to by a Loan Party or any of its Subsidiaries primarily for the benefit of employees employed and residing outside the United States (other than plans, funds or other similar programs that are maintained exclusively by a Governmental Authority), and which plan is not subject to ERISA or the Code.

"Foreign Subsidiary" means any direct or indirect Subsidiary of the Parent Borrower that is not a Domestic Subsidiary.

"FRB" means the Board of Governors of the Federal Reserve System of the United States.

"Fronting Exposure" means, at any time there is a Defaulting Lender, such Defaulting Lender's Pro Rata Share of the outstanding L/C Obligations (other than L/C Obligations as to which such Defaulting Lender's participation obligation has been reallocated to other Non-Defaulting Lenders or Cash Collateralized in accordance with the terms hereof).

"FSHCO" means any direct or indirect Subsidiary of the Parent Borrower or any Subsidiary of a Guarantor, in each case, which Subsidiary owns no material assets other than (i) Equity Interests (or, if applicable, Equity Interests and/or indebtedness) of one or more Controlled Foreign Subsidiaries or another FSHCO and (ii) cash and Cash Equivalents.

"Fund" means any Person (other than a natural person) that is (or will be) engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of its business.

"GAAP" means generally accepted accounting principles in the United States of America as in effect on the Fixed GAAP Date (for purposes of the Fixed GAAP Terms) and as in effect from time to time (for all other purposes of the Agreement), including those set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other entity as approved by a significant segment of the accounting profession (but excluding the policies, rules and regulations of the SEC applicable only to public companies); provided that the Parent Borrower may at any time elect by written notice to the Administrative Agent to use IFRS in lieu of GAAP for financial reporting purposes and, upon any such notice, references herein to GAAP shall thereafter be construed to mean (a) for periods beginning on and after the date specified in such notice, IFRS as in effect on the date specified in such notice (for purposes of the Fixed GAAP Terms) and as in effect from time to time (for all other purposes of this Agreement) and (b) for prior periods, GAAP as defined in the first sentence of this definition without giving effect to the proviso thereto. All ratios and computations based on GAAP contained in this Agreement shall be computed in conformity with GAAP.

"GS" means Goldman Sachs Bank USA.

"Governmental Authority" means any nation or government, any state or other political subdivision thereof, any agency, authority, instrumentality, regulatory body, court, administrative tribunal, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government, including any applicable supranational bodies (such as the European Union or the European Central Bank).

"Granting Lender" has the meaning specified in Section 10.07(g).

"Guarantee" means, as to any Person, without duplication, (a) any obligation, contingent or otherwise, of such Person guaranteeing or having the economic effect of guaranteeing any Indebtedness or other monetary obligation payable or performable by another Person (the "primary obligor") in any manner, whether directly or indirectly, and including any obligation of such Person, direct or indirect, (i) to purchase or pay (or advance or supply funds for the purchase or payment of) such Indebtedness or other monetary obligation, (ii) to purchase or lease property, securities or services for the purpose of assuring the obligee in respect of such Indebtedness or other monetary obligation of the payment or performance of such Indebtedness or other monetary obligation, (iii) to maintain working capital, equity capital or any other financial statement condition or liquidity or level of income or cash flow of the primary obligor so as to enable the primary obligor to pay such Indebtedness or other monetary obligation or (iv) 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 (b) any Lien on any assets of such Person securing any Indebtedness or other monetary obligation of any other Person, whether or not such Indebtedness or other monetary obligation is assumed by such Person (or any right, contingent or otherwise, of any holder of such Indebtedness to obtain any such Lien); provided that the term "Guarantee" shall not include endorsements for collection or deposit, in either case in the ordinary course of business, or customary or reasonable indemnity obligations in effect on the Closing Date, or entered into in connection with any acquisition or Disposition of assets 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. The term "Guarantee" as a verb has a corresponding meaning.

"Guarantors" means, collectively, Holdings and, as of the Closing Date, the Subsidiaries of the Borrowers listed onSchedule 1 and each other Subsidiary of the Borrowers that executes and delivers a Guaranty or guaranty supplement pursuant to the Guaranty, Section 6.12 or 6.16, unless it has ceased to be a Guarantor pursuant to the terms hereof, and including any Discretionary Guarantor.

"Guaranty" means, collectively, the Holdings Guaranty and the Subsidiary Guaranty.

"Guaranty Release Event" has the meaning specified in Section 9.11(b).

"Hazardous Materials" means all explosive or radioactive substances or wastes and all hazardous or toxic substances, materials or wastes, including petroleum or petroleum distillates, asbestos or asbestos-containing materials, toxic mold, polychlorinated biphenyls, radon gas, infectious or medical wastes and all other toxic substances, materials or wastes regulated pursuant to any Environmental Law.

"Hedge Bank" means any Person that (i) at the time it enters into a Swap Contract, is a Lender or an Agent or an Affiliate of a Lender or an Agent, (ii) within 30 days after the time it enters into a Swap Contract, becomes a Lender or an Agent or an Affiliate of a Lender or an Agent, (iii) with respect to Swap Contracts in effect as of the Closing Date, is, as of the Closing Date or within 30 days after the Closing Date, a Lender or an Agent or an Affiliate of a Lender or an Agent, in each case, in its capacity as a party to such Swap Contract or (iv)(A) is a party to a Swap Contract with a Loan Party and (B) at the Parent Borrower's request, delivers to the Administrative Agent a written notice (1) appointing the Administrative Agent as its agent under the applicable Loan Documents and (2) agreeing to be bound by Article IX and Sections 10.05, 10.15 and 10.17 as if such Person were a Lender; provided that the designation of any Hedge Bank pursuant to this clause (iv) shall not create in favor of such Hedge Bank any rights in connection with management or release of Collateral or the obligations of any Loan Party under the Loan Documents.

"Holdings" has the meaning specified in the introductory paragraph to this Agreement.

"Holdings Guaranty" means the Holdings Guaranty made by Holdings in favor of the Administrative Agent on behalf of the Secured Parties, substantially in the form of Exhibit F-1, as amended, supplemented or otherwise modified from time to time in accordance with the terms thereof.

"Honor Date" has the meaning specified in Section 2.03(d)(i).

"IFRS" means the International Financial Reporting Standards as issued by the International Accounting Standards Board.

"Immaterial Subsidiary" means any Subsidiary of any Borrower that, as of the date of the most recent financial statements required to be delivered pursuant to Section 6.01(a) or (b), does not have (a) assets (when combined with the assets of all other Immaterial Subsidiaries, after eliminating intercompany obligations) in excess of 5.0% of Consolidated Net Tangible Assets or (b) Consolidated EBITDA (when combined with the Consolidated EBITDA of all other Immaterial Subsidiaries, after eliminating intercompany obligations) for the period of four consecutive fiscal quarters ending on such date in excess of 5.0% of the Consolidated EBITDA of the Parent Borrower and the Restricted Subsidiaries for such period.

"Impacted Interest Period" has the meaning assigned to it in the definition of "Eurocurrency Rate."

"Increase Effective Date" has the meaning specified in Section 2.14(c).

"Incremental Amount" has the meaning specified in Section 2.14(a).

"Incremental Arranger" has the meaning specified in Section 2.14(a).

"Incremental Notes Arranger" has the meaning specified in Section 2.15(a).

"Incur" means, with respect to any Indebtedness, Capital Stock or Lien, to issue, assume, guarantee, incur or otherwise become liable for such Indebtedness, Capital Stock or Lien, as applicable; provided that any Indebtedness, Capital Stock or Lien of a Person existing at the time such Person becomes a Subsidiary (whether by merger, amalgamation, consolidation, acquisition or otherwise) shall be deemed to be Incurred by such Person at the time it becomes a Subsidiary.

"Indebtedness" means, with respect to any Person, without duplication:

(a) the principal of any indebtedness of such Person, whether or not contingent, (i) in respect of borrowed money, (ii) evidenced by bonds, notes, debentures or similar instruments or letters of credit or bankers' acceptances (or, without duplication, reimbursement agreements in respect thereof), (iii) representing the deferred and unpaid purchase price of any property, (iv) in respect of Capitalized Lease Obligations or (v) representing any Swap Contracts, in each case, if and to the extent that any of the foregoing Indebtedness (other than letters of credit and Swap Contracts) would appear as a liability on a balance sheet (excluding the footnotes thereto) of such Person prepared in accordance with GAAP;

(b) to the extent not otherwise included, any guarantee by such Person of the Indebtedness of another Person (other than by endorsement of negotiable instruments for collection in the ordinary course of business); and

(c) to the extent not otherwise included, Indebtedness of another Person secured by a Lien on any asset owned by such Person (whether or not such Indebtedness is assumed by such Person); provided, however, that the amount of such Indebtedness will be the lesser of: (a) the Fair Market Value of such asset at such date of determination, and (b) the amount of such Indebtedness of such other Person.

The term "Indebtedness" shall not include any lease, concession or license of property (or guarantee thereof) that would be considered an operating lease under GAAP in accordance with the terms hereof, any prepayments of deposits received from clients or customers in the ordinary course of business or consistent with past practices, or obligations under any license, permit or other approval (or guarantees given in respect of such obligations) Incurred prior to the Closing Date or in the ordinary course of business or consistent with past practices.

Notwithstanding the above provisions, in no event shall the following constitute Indebtedness:

(i) Contingent Obligations Incurred in the ordinary course of business or consistent with past practices;

(ii) obligations under or in respect of Receivables Financings;

(iii) any balance that constitutes a trade payable, accrued expense or similar obligation to a trade creditor, in each case Incurred in the ordinary course of business;

(iv) intercompany liabilities that would be eliminated on the consolidated balance sheet of the Parent Borrower and its consolidated Subsidiaries;

(v) prepaid or deferred revenue arising in the ordinary course of business;

(vi) Cash Management Services;

(vii) in connection with the purchase by the Parent Borrower or any Restricted Subsidiary of any business, any post-closing payment adjustments to which the seller may become entitled to the extent such payment is determined by a final closing balance sheet or such payment depends on the performance of such business after the closing; provided, however, that, at the time of closing, the amount of any such payment is not determinable and, to the extent such payment thereafter becomes fixed and determined, the amount is paid in a timely manner;

(viii) obligations, to the extent such obligations would otherwise constitute Indebtedness, under any agreement that have been defeased or satisfied and discharged pursuant to the terms of such agreement;

(ix) for the avoidance of doubt, any obligations in respect of workers' compensation claims, early retirement or termination obligations, deferred compensatory or employee or director equity plans, pension fund obligations or contributions or similar claims, obligations or contributions or social security or wage taxes; or

(x) Capital Stock (other than Disqualified Stock and Preferred Stock).

"Indemnified Liabilities" has the meaning specified in Section 10.05.

"Indemnified Taxes" means (a) all Taxes, other than Excluded 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 and (b) to the extent not otherwise described in (a), all Other Taxes.

"Indemnitees" has the meaning specified in Section 10.05.

"Independent Financial Advisor" means an accounting, appraisal or investment banking firm or consultant, in each case of nationally recognized standing that is, in the good faith determination of the Parent Borrower, qualified to perform the task for which it has been engaged.

"Information" has the meaning specified in Section 10.08.

"Initial Public Company Costs" means, as to any Person, costs relating to compliance with the provisions of the Securities Act and the Exchange Act (or similar regulations applicable in other listing jurisdictions), as applicable to companies with equity securities held by the public, costs associated with, or in anticipation of, or preparation for, compliance with the requirements of the Sarbanes Oxley Act of 2002 (or similar non-U.S. regulations) and the rules

and regulations promulgated in connection therewith (or similar regulations applicable in other listing jurisdictions), the rules of national securities exchange companies with listed equity, directors' compensation, fees and expense reimbursement, costs relating to enhanced accounting functions and investor relations, shareholder meetings and reports to shareholders, directors' and officers' insurance and other executive costs, legal and other professional fees, and listing fees, in each case to the extent arising solely by virtue of the initial listing of such Person's equity securities on a national securities exchange (or similar non-U.S. exchange).

"Initial Term Borrowing" means a borrowing consisting of simultaneous Initial Term Loans of the same Type and, in the case of Eurocurrency Rate Loans, having the same Interest Period made by each of the Term Lenders pursuant to Section 2.01(a), in each case, on the Closing Date.

"Initial Term Commitment" means, as to each Term Lender, its obligation to make Initial Term Loans to the Borrowers pursuant to Section 2.01(a) in an aggregate principal amount not to exceed the amount set forth opposite such Term Lender's name on Schedule 2.01 under the caption "Initial Term Commitment" as such amount may be adjusted from time to time in accordance with this Agreement. The initial aggregate amount of the Initial Term Commitments is $600,000,000.

"Initial Term Loans" has the meaning specified in Section 2.01(a).

"Inside Maturity Date Exception" means Indebtedness consisting of any combination of New Term Facilities, New Incremental Notes, Specified Refinancing Indebtedness, Ratio Debt or Indebtedness incurred pursuant to Section 7.01(o) and any Refinancing of the foregoing in an aggregate original principal amount not to exceed $100,000,000 as of the applicable date of determination.

"Intellectual Property Security Agreement" means, collectively, the intellectual property security agreement substantially in the form of Exhibit B to the Security Agreement, dated the date of this Agreement, together with each other intellectual property security agreement or Intellectual Property Security Agreement Supplement executed and delivered pursuant to Section 6.12, Section 6.14 or Section 6.16.

"Intellectual Property Security Agreement Supplement" means, collectively, any intellectual property security agreement supplement entered into in connection with, and pursuant to the terms of, any Intellectual Property Security Agreement.

"Intercompany Subordination Agreement" means an intercompany subordination agreement, in substantially the form ofExhibit J hereto, or otherwise in form and substance reasonably satisfactory to the Administrative Agent.

"Interest Payment Date" means, (a) as to any Loan other than a Base Rate Loan, the last day of each Interest Period applicable to such Loan and the Maturity Date of the Facility under which such Loan was made; provided, however, that if any Interest Period for a Eurocurrency Rate Loan exceeds three months, the respective dates that fall every three months after the beginning of such Interest Period shall also be Interest Payment Dates; (b) as to any Base Rate Loan, the last Business Day of each March, June, September and December, and the Maturity Date of the Facility under which such Loan was made, commencing December 31, 2020; and (c) to the extent necessary to create a fungible tranche of Term Loans (as determined by the Parent Borrower and notified to the Administrative Agent), the date of the incurrence of any Incremental Term Loans.

"Interest Period" means, as to each Eurocurrency Rate Loan, the period commencing on the date such Eurocurrency Rate Loan is disbursed or converted to or continued as a Eurocurrency Rate Loan and ending on the date one (1), two (2), three (3) or six (6) months thereafter, or to the extent consented to by all Appropriate Lenders, twelve months thereafter (or such shorter interest period as may be agreed to by all Lenders of the applicable Tranche) as the Parent Borrower may elect; as selected by the Parent Borrower in a Committed Loan Notice; provided that:

(a) any Interest Period that would otherwise end on a day that is not a Business Day shall be extended to the next succeeding Business Day unless such Business Day falls in another calendar month, in which case such Interest Period shall end on the next preceding Business Day;

(b) any Interest Period that begins on the last Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the calendar month at the end of such Interest Period) shall end on the last Business Day of the calendar month at the end of such Interest Period; and

(c) no Interest Period shall extend beyond the scheduled Maturity Date of the Facility under which such Loan was made;

provided, further, that the Interest Period for any Borrowing to be made on the Closing Date (which Interest Period shall commence on the Closing Date) may end on the last Business Day of any calendar month ending on or before December 31, 2020 as selected by the Parent Borrower.

"Interpolated Rate" means, at any time, for any Interest Period, the rate per annum (rounded to the same number of decimal places as the Screen Rate) determined by the Administrative Agent (which determination shall be conclusive and binding absent manifest error) to be equal to the rate that results from interpolating on a linear basis between: (a) the Screen Rate for the longest period for which the Screen Rate is available for Dollars that is shorter than the Impacted Interest Period; and (b) the Screen Rate for the shortest period (for which that Screen Rate is available for Dollars) that exceeds the Impacted Interest Period, in each case, at such time.

"Investment" means, with respect to any Person, (i) all investments by such Person in other Persons (including Affiliates) in the form of (a) loans (including guarantees of Indebtedness), (b) advances or capital contributions (excluding accounts receivable, trade credit and advances or other payments made to customers, dealers, suppliers and distributors and payroll, commission, travel and similar advances to officers, directors, managers, employees consultants and independent contractors made in the ordinary course of business), and (c) purchases or other acquisitions for consideration of Indebtedness, Equity Interests or other securities issued by any other Person and (ii) investments that are required by GAAP to be classified on the balance sheet of the Parent Borrower in the same manner as the other investments included in clause (i) of this definition to the extent such transactions involve the transfer of cash or other property; provided that Investments shall not include, in the case of the Parent Borrower and the Restricted Subsidiaries, intercompany loans, advances, or Indebtedness having a term not exceeding 364 days (inclusive of any roll-over or extensions of terms) and made in the ordinary course of business. If the Parent Borrower or any Restricted Subsidiary sells or otherwise disposes of any Equity Interests of any Restricted Subsidiary, or any Subsidiary issues any Equity Interests, in either case, such that, after giving effect to any such sale or disposition, such Person is no longer a Restricted Subsidiary of the Parent Borrower, the Parent Borrower shall be deemed to have made an Investment on the date of any such sale or other disposition equal to the Fair Market Value of the Equity Interests of and all other Investments in such Restricted Subsidiary retained. In no event shall a guarantee of an operating lease of the Parent Borrower or any Restricted Subsidiary be deemed an Investment. For purposes of the definition of "Unrestricted Subsidiary" and Section 7.05:

(1) "Investments" shall include the portion (proportionate to the relevant Borrower Party's equity interest in such Subsidiary) of the Fair Market Value of the net assets of a Subsidiary of such Borrower Party at the time that such Subsidiary is designated an Unrestricted Subsidiary; provided, however, that upon a redesignation of such Subsidiary as a Restricted Subsidiary, such Borrower Party shall be deemed to continue to have a permanent "Investment" in an Unrestricted Subsidiary in an amount (if positive) equal to:

(a) such Borrower Party's "Investment" in such Subsidiary at the time of such redesignation,*less*

(b) the portion (proportionate to such Borrower Party's equity interest in such Subsidiary) of the Fair Market Value of the net assets of such Subsidiary at the time of such redesignation; and

(2) any property transferred to or from an Unrestricted Subsidiary shall be valued at its Fair Market Value at the time of such transfer.

The amount of any Investment outstanding at any time (including for purposes of calculating the amount of any Investment outstanding at any time under any provision of Section 7.05 and otherwise determining compliance

with Section 7.05) shall be the original cost of such Investment (determined, in the case of any Investment made with assets of the Parent Borrower or any Restricted Subsidiary, based on the Fair Market Value of the assets invested and without taking into account subsequent increases or decreases in value), reduced by any dividend, distribution, interest payment, return of capital, repayment or other amount received in cash by the Parent Borrower or a Restricted Subsidiary in respect of such Investment and shall be net of any Investment by such Person in the Parent Borrower or any Restricted Subsidiary.

"Investment Grade Rating" means a rating equal to or higher than Baa3 (or the equivalent) by Moody's andBBB- (or the equivalent) by S&P, or an equivalent rating by any other "nationally recognized statistical rating organization" within the meaning of Section 3 under the Exchange Act selected by the Parent Borrower as a replacement agency for Moody's or S&P, as the case may be.

"Investment Grade Securities" means:

(1) securities issued or directly and guaranteed or insured by the U.S. government or any agency or instrumentality thereof (other than Cash Equivalents),

(2) securities that have an Investment Grade Rating, but excluding any debt securities or instruments constituting loans or advances among the Parent Borrower and its Subsidiaries,

(3) investments in any fund that invests at least 95.0% of its assets in investments of the type described in clauses (1) and (2) above and clause (4) below which fund may also hold immaterial amounts of cash pending investment and/or distribution, and

(4) corresponding instruments in countries other than the United States customarily utilized for high quality investments and in each case with maturities not exceeding two years from the date of acquisition.

"IP Rights" has the meaning specified in Section 5.16.

"IRS" means the United States Internal Revenue Service.

"ISDA Definitions" means the 2006 ISDA Definitions published by the International Swaps and Derivatives Association, Inc. or any successor thereto, as amended or supplemented from time to time, or any successor definitional booklet for interest rate derivatives published from time to time by the International Swaps and Derivatives Association, Inc. or such successor thereto.

"ISP" means, with respect to any Letter of Credit, the "International Standby Practices 1998" published by the Institute of International Banking Law & Practice, Inc. (or such later version thereof as may be in effect at the time of issuance and to which such Letter of Credit is subject).

"Issuer Documents" means with respect to any Letter of Credit, the Letter of Credit Application, and any other document, agreement and instrument entered into by the applicable L/C Issuer and a Borrower (or, if applicable, a Restricted Subsidiary) or in favor of such L/C Issuer and relating to such Letter of Credit.

"Jefferies" means Jefferies Finance LLC.

"joint venture" means any joint venture or similar arrangement (in each case, regardless of legal formation), including but not limited to collaboration arrangements, profit sharing arrangements or other contractual arrangements.

"Judgment Currency" has the meaning specified in Section 10.23.

"Junior Financing" has the meaning specified in Section 7.05.

"Junior Financing Document" means any documentation governing any Junior Financing.

"JV Distribution" means, at any time, 50% of the aggregate amount of all cash dividends or distributions received by the Parent Borrower or any of its Restricted Subsidiaries as a return on an Investment in a Permitted Joint Venture that is not a Restricted Subsidiary during the period from the Closing Date through the end of the fiscal quarter most recently ended immediately prior to such date for which financial statements are internally available; provided that the Parent Borrower or any of its Restricted Subsidiaries are not required to reinvest such dividends or distributions in the Permitted Joint Venture.

"Latest Maturity Date" means, at any date of determination, the latest maturity or expiration date applicable to any Term Loan Tranche or Revolving Tranche at such time under this Agreement, in each case as extended in accordance with this Agreement from time to time.

"Laws" means, collectively, all applicable international, foreign, federal, state and local statutes, treaties, rules, guidelines, regulations, ordinances, codes and administrative or judicial precedents or authorities, including the interpretation or administration thereof by any Governmental Authority charged with the enforcement, interpretation or administration thereof, and all applicable administrative orders, directed duties, requests, licenses, authorizations and permits of, and agreements with, any Governmental Authority.

"L/C Advance" means, with respect to each Revolving Credit Lender, such Lender's funding of its participation in any L/C Borrowing in accordance with its applicable Pro Rata Share.

"L/C Borrowing" means an extension of credit resulting from a drawing under any Letter of Credit which has not been reimbursed by the Borrowers on the date required under Section 2.03(d)(i) or refinanced as a Revolving Credit Borrowing.

"L/C Credit Extension" means, with respect to any Letter of Credit, the issuance thereof or extension of the expiry date thereof, or the renewal or increase of the amount thereof.

"L/C Disbursement" means a payment made by an L/C Issuer pursuant to a Letter of Credit.

"L/C Issuer" means (a) each of MS, GS, Jefferies, Antares, UBS AG, Stamford Branch, Bank of America, N.A. and Credit Suisse AG, Cayman Islands Branch each in its capacity as an issuer of Letters of Credit hereunder (it being understood that no L/C Issuer shall be obligated to issue any letters of credit hereunder other than standby letters of credit denominated in Dollars), and (b) any other Lender reasonably acceptable to the Parent Borrower and the Administrative Agent (which consent shall not be unreasonably withheld, delayed or conditioned) that agrees to issue Letters of Credit pursuant hereto, in each case in its capacity as an issuer of Letters of Credit hereunder, or any successor issuer of Letters of Credit hereunder, and in each case, applicable Affiliates; *provided* that no L/C Issuer shall be required to issue Letters of Credit in an amount in excess of its Letter of Credit Commitment. No Lender shall be obligated to become an L/C Issuer hereunder. Jefferies Finance LLC will cause Letters of Credit to be issued by unaffiliated financial institutions and such Letters of Credit shall be treated as issued by Jefferies Finance LLC for all purposes under the Loan Documents.

"L/C Obligations" means, as at any date of determination, the aggregate amount available to be drawn under all outstanding Letters of Credit plus the aggregate of all Unreimbursed Amounts, including all L/C Borrowings. For purposes of computing the amount available to be drawn under any Letter of Credit, the amount of such Letter of Credit shall be determined in accordance with Section 1.09. For all purposes of this Agreement, if on any date of determination a Letter of Credit has expired by its terms but (a) any amount may still be drawn thereunder by reason of the operation of Rule 3.13 or Rule 3.14 of the ISP, such Letter of Credit shall be deemed to be "outstanding" in the amount so remaining available to be drawn, or (b) any drawing was made thereunder on or before the last day permitted thereunder and such drawing has not been honored or refused by the applicable L/C Issuer, such Letter of Credit shall be deemed to be "outstanding" in the amount of such drawing.

"Lender" has the meaning specified in the introductory paragraph to this Agreement and, as the context requires, includes each L/C Issuer.

"Lender Parent" means, with respect to any Lender, any Person as to which such Lender is, directly or indirectly, a subsidiary.

"Lending Office" means, as to any Lender, the office or offices of such Lender described as such in such Lender's Administrative Questionnaire, or such other office or offices as a Lender may from time to time notify the Parent Borrower and the Administrative Agent.

"Letter of Credit" means any letter of credit issued hereunder. A Letter of Credit may be a commercial letter of credit or a standby letter of credit.

"Letter of Credit Application" means an application and agreement for the issuance or amendment of a Letter of Credit in the form from time to time in use by the applicable L/C Issuer, together with a request for L/C Credit Extension, substantially in the form of Exhibit A-2 hereto.

"Letter of Credit Commitment" means, with respect to each L/C Issuer, the commitment of such L/C Issuer to issue and to honor payment obligations under Letters of Credit to the extent provided in Section 2.03(d), which (i) as to any L/C Issuer as of the Closing Date, such commitment is set forth on Schedule 2.01(c) and (ii) as to any other L/C Issuer, the amount agreed by the Parent Borrower and such L/C Issuer and notified in writing to the Administrative Agent; provided that the Letter of Credit Commitment of any L/C Issuer added pursuant to clause (b) of the definition of "L/C Issuer" shall reduce, on a pro rata basis, the Letter of Credit Commitments of each of the L/C Issuers named in clause (a) of the definition of "L/C Issuer".

"Letter of Credit Expiration Date" means, subject to Section 2.03(a)(ii)(C), the day that is three Business Days prior to the scheduled Maturity Date then in effect for the Revolving Credit Facility (or, if such day is not a Business Day, the next preceding Business Day).

"Letter of Credit Sublimit" means an amount equal to $20,000,000. The Letter of Credit Sublimit is part of, and not in addition to, the Revolving Credit Facility.

"Lien" means, with respect to any asset, any mortgage, lien, pledge, hypothecation, charge, security interest, preference, priority or encumbrance of any kind in respect of such asset, whether or not filed, recorded or otherwise perfected under applicable law (including any conditional sale or other title retention agreement, any lease in the nature thereof, any option or other agreement to sell or give a security interest in and any filing of or agreement to give any financing statement under the Uniform Commercial Code (or equivalent or similar statutes) of any jurisdiction); provided that in no event shall an operating lease or an agreement to sell be deemed to constitute a Lien.

"Lien Release Event" has the meaning specified in Section 9.11(b).

"Loan" means an extension of credit by a Lender to the Borrowers under Article II in the form of a Term Loan, a Revolving Credit Loan or a Specified Refinancing Revolving Loan.

"Loan Documents" means, collectively, (i) this Agreement, (ii) the Notes, (iii) the Guaranty, (iv) the Collateral Documents, (v) the Intercompany Subordination Agreement, (vi) any intercreditor agreement entered into pursuant to the terms of this Agreement, (vii) any agreement creating or perfecting rights in Cash Collateral pursuant to the provisions of Section 2.16 of this Agreement, and (viii) any Refinancing Amendment.

"Loan Parties" means, collectively, the Borrowers and each Guarantor.

"London Banking Day" means any day on which dealings in Dollar deposits are conducted by and between banks in the London interbank market.

"Majority Lenders" of any Tranche shall mean those Non-Defaulting Lenders which would constitute the Required Lenders under, and as defined in, this Agreement if all outstanding Obligations of the other Tranches under this Agreement were repaid in full and all Commitments with respect thereto were terminated.

"Management Agreement" means that certain Second Amended and Restated Advisory Agreement dated as of September 15, 2016 between GTCR Management XI LP, a Delaware limited liability partnership, Vector and TriLink, as the same may be amended, restated, modified or replaced, from time to time, to the extent such amendment, modification or replacement is not less advantageous to the Lenders in any material respect than such Management Agreement.

"Margin Stock" has the meaning assigned to such term in Regulation U of the Board as from time to time in effect.

"Material Adverse Effect" means (a) a material adverse effect on the business, assets, property, liabilities (actual or contingent), financial condition or results of operations of the Borrowers and the Subsidiaries, taken as a whole, (b) a material adverse effect on the ability of the Loan Parties (taken as a whole) to perform their respective payment obligations under the Loan Documents or (c) a material adverse effect on the rights or remedies (taken as a whole) of the Agents or the Lenders under the Loan Documents, taken as a whole.

"Material Real Property" means any parcel of real property (other than a parcel with a Fair Market Value of less than $13,500,000 and other than a parcel constituting Excluded Property) owned in fee by a Loan Party and located in the United States; provided, however, that one or more parcels owned in fee by a Loan Party and located adjacent to, contiguous with, or in close proximity to, and comprising one property with a common street address, may, in the reasonable discretion of the Administrative Agent, be deemed to be one parcel for the purposes of this definition.

"Maturity Date" means: (a) with respect to the Revolving Credit Facility, the earlier of (i) October 19, 2025 and (ii) the date of termination in whole of the Revolving Credit Commitments pursuant to Section 2.06(a) or 8.02; and (b) with respect to the Initial Term Loans, the earliest of (i) October 19, 2027, (ii) the date of termination in whole of the Initial Term Commitments pursuant to Section 2.06(a) prior to any Initial Term Borrowing and (iii) the date that the Initial Term Loans are declared due and payable pursuant to Section 8.02; provided that the reference to Maturity Date with respect to (i) Term Loans and Revolving Credit Commitments that are the subject of a loan modification offer pursuant to Section 10.01 and (ii) Term Loans and Revolving Credit Commitments that are incurred pursuant to Section 2.14 or 2.18 shall, in each case, be the final maturity date as specified in the loan modification documentation, incremental documentation, or specified refinancing documentation, as applicable thereto.

"Maximum Leverage / Minimum Interest Coverage Requirement" means, with respect to any request made in reliance on this definition under Article II for an increase in any Revolving Tranche or any Term Loan Tranche, for a New Revolving Facility, for a New Term Facility or for the issuance of New Incremental Notes, the requirement that, on a Pro Forma Basis, after giving effect to such increase, such new Facility (assuming all commitments thereunder are fully drawn) or such New Incremental Notes (including, in each case, any acquisition consummated concurrently therewith) and without deducting any cash and Cash Equivalents borrowed under such new facility on the date of incurrence, (a) for any such increase, new Facility and/or New Incremental Notes that are secured on a *pari passu* basis with the Term Loans, the Consolidated First Lien Net Leverage Ratio as of the most recently ended fiscal quarter for which internal financial statements are available (x) does not exceed 5.25:1.00 or (y) if incurred in connection with a permitted acquisition or other permitted Investment, the Consolidated First Lien Net Leverage Ratio does not increase immediately after giving effect to such permitted acquisition or other permitted Investment, (b) for any such increase, new Facility and/or New Incremental Notes that are secured on a junior basis to the Term Loans, the Consolidated Senior Secured Net Leverage Ratio as of the most recently ended fiscal quarter for which internal financial statements are available (x) does not exceed 5.25:1.00 or (y) if incurred in connection with a permitted acquisition or other permitted Investment, the Consolidated Senior Secured Net Leverage Ratio does not increase immediately after giving effect to such permitted acquisition or other permitted Investment or (c) for any such increase, new Facility and/or New Incremental Notes that are unsecured, (1) the Consolidated Total Net Leverage Ratio as of the most recently ended fiscal quarter for which internal financial statements are available (x) does not exceed 5.25:1.00 or (y) if incurred in connection with a permitted acquisition or other permitted Investment, the Consolidated Total Net Leverage Ratio does not increase immediately after giving effect to such permitted acquisition or other permitted Investment or (2) the Cash Interest Coverage Ratio would (x) be no less than 2.00 to 1.00 or (y) if incurred in connection with a permitted acquisition or other permitted Investment, the Cash Interest Coverage Ratio does not decrease immediately after giving effect to such permitted acquisition or other permitted Investment.

"Maximum Rate" has the meaning specified in Section 10.10.

"Minimum Tender Condition" has the meaning specified in Section 2.19

"Moody's" means Moody's Investors Service, Inc. and any successor thereto.

"Mortgage" means, collectively, the deeds of trust, trust deeds, deeds to secure debt and mortgages in respect of Mortgaged Properties in the U.S. made by the Loan Parties in favor or for the benefit of the Collateral Agent on behalf of the Lenders in form and substance reasonably satisfactory to the Parent Borrower and Administrative Agent, in each case as the same may be amended, amended and restated, extended, supplemented, substituted or otherwise modified from time to time.

"Mortgage Policies" has the meaning specified in Section 6.14.

"Mortgaged Properties" means the parcels of real property identified on Schedule 5.08(b) and any other Material Real Property with respect to which a Mortgage is required pursuant to Section 6.12.

"Multiemployer Plan" means a "multiemployer plan" as defined in Section 4001(a)(3) of ERISA, to which any Loan Party or any ERISA Affiliate makes or is obligated to make contributions.

"Natural Person" means (a) any natural person or (b) a holding company, investment vehicle or trust for, or owned and operated for the primary benefit of a natural person or relatives thereof; provided that, with respect to clause (b) above, such holding company, investment vehicle or trust shall not constitute a Natural Person if it (x) has not been established for the primary purpose of acquiring any Loans or Commitments, (y) is managed by a professional advisor, who is not such natural person or a relative thereof, having significant experience in the business of making or purchasing commercial loans, and (z) has assets greater than $25,000,000 and a significant part of its activities consist of making or purchasing commercial loans and similar extensions of credit in the ordinary course of its business.

"Net Cash Proceeds" means:

(a) with respect to the Disposition of any asset by the Parent Borrower or any of its Restricted Subsidiaries (other than any Disposition of any Receivables Assets in a Qualified Receivables Factoring or Qualified Receivables Financing) or any Casualty Event, the excess, if any, of (i) the sum of cash and Cash Equivalents received in connection with such Disposition or Casualty Event (including any cash or Cash Equivalents received by way of deferred payment pursuant to, or by monetization of, a note receivable or otherwise, but only as and when so received and, with respect to any Casualty Event, any insurance proceeds or condemnation awards in respect of such Casualty Event received by or paid to or for the account of the Parent Borrower or any of its Restricted Subsidiaries and including any proceeds received as a result of unwinding any related Swap Contract in connection with such related transaction) over (ii) the sum of:

(A) the principal amount of any Indebtedness that is (i) secured by a Lien on the asset subject to such Disposition or Casualty Event or (ii) in the case of a Disposition by, or Casualty Event with respect to, a Non-Loan Party, is owed by a Non-Loan Party and, in each case, that is required to be repaid in connection with such Disposition or Casualty Event (other than (x) Indebtedness under the Loan Documents and (y), if such asset constitutes Collateral, any Indebtedness secured by such asset with a Lien ranking *pari passu* with or junior to the Lien securing the Obligations), together with any applicable premiums, penalties, interest or breakage costs,

(B) the fees and out-of-pocket expenses incurred by the Parent Borrower or such Restricted Subsidiary in connection with such Disposition or Casualty Event (including attorneys' fees, accountants' fees, investment banking fees, survey costs, title insurance premiums, and related search and recording charges, transfer taxes, deed or mortgage recording taxes, other customary expenses and brokerage, consultant and other customary fees actually incurred in connection therewith),

(C) all taxes paid or reasonably estimated to be payable in connection with such Disposition or Casualty Event (or any tax distribution the Parent Borrower may make as a result of such Disposition or Casualty Event) and any repatriation costs associated with receipt or distribution by the applicable taxpayer of such proceeds,

(D) amounts repaid in respect of customer deposits,

(E) any costs associated with unwinding any related Swap Contract in connection with such transaction,

(F) any reserve for adjustment in respect of (x) the sale price of the property that is the subject of such Disposition established in accordance with GAAP and (y) any liabilities associated with such property and retained by the Parent Borrower or any of its Restricted Subsidiaries after such Disposition, including pension and other post-employment benefit liabilities and liabilities related to environmental matters or against any indemnification obligations associated with such transaction, and it being understood that "Net Cash Proceeds" shall include, without limitation, any cash or Cash Equivalents (i) received upon the Disposition of any non-cash consideration received by the Parent Borrower or any of its Restricted Subsidiaries in any such Disposition and (ii) upon the reversal (without the satisfaction of any applicable liabilities in cash in a corresponding amount) of any reserve described in this clause (E), and

(G) in the case of any Disposition or Casualty Event by a Restricted Subsidiary that is not a Wholly Owned Restricted Subsidiary, the *pro rata* portion of the Net Cash Proceeds thereof (calculated without regard to this clause (F)) attributable to the minority interests; and

(b) with respect to the incurrence or issuance of any Indebtedness by the Parent Borrower or any of its Restricted Subsidiaries, the excess, if any, of (i) the sum of the cash received in connection with such incurrence or issuance and in connection with unwinding any related Swap Contract in connection therewith over (ii) the investment banking fees, underwriting discounts and commissions, premiums, expenses, accrued interest and fees related thereto, taxes reasonably estimated to be payable and other out-of-pocket expenses and other customary expenses, incurred by the Parent Borrower or such Restricted Subsidiary in connection with such incurrence or issuance and any costs associated with unwinding any related Swap Contract in connection therewith and, in the case of Indebtedness of any Foreign Subsidiary, deductions in respect of withholding taxes that are or would otherwise be payable in cash if such funds were repatriated to the United States.

"Net Short Lender" means at any date of determination, each Lender that has a Net Short Position as of such date; provided that Unrestricted Lenders shall not be Net Short Lenders.

"Net Short Position" means, with respect to a Lender (other than an Unrestricted Lender), as of a date of determination, the net positive position, if any, held by such Lender that is remaining after deducting any long position that the Lender holds (i.e., a position (whether as an investor, lender or holder of Loans, debt obligations and/or Derivative Instruments) where the Lender is exposed to the credit risk of Deliverable Obligations of the Loan Parties) from any short positions (i.e., a position as described above, but where the Lender is instead protected from the credit risk described above).

For purposes of determining whether a Lender (other than an Unrestricted Lender) has a Net Short Position on any date of determination:

(a) Derivative Instruments shall be counted at the notional amount (in Dollars) of such Derivative Instrument; provided that, subject to clause (e) below, the notional amount of Derivative Instruments referencing an index that includes any of the Loan Parties or any bond or loan obligation issued or guaranteed by any Loan Party shall be determined in proportionate amount and by reference to the percentage weighting of the component which references any Loan Party or any bond or loan obligation issued or guaranteed by any Loan Party that would be a "Deliverable Obligation" or an "Obligation" (as defined in the ISDA CDS Definitions) of the Loan Parties;

(b) notional amounts of Derivative Instruments in other currencies shall be converted to the Dollar equivalent thereof by such Lender in accordance with the terms of such Derivative Instruments, as applicable; provided that if not otherwise provided in such Derivative Instrument, such conversion shall be made in a commercially reasonable manner consistent with generally accepted financial practices and based on the prevailing conversion rate determined (on a midmarket basis) by such Lender, acting in a commercially reasonable manner, on the date of determination;

(c) Derivative Instruments that are documented using either the 2014 ISDA Credit Derivatives Definitions or the 2003 ISDA Credit Derivatives Definitions (or any successor definitions thereof, collectively, the "ISDA CDS Definitions") shall be deemed to create a short position with respect to the Loans if such Lender is a protection buyer or the equivalent thereof for such Derivative Instrument and (i) the Loans are a "Reference Obligation" under the terms of such derivative transaction (whether specified by name in the related documentation, included as a "Standard Reference Obligation" on the most recent list published by Markit, if "Standard Reference Obligation" is specified as applicable in the relevant documentation or in any other manner) or (ii) the Loans would be a "Deliverable Obligation" or an "Obligation" (as defined in the ISDA CDS Definitions) of the Loan Parties under the terms of such derivative transaction;

(d) credit derivative transactions or other Derivative Instruments not documented using the ISDA CDS Definitions shall be counted for purposes of the Net Short Position determination if, with respect to the Loans, such transactions are functionally equivalent to a transaction that offers such Lender protection in respect of the Loans; and

(e) Derivative Instruments in respect of an index that includes any of the Loan Parties or any instrument issued or guaranteed by any of the Loan Parties shall not be deemed to create a short position, so long as (A) such index is not created, designed, administered or requested by such Lender and (B) the Loan Parties, and any Deliverable Obligation of the Loan Parties, collectively, shall represent less than 5.0% of the components of such index.

"Net Short Representation" means, with respect to any Lender (other than an Unrestricted Lender) at any time, a representation and warranty (including any deemed representation and warranty, as the case may be) from such Lender to the Borrowers that it is not (x) a Net Short Lender at such time or (y) knowingly and intentionally acting in concert with any of its Affiliates for the express purpose of creating (and in fact creating) the same economic effect with respect to the Loan Parties as though such Lender were a Net Short Lender at such time.

"New Incremental Notes" has the meaning specified in Section 2.15(a).

"New Incremental Notes Indentures" means, collectively, the indentures or other similar agreements pursuant to which any New Incremental Notes are issued, together with all instruments and other agreements in connection therewith, as amended, supplemented or otherwise modified from time to time in accordance with the terms thereof, but only to the extent permitted under the terms of the Loan Documents.

"New Loan Commitments" has the meaning specified in Section 2.14(a).

"New Revolving Commitment" has the meaning specified in Section 2.14(a).

"New Revolving Facility" has the meaning specified in Section 2.14(a).

"New Revolving Loan" has the meaning specified in Section 2.14(a).

"New Term Commitment" has the meaning specified in Section 2.14(a).

"New Term Facility" has the meaning specified in Section 2.14(a).

"New Term Loan" has the meaning specified in Section 2.14(a).

"Non-Consenting Lender" has the meaning specified in Section 3.08(c).

"Non-Defaulting Lender" means any Lender other than a Defaulting Lender.

"Non-Loan Party" means any Restricted Subsidiary of the Parent Borrower that is not a Loan Party.

"Note" means a Term Note or a Revolving Credit Note, as the context may require.

"NPL" means the National Priorities List under CERCLA.

"NYFRB" means the Federal Reserve Bank of New York.

"NYFRB Rate" means, for any day, the greater of (a) the Federal Funds Effective Rate in effect on such day and (b) the Overnight Bank Funding Rate in effect on such day (or for any day that is not a Business Day, for the immediately preceding Business Day); provided that if none of such rates are published for any day that is a Business Day, the term "NYFRB Rate" means the rate for a federal funds transaction quoted at 11:00 a.m. on such day received by the Administrative Agent from a federal funds broker of recognized standing selected by it; provided, further, that if any of the aforesaid rates as so determined be less than zero, such rate shall be deemed to be zero for purposes of this Agreement.

"Obligations" means all advances to, and debts, liabilities, obligations, covenants and duties of, any Loan Party arising under any Loan Document or otherwise with respect to any Loan, Letter of Credit, Secured Cash Management Agreement or Secured Hedge Agreement, in each case whether direct or indirect (including those acquired by assumption), absolute or contingent, due or to become due, now existing or hereafter arising and including interest and fees that accrue after the commencement by or against any Loan Party of any proceeding under any Debtor Relief Laws naming such Person as the debtor in such proceeding, regardless of whether such interest and fees are allowed claims in such proceeding; provided that (a) obligations of any Loan Party under any Secured Cash Management Agreement or Secured Hedge Agreement shall be secured and guaranteed pursuant to the Collateral Documents only to the extent that, and for so long as, the other Obligations are so secured and guaranteed, (b) any release of Collateral or Guarantors effected in the manner permitted by this Agreement shall not require the consent of holders of obligations under Secured Hedge Agreements or Secured Cash Management Agreements and (c) the Obligations with respect to any Guarantor shall not include Excluded Swap Obligations of such Guarantor. Without limiting the generality of the foregoing, the Obligations of the Loan Parties under the Loan Documents include (a) the obligation to pay principal, interest, Letter of Credit commissions, charges, expenses, fees, indemnities and other amounts payable by any Loan Party under any Loan Document and (b) the obligation of any Loan Party to reimburse any amount in respect of any of the foregoing pursuant to Section 10.04.

"OFAC" shall have the meaning specified in the definition of Sanctions Laws and Regulations.

"OID" means original issue discount.

"Organization Documents" means (a) with respect to any corporation, the certificate or articles of incorporation and the bylaws (or equivalent or comparable constitutive documents with respect to any non-U.S. jurisdiction), (b) with respect to any limited liability company, the certificate or articles of formation or organization and operating or limited liability company agreement (or equivalent or comparable constitutive documents with respect to any non-U.S. jurisdiction) and (c) with respect to any partnership, joint venture, trust or other form of business entity, the partnership, joint venture, trust or other applicable agreement of formation or organization and any agreement, instrument, filing or notice with respect thereto filed in connection with its formation or organization with the applicable Governmental Authority in the jurisdiction of its formation or organization and, if applicable, any certificate or articles of formation or organization of such entity.

"Other Affiliate" means the Sponsor and its Affiliates, other than Holdings, any Subsidiary of Holdings and any natural person.

"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 from such Recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, 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 LC" has the meaning specified in Section 2.03(c)(v).

"Other Taxes" means all present or future stamp, court or documentary, intangible, recording, filing or similar Taxes that arise from any payment made under, from the execution, delivery, performance, enforcement or registration of, from the receipt or perfection of a security interest under, or otherwise with respect to, any Loan Document, except any such Taxes that are imposed with respect to an assignment (other than an assignment made pursuant to Section 3.01(f) or Section 3.08).

"Outstanding Amount" means: (a) with respect to the Term Loans, Revolving Credit Loans and Specified Refinancing Revolving Loans on any date, the aggregate outstanding principal amount thereof after giving effect to any borrowings and prepayments or repayments of the Term Loans, Revolving Credit Loans (including any refinancing of outstanding unpaid drawings under Letters of Credit or L/C Credit Extensions as a Revolving Credit Borrowing) and Specified Refinancing Revolving Loans, as the case may be, occurring on such date; and (b) with respect to any L/C Obligations on any date, the amount of such L/C Obligations on such date after giving effect to any L/C Credit Extension occurring on such date and any other changes in the aggregate amount of the L/C Obligations as of such date, including as a result of any reimbursements of outstanding unpaid drawings under any Letters of Credit (including any refinancing of outstanding unpaid drawings under Letters of Credit or L/C Credit Extensions as a Revolving Credit Borrowing) or any reductions in the maximum amount available for drawing under Letters of Credit taking effect on such date.

"Overnight Bank Funding Rate" means, for any day, the rate comprised of both overnight federal funds and overnight Eurodollar borrowings by U.S.-managed banking offices of depository institutions, as such composite rate shall be determined by the NYFRB as set forth on its public website from time to time, and published on the next succeeding Business Day by the NYFRB as an overnight bank funding rate.

"Parent Borrower" has the meaning specified in the introductory paragraph to this Agreement.

"Parent Holding Company" means any direct or indirect parent entity of Holdings which holds directly or indirectly 100% of the Equity Interest of Holdings and which does not hold Capital Stock in any other Person (except for any other Parent Holding Company).

"Pari Passu Indebtedness" means:

(a) with respect to any Borrower, any Indebtedness that ranks *pari passu* in right of security to the Loans; and

(b) with respect to any Guarantor, its guarantee of the Obligations and any Indebtedness that ranks *pari passu* in right of security to such Guarantor's guarantee of the Obligations.

"Pari Passu Intercreditor Agreement" means a Pari Passu Intercreditor Agreement substantially in the form of Exhibit N, or otherwise in form and substance reasonably satisfactory to the Administrative Agent.

"Participant" has the meaning specified in Section 10.07(d).

"Participant Register" has the meaning specified in Section 10.07(m).

"Participating Member State" means each state as described in any EMU Legislation.

"PATRIOT Act" has the meaning specified in Section 10.22.

"PBGC" means the Pension Benefit Guaranty Corporation.

"Pension Funding Rules" means the rules of the Code and ERISA regarding minimum required contributions (including any installment payment thereof) to Plans and set forth in Sections 412 and 430 of the Code and Sections 302 and 303 of ERISA.

"Perfection Exceptions" means that no Loan Party shall be required to (i) enter into control agreements with respect to, or otherwise perfect any security interest by "control" (or similar arrangements) over securities accounts, deposit accounts, other bank accounts, cash and cash equivalents and accounts related to the clearing, payment processing and similar operations of the Parent Borrower and its Restricted Subsidiaries, (ii) perfect the security interest in the following other than by the filing of a UCC financing statement: (1) letter-of-credit rights (as defined in the UCC), (2) commercial tort claims (as defined in the UCC), (3) Fixtures (as defined in the UCC), except to the extent that the same are Equipment (as defined in the UCC) or are related to real property covered or intended by the Loan Documents to be covered by a Mortgage and (4) Assigned Agreements (as defined in the Security Agreement), (iii) send notices to account debtors or other contractual third-parties unless an Event of Default has not been cured or waived and is continuing and the Administrative Agent has exercised its rights pursuant to Section 8.02 of this Agreement, (iv) enter into any security documents to be governed by the law of any jurisdiction in which assets are located other than the United States, any state thereof (or the District of Columbia) except with respect to the equity and assets of any Foreign Subsidiary that becomes a Loan Party or (v) deliver landlord waivers, estoppels or collateral access letters.

"Permitted Asset Swap" means the substantially concurrent purchase and sale or exchange of Related Business Assets or a combination of Related Business Assets and cash or Cash Equivalents between Holdings or any of its Restricted Subsidiaries and another Person; provided that any cash or Cash Equivalents received must be applied in accordance with Section 7.04.

"Permitted Debt" has the meaning specified in Section 7.01.

"Permitted Debt Exchange" has the meaning specified in Section 2.19.

"Permitted Debt Exchange Notes" means Indebtedness in the form of unsecured, first lien, second lien or other junior lien notes; provided that such Indebtedness (i) satisfies the Permitted Other Debt Conditions, (ii) such Indebtedness is not at any time guaranteed by any Person other than Guarantors, and (iii) to the extent secured, such Indebtedness is not secured by property other than the Collateral and the Liens securing such Indebtedness shall be subject to Applicable Intercreditor Arrangements and the security agreements governing such Liens shall be substantially the same as of the Collateral Documents (with such differences as are reasonably acceptable to the Administrative Agent).

"Permitted Debt Exchange Offer" has the meaning specified in Section 2.19(a).

"Permitted Holders" means each of (a) the Sponsor, (b) managers and members of management of the Parent Borrower (or any Permitted Parent (other than clause (c) of the definition thereof)) or its Subsidiaries that have ownership interests in the Parent Borrower (or such Permitted Parent (other than clause (c) of the definition thereof)), (c) any other beneficial owner in the common equity of the Parent Borrower (or such Permitted Parent (other than clause (c) of the definition thereof)) as of the Closing Date, (d) any Permitted Transferee of any of the foregoing persons, (e) any group (within the meaning of Rule 13d-5 under the Exchange Act) of which any of the Persons described in clauses (a), (b), (c) or (d) above are members; provided that, without giving effect to the existence of such group or any other group, any of the Persons described in clauses (a), (b), (c) or (d), collectively, beneficially own Voting Stock representing 50% or more of the total voting power of the Voting Stock of the Parent Borrower (or any Permitted Parent (other than clause (c) of the definition thereof)) then held by such group, and (f) any Permitted Parent.

"Permitted Investments" means:

(1) any Investment in cash and Cash Equivalents or Investment Grade Securities and Investments that were Cash Equivalents or Investment Grade Securities when made;

(2) any Investment in any Borrower or any Restricted Subsidiary;

(3) any Investments by Subsidiaries that are not Restricted Subsidiaries in other Subsidiaries that are not Restricted Subsidiaries;

(4) any Investment by any Borrower or any Restricted Subsidiary in a Person that is primarily engaged in a Similar Business if as a result of such Investment (a) such Person becomes a Restricted Subsidiary, or (b) such Person, in one transaction or a series of related transactions, is merged, consolidated or amalgamated with or into, or transfers or conveys all or substantially all of its assets to, or is liquidated into, a Borrower or a Restricted Subsidiary (and any Investment held by such Person that was not acquired by such Person in contemplation of so becoming a Restricted Subsidiary or in contemplation of such merger, consolidation, amalgamation, transfer, conveyance or liquidation);

(5) any Investment in securities or other assets received in connection with an Asset Sale made pursuant to Section 7.04 or any other Disposition of assets not constituting an Asset Sale;

(6) any Investment (x) existing on the Closing Date and listed on Schedule 7.05, (y) made pursuant to binding commitments in effect on the Closing Date and listed on Schedule 7.05 or (z) that replaces, refinances, refunds, renews or extends any Investment described under either of the immediately preceding clauses (x) or (y); provided that any such Investment is in an amount that does not exceed the amount replaced, refinanced, refunded, renewed or extended, except as contemplated pursuant to the terms of such Investment in existence on the Closing Date or as otherwise permitted under this definition or otherwise under Section 7.05;

(7) loans and advances to, or guarantees of Indebtedness of, employees, directors, officers, managers, consultants or independent contractors in an aggregate amount, taken together with all other Investments made pursuant to this clause (7) that are at the time outstanding, not in excess of $13,500,000 outstanding at any one time in the aggregate;

(8) loans and advances to officers, directors, employees, managers, consultants and independent contractors for business related travel and entertainment expenses, moving and relocation expenses and other similar expenses, in each case in the ordinary course of business;

(9) any Investment (x) acquired by any Borrower or any of its Restricted Subsidiaries (a) in exchange for any other Investment or accounts receivable held by any Borrower or any such Restricted Subsidiary in connection with or as a result of a bankruptcy, workout, reorganization or recapitalization of such Borrower or Restricted Subsidiary of such other Investment or accounts receivable, or (b) as a result of a foreclosure or other remedial action by any Borrower or any of its Restricted Subsidiaries with respect to any Investment or other transfer of title with respect to any Investment in default and (y) received in compromise or resolution of (A) obligations of trade creditors or customers that were incurred in the ordinary course of business of any Borrower or any Restricted Subsidiary, including pursuant to any plan of reorganization or similar arrangement upon the bankruptcy or insolvency of any trade creditor or customer, or (B) litigation, arbitration or other disputes;

(10) Swap Contracts and cash management services permitted under Section 7.01(j), including any payments in connection with the termination thereof;

(11) any Investment by any Borrower or any of its Restricted Subsidiaries in a Similar Business in an aggregate amount, taken together with all other Investments made pursuant to this clause (11) that are at the time outstanding, not to exceed the greater of (x) $40,000,000 and (y) 40% of Consolidated EBITDA;

provided, however, that if any Investment pursuant to this clause (11) is made in any Person that is not a Restricted Subsidiary at the date of the making of such Investment and such Person becomes a Restricted Subsidiary after such date, such Investment shall thereafter be deemed to have been made pursuant to clause (2) above and shall cease to have been made pursuant to this clause (11) for so long as such Person continues to be a Restricted Subsidiary;

(12) additional Investments by any Borrower or any of its Restricted Subsidiaries in an aggregate amount, taken together with all other Investments made pursuant to this clause (12) that are at the time outstanding, not to exceed the greater of (x) $40,000,000 and (y) 40% of Consolidated EBITDA; provided, however, that if any Investment pursuant to this clause (12) is made in any Person that is not a Restricted Subsidiary at the date of the making of such Investment and such Person becomes a Restricted Subsidiary after such date, such Investment shall thereafter be deemed to have been made pursuant to clause (2) above and shall cease to have been made pursuant to this clause (12) for so long as such Person continues to be a Restricted Subsidiary;

(13) any transaction to the extent it constitutes an Investment that is permitted and made in accordance with the provisions of Section 6.18(b) (except transactions described in clause (2), (3), (4), (8), (9), (13), (14) or (20) of such Section 6.18(b));

(14) Investments the payment for which consists of Equity Interests (other than Excluded Equity) of the Parent Borrower or any direct or indirect parent of the Parent Borrower, as applicable; provided, however, that such Equity Interests will not increase the amount available for Restricted Payments under clause (c) of the first paragraph of Section 7.05;

(15) Investments consisting of the leasing, licensing, sublicensing or contribution of intellectual property in the ordinary course of business or pursuant to joint marketing arrangements with other Persons;

(16) Investments consisting of purchases or acquisitions of inventory, supplies, materials and equipment or purchases, acquisitions, licenses, sublicenses or leases or subleases of intellectual property, or other rights or assets, in each case in the ordinary course of business;

(17) any Investment in a Receivables Subsidiary or any Investment by a Receivables Subsidiary in any other Person in connection with a Qualified Receivables Financing, including Investments of funds held in accounts permitted or required by the arrangements governing such Qualified Receivables Financing or any related Indebtedness;

(18) Investments of a Restricted Subsidiary acquired after the Closing Date or of an entity merged into or amalgamated or consolidated with a Restricted Subsidiary in a transaction that is not prohibited by Section 7.03 after the Closing Date to the extent that such Investments were not made in contemplation of such acquisition, merger, amalgamation or consolidation and were in existence on the date of such acquisition, merger, amalgamation or consolidation;

(19) additional Investments; *provided* that after giving Pro Forma Effect to such Investments, the Consolidated Total Net Leverage Ratio is equal to or less than 5.25 to 1.00;

(20) guarantees of Indebtedness permitted to be incurred under Section 7.01 and obligations relating to such Indebtedness and guarantees (other than guarantees of Indebtedness) in the ordinary course of business;

(21) advances, loans or extensions of trade credit in the ordinary course of business by the Borrowers or any of the Restricted Subsidiaries;

(22) Investments consisting of purchases and acquisitions of assets or services in the ordinary course of business;

(23) Investments in the ordinary course of business consisting of Uniform Commercial Code Article 3 endorsements for collection or deposit and Uniform Commercial Code Article 4 customary trade arrangements with customers;

(24) intercompany current liabilities owed to Unrestricted Subsidiaries or joint ventures Incurred in the ordinary course of business in connection with the cash management operations of the Borrowers and their Subsidiaries;

(25) Investments in joint ventures of the Borrowers or any of their Restricted Subsidiaries in an aggregate amount, taken together with all other Investments made pursuant to this clause (25) that are at the time outstanding, not to exceed the greater of (x) $20,000,000 and (y) 20% of Consolidated EBITDA; provided that the Investments permitted pursuant to this clause may be increased by the amount of JV Distributions, without duplication of dividends or distributions increasing amounts available pursuant to clause (c) of the first paragraph of Section 7.05;

(26) the Transactions;

(27) accounts receivable, security deposits and prepayments and other credits granted or made in the ordinary course of business and any Investments received in satisfaction or partial satisfaction thereof from financially troubled account debtors and others, including in connection with the bankruptcy or reorganization of, or settlement of delinquent accounts and disputes with or judgments against, such account debtors and others, in each case in the ordinary course of business;

(28) Investments acquired as a result of a foreclosure by the Borrowers or any Restricted Subsidiary with respect to any secured Investments or other transfer of title with respect to any secured Investment in default;

(29) Investments resulting from pledges and deposits that are Permitted Liens;

(30) acquisitions of obligations of one or more officers or other employees of any direct or indirect parent of the Parent Borrower, the Borrowers or any Subsidiary of the Borrowers in connection with such officer's or employee's acquisition of Equity Interests of any direct or indirect parent of the Parent Borrower, so long as no cash is actually advanced by the Borrowers or any Restricted Subsidiary to such officers or employees in connection with the acquisition of any such obligations;

(31) guarantees of operating leases (for the avoidance of doubt, excluding Capitalized Lease Obligations) or of other obligations that do not constitute Indebtedness, in each case, entered into by the Borrowers or any Restricted Subsidiary in the ordinary course of business;

(32) Investments consisting of the redemption, purchase, repurchase or retirement of any Equity Interests permitted by Section 7.05;

(33) non-cash Investments made in connection with tax planning and reorganization activities;

(34) Investments made pursuant to obligations entered into when the Investment would have been permitted hereunder so long as such Investment when made reduces the amount available under the clause under which the Investment would have been permitted;

(35) Investments made in the ordinary course of business in connection with obtaining, maintaining or renewing client and customer contracts and loans or advances made to, and guarantees with respect to obligations of, distributors, suppliers, licensors and licensees in the ordinary course of business; and

(36) Investments in Unrestricted Subsidiaries having an aggregate Fair Market Value, taken together with all other Investments made pursuant to this clause (36) that are at the time outstanding, without giving effect to the sale of an Unrestricted Subsidiary to the extent the proceeds of such sale do not consist of cash, Cash Equivalents or marketable securities, not to exceed the greater of (x) $20,000,000 and (y) 20% of Consolidated EBITDA (with the Fair Market Value of each Investment being measured at the time made and without giving effect to subsequent changes in value).

"Permitted Joint Venture" means, with respect to any specified Person, a joint venture in any other Person engaged in a Similar Business in respect of which any Borrower or a Restricted Subsidiary beneficially owns at least 35% of the shares of Equity Interests of such Person.

"Permitted Liens" means, with respect to any Person:

(1) Liens Incurred in connection with workers' compensation laws, unemployment insurance laws or similar legislation, or in connection with bids, tenders, contracts (other than for the payment of Indebtedness) or leases to which such Person is a party, or to secure public or statutory obligations of such Person or to secure surety, stay, customs or appeal bonds to which such Person is a party, or as security for contested taxes or import duties or for the payment of rent, in each case Incurred in the ordinary course of business;

(2) Liens imposed by law, such as carriers', warehousemen's, landlords', materialmen's, repairman's, construction contractors', mechanics' or other like Liens, in each case for sums not yet overdue by more than 30 days or being contested in good faith by appropriate proceedings or other Liens arising out of judgments or awards against such Person with respect to which such Person shall then be proceeding with an appeal or other proceedings for review (or which, if due and payable, are being contested in good faith by appropriate proceedings and for which adequate reserves are being maintained, to the extent required by GAAP) or with respect to which the failure to make payment would not reasonably be expected to have a Material Adverse Effect;

(3) Liens for taxes, assessments or other governmental charges or levies (i) that are not yet delinquent, (ii) that are being contested in good faith by appropriate proceedings and for which adequate reserves are being maintained to the extent required by GAAP, or for property taxes on property such Person or one of its Subsidiaries has determined to abandon if the sole recourse for such tax, assessment, charge, levy or claim is to such property or (iii) with respect to which the failure to make payment would not reasonably be expected to have a Material Adverse Effect;

(4) Liens in favor of the issuers of performance and surety bonds, bid, indemnity, warranty, release, appeal or similar bonds or with respect to regulatory requirements or letters of credit or bankers' acceptances issued and completion of guarantees provided for, in each case, pursuant to the request of and for the account of such Person in the ordinary course of its business;

(5) survey exceptions, encumbrances, ground leases, easements or reservations of, or rights of others for, licenses,rights-of-way, servitudes, sewers, electric lines, drains, telegraph and telephone and cable television lines, gas and oil pipelines and other similar purposes, reservations of rights, or zoning, building codes or other restrictions (including, without limitation, minor defects or irregularities in title and similar encumbrances) as to the use of real properties or Liens incidental to the conduct of the business of such Person or to the ownership of its properties which do not in the aggregate materially adversely interfere with the ordinary conduct of the business of such Person;

(6) Liens Incurred to secure obligations in respect of Indebtedness permitted to be Incurred pursuant to Section 7.01(a) and obligations secured ratably thereunder or 7.01(d); provided that, in the case of such clause (d), such Lien extends only to the assets and/or Capital Stock the acquisition, lease, construction, repair, replacement or improvement of which is financed thereby and any replacements, additions and accessions thereto and any income or profits thereof; provided that individual financings provided by a lender may be cross collateralized to other financingsprovided by such lender or its affiliates;

(7) Liens of the Borrowers or any of the Guarantors existing on the Closing Date and listed on Schedule 7.02 and any modifications, replacements, renewals or extensions thereof; provided that (i) the Lien does not extend to any additional property other than (A) after-acquired property that is affixed or incorporated into the property covered by such Lien or (B) proceeds and products thereof; provided that individual financings provided by a lender may be cross collateralized to other financings provided by such lender or its affiliates and (ii) the modification, replacement, renewal, extension or refinancing of the obligations secured or benefited by such Liens (if such obligations constitute Permitted Debt) shall constitute a Permitted Refinancing;

(8) Liens on assets of, or Equity Interests (other than Equity Interests in any Subsidiary that is required to become a Guarantor pursuant to this Agreement) in, a Person at the time such Person becomes a Subsidiary; provided, however, that such Liens are not created or Incurred in connection with, or in contemplation of, such other Person becoming such a Subsidiary; provided, further, that such Liens are limited to all or a portion of the assets (and improvements on such assets) that secured (or, under the written arrangements under which the Liens arose, could secure) the obligations to which such Liens relate; provided, further, that for purposes of this clause (8), if a Person becomes a Subsidiary, any Subsidiary of such Person shall be deemed to become a Subsidiary of the Parent Borrower, and any property or assets of such Person or any Subsidiary of such Person shall be deemed acquired by the Parent Borrower at the time of such merger, amalgamation or consolidation;

(9) Liens on assets at the time the Borrowers or any Restricted Subsidiary acquired the assets, including any acquisition by means of a merger, amalgamation or consolidation with or into the Borrowers or such Restricted Subsidiary; provided, however, that such Liens are not created or Incurred in connection with, or in contemplation of, such acquisition; provided, further, that such Liens are limited to all or a portion of the property or assets (and improvements on such property or assets) that secured (or, under the written arrangements under which the Liens arose, could secure) the obligations to which such Liens relate; provided, further, that for purposes of this clause (9), if, in connection with an acquisition by means of a merger, amalgamation or consolidation with or into any Borrower or any Restricted Subsidiary, a Person other than such Borrower or Restricted Subsidiary is the successor company with respect thereto, any Subsidiary of such Person shall be deemed to become a Subsidiary of such Borrower or such Restricted Subsidiary, as applicable, and any property or assets of such Person or any such Subsidiary of such Person shall be deemed acquired by such Borrower or such Restricted Subsidiary, as the case may be, at the time of such merger, amalgamation or consolidation;

(10) [reserved];

(11) Liens securing Swap Contracts Incurred in accordance with Section 7.01;

(12) Liens on specific items of inventory or other goods and proceeds of any Person securing such Person's obligations in respect of bankers' acceptances or letters of credit entered into in the ordinary course of business issued or created for the account of such Person to facilitate the purchase, shipment or storage of such inventory or other goods;

(13) leases, subleases, licenses, sublicenses, occupancy agreements or assignments of or in respect of real or personal property;

(14) Liens arising from, or from Uniform Commercial Code financing statement filings regarding, operating leases or consignments entered into by the Borrowers and the Guarantors in the ordinary course of business;

(15) Liens in favor of any Borrower or any Guarantor;

(16) (i) Liens on Receivables Assets and related assets sold, conveyed, assigned or otherwise transferred or purported to be so sold, conveyed, assigned or otherwise transferred in connection with a Qualified Receivables Factoring and/or Qualified Receivables Financing and (ii) Liens securing Indebtedness or other obligations of any Receivables Subsidiary;

(17) deposits made or other security provided in the ordinary course of business to secure liability to insurance carriers or under self-insurance arrangements in respect of such obligations;

(18) Liens on the Capital Stock of Unrestricted Subsidiaries;

(19) Non-exclusive and exclusive (in the ordinary course of business) grants of intellectual property, software and other technology licenses;

(20) judgment and attachment Liens not giving rise to an Event of Default pursuant to Section 8.01(f), (g) or (h) and notices of *lis pendens* and associated rights related to litigation being contested in good faith by appropriate proceedings and for which adequate reserves have been made;

(21) Liens arising out of conditional sale, title retention, consignment or similar arrangements for the sale of goods entered into in the ordinary course of business;

(22) Liens incurred to secure Cash Management Services and other "bank products" (including those described in Sections 7.01(j) and (w));

(23) Liens to secure any refinancing, refunding, extension, renewal or replacement (or successive refinancings, refundings, extensions, renewals or replacements) as a whole, or in part, of any Indebtedness secured by any Lien referred to in the foregoing clauses (7), (8), (9) or (11), or succeeding clauses (24) or (25) of this definition; provided, however, that (x) such new Lien shall be limited to all or part of the same property that secured (or, under the written arrangements under which the original Lien arose, could secure) the original Lien (plus any replacements, additions, accessions and improvements on such property), (y) the Indebtedness secured by such Lien at such time is not increased to any amount greater than the sum of (A) the outstanding principal amount or, if greater, committed amount of the Indebtedness described under clause (7), (8), (9), (11), (24) or (25) of this definition at the time the original Lien became a Permitted Lien, and (B) an amount necessary to pay any fees and expenses, including unpaid accrued interest and the aggregate amount of premiums (including tender premiums), and underwriting discounts, defeasance costs and fees and expenses in connection therewith, related to such refinancing, refunding, extension, renewal or replacement and (z)(A) any amounts Incurred under this clause (23) as a refinancing indebtedness of clause (24) of this definition hereunder shall be secured to the same extent, including with respect to any subordination provisions, and subject to Applicable Intercreditor Arrangements and (B) any amounts Incurred under this clause (23) as a refinancing indebtedness of clause (25) of this definition hereunder shall reduce the amount available under such clause (25);

(24) Liens securing Indebtedness or other obligations permitted to be Incurred pursuant to Section 7.01 or securing obligations that do not constitute Indebtedness if at the time of any Incurrence of such Indebtedness or other obligations and after giving pro forma effect thereto (i) for any such Indebtedness that is secured by the Collateral on a *pari passu* basis with the Liens securing the Obligations, the Consolidated First Lien Net Leverage Ratio would not exceed (x) 5.25 to 1.00 or (y) if incurred in connection with a permitted acquisition or other permitted Investment, the Consolidated First Lien Net Leverage Ratio does not increase immediately after giving effect to such permitted acquisition or other permitted Investment, or (ii) for any such Indebtedness or other obligations that is secured by the Collateral on a "junior" basis to the Liens securing the Obligations, the Consolidated Senior Secured Net Leverage Ratio would not (x) exceed 5.25 to 1.00 or (y) if incurred in connection with a permitted acquisition or other permitted Investment, the Consolidated Senior Secured Net Leverage Ratio does not increase immediately after giving effect to such permitted acquisition or other permitted Investment; provided that (x) such Indebtedness or other obligations shall be secured by the Collateral on a *pari passu* basis with the Liens securing the Obligations or on a "junior" basis to the Liens securing the Obligations (in each case pursuant to Applicable Intercreditor Arrangements), (y) solely for purposes of this clause (24), any Indebtedness secured pursuant to clause (i) of this clause (24) shall be deemed to constitute Consolidated First Lien Funded Indebtedness and (z) solely for purposes of this clause (24), any Indebtedness secured pursuant to clause (ii) of this clause (24) shall be deemed to constitute Consolidated Funded Senior Secured Indebtedness;

(25) other Liens (which Liens, if constituting consensual liens secured by the Collateral, shall rank pari passu or junior to the Liens securing the Obligations or be of the type described in clause (6) of this definition) securing obligations the principal amount of which does not exceed the greater of (x) $40,000,000 and (y) 40% of Consolidated EBITDA at any one time outstanding (after giving effect to clause (23) above as applicable);

(26) Liens on the Equity Interests or assets of a joint venture to secure Indebtedness of such joint venture Incurred pursuant to Section 7.01(u);

(27) Liens on equipment of any Borrower or any Guarantor granted in the ordinary course of business to such Borrower's or such Guarantor's client at which such equipment is located;

(28) [reserved];

(29) Liens on property or assets used to redeem, repay, defease or to satisfy and discharge Indebtedness; provided that such redemption, repayment, defeasance or satisfaction and discharge is not prohibited by this Agreement and that such deposit shall be deemed for purposes of Section 7.05 (to the extent applicable) to be a prepayment of such Indebtedness;

(30) 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 and exportation of goods in the ordinary course of business;

(31) Liens (i) of a collection bank arising under Section 4-210 of the Uniform Commercial Code, or any comparable or successor provision, on items in the course of collection; (ii) attaching to pooling, commodity trading accounts or other commodity brokerage accounts Incurred in the ordinary course of business; and (iii) in favor of banking or other financial institutions or entities, or electronic payment service providers, arising as a matter of law encumbering deposits (including the right of setoff) and which are within the general parameters customary in the banking or finance industry;

(32) Liens that are contractual rights of set-off (i) relating to the establishment of depository relations with banks or other Persons not given in connection with the issuance of Indebtedness; (ii) relating to pooled deposit or sweep accounts of any Borrower or any Guarantor to permit satisfaction of overdraft or similar obligations Incurred in the ordinary course of business of the Borrowers and the Guarantors; or (iii) relating to purchase orders and other agreements entered into with customers of any Borrower or any Guarantor in the ordinary course of business;

(33) any encumbrance or restriction (including put and call arrangements) with respect to Equity Interests of any joint venture or similar arrangement pursuant to any joint venture or similar agreement;

(34) Liens on insurance policies and the proceeds thereof securing the financing of the premiums with respect thereto;

(35) Liens on vehicles or equipment of any Borrower or any Guarantor granted in the ordinary course of business;

(36) Liens on assets of Non-Loan Parties securing Indebtedness permitted by Section 7.01 or obligations of Non-Loan Parties that do not constitute Indebtedness;

(37) Liens disclosed by the title insurance policies delivered on or subsequent to the Closing Date for any Mortgaged Property and any replacement, extension or renewal of any such Liens (so long as the Indebtedness and other obligations secured by such replacement, extension or renewal Liens are permitted by this Agreement); provided that such replacement, extension or renewal Liens do not cover any property other than the property that was subject to such Liens prior to such replacement, extension or renewal;

(38) Liens arising solely by virtue of any statutory or common law provision or customary business provision relating to banker's liens, rights of setoff or similar rights;

(39) (a) Liens solely on any cash earnest money deposits made by any Borrower or any Restricted Subsidiary in connection with any letter of intent or other agreement in respect of any Permitted Investment and (b) Liens on advances of cash or Cash Equivalents in favor of the seller of any property to be acquired in a Permitted Investment to be applied against the purchase price for such Investment;

(40) the prior rights of consignees and their lenders under consignment arrangements entered into in the ordinary course of business;

(41) Liens on securities that are the subject of repurchase agreements constituting Cash Equivalents under clause (4) of the definition thereof;

(42) Liens encumbering reasonable customary initial deposits and margin deposits and similar Liens attaching to commodity trading accounts or other brokerage accounts Incurred in the ordinary course of business and not for speculative purposes;

(43) rights reserved or vested in any Person by the terms of any lease, license, franchise, grant or permit held by the Borrowers or any of their Restricted Subsidiaries or by a statutory provision, to terminate any such lease, license, franchise, grant or permit, or to require annual or periodic payments as a condition to the continuance thereof;

(44) restrictive covenants affecting the use to which real property may be put; provided that such covenants are complied with;

(45) security given to a public utility or any municipality or governmental authority when required by such utility or authority in connection with the operations of that Person in the ordinary course of business;

(46) zoning by-laws and other land use restrictions, including, without limitation, site plan agreements, development agreements and contract zoning agreements;

(47) Liens securing obligations issued or incurred under (i) any Refinancing Notes and the Refinancing Notes Indentures related thereto, and (ii) any New Incremental Notes and the New Incremental Notes Indentures related thereto and, in each case, any Permitted Refinancings thereof (or successive Permitted Refinancings thereof); provided that such Liens on property constituting Collateral are subject to customary Applicable Intercreditor Arrangements;

(48) Liens on cash proceeds of Indebtedness (and related escrow accounts) in connection with the issuance of such Indebtedness into (and pending the release from) a customary escrow arrangement, to the extent such Indebtedness is incurred in compliance with Section 7.01; and

(49) Liens on the Collateral to secure Indebtedness Incurred pursuant to Section 7.01(aa).

For purposes of determining compliance with this definition, (x) a Lien need not be Incurred solely by reference to one category of Permitted Liens described in this definition but may be Incurred under any combination of such categories (including in part under one such category and in part under any other such category), (y) in the event that a Lien (or any portion thereof) meets the criteria of one or more of such categories of Permitted Liens, the Parent Borrower shall, in its sole discretion, classify or reclassify such Lien (or any portion thereof) in any manner that complies with this definition, and (z) in the event that a portion of the Indebtedness secured by a Lien could be classified as secured in part pursuant to clause (6) or (24) above (giving effect to the Incurrence of such portion of

such Indebtedness), the Parent Borrower, in its sole discretion, may classify such portion of such Indebtedness (and any obligations in respect thereof) as having been secured pursuant to clause (6) or (24) above prior to giving effect to any other Indebtedness Incurred at substantially the same time and thereafter the remainder of the Indebtedness as having been secured pursuant to one or more of the other clauses of this definition.

"Permitted Other Debt Conditions" means that such applicable Indebtedness (unless Incurred under the Inside Maturity Exception) does not mature or have scheduled amortization payments of principal and is not subject to mandatory redemption, repurchase, prepayment or sinking fund obligations (except (x) customary offers or obligations to repurchase, repay or redeem upon a change of control, asset sale, casualty or condemnation event or initial public offering, (y) maturity payments and customary mandatory prepayments for a customary bridge financing which, subject to customary conditions, provides for automatic conversion or exchange into Indebtedness that otherwise complies with the requirements of this definition or (z) "AHYDO" payments), in each case prior to the Latest Maturity Date at the time such Indebtedness is incurred.

"Permitted Parent" means (a) any direct or indirect parent of the Parent Borrower so long as a Permitted Holder pursuant to clause (a), (b), (c) or (d) of the definition thereof holds 50% or more of the Voting Stock of such direct or indirect parent of the Parent Borrower, (b) Holdings, so long as it is a Permitted Holder pursuant to clause (a), (b), (c) or (d) of the definition thereof, and (c) any Public Company (or Wholly Owned Subsidiary of such Public Company) to the extent and until such time as any Person or group (other than a Permitted Holder under clause (a), (b), (c) or (d) of the definition thereof) is deemed to be or become a beneficial owner of Voting Stock of such Public Company representing more than 50% of the total voting power of the Voting Stock of such Public Company.

"Permitted Refinancing" means, with respect to any Person, any modification, refinancing, refunding, renewal, replacement, exchange or extension of any Indebtedness of such Person; provided that (a) the principal amount (or accreted value, if applicable) thereof does not exceed the principal amount (or accreted value, if applicable) of the Indebtedness so modified, refinanced, refunded, renewed, replaced, exchanged or extended except by an amount equal to accrued and unpaid interest and a reasonable premium thereon plus other reasonable amounts paid, and fees and expenses reasonably incurred (including original issue discount and upfront fees), in connection with such modification, refinancing, refunding, renewal, replacement, exchange or extension and by an amount equal to any existing commitments unutilized thereunder; (b) other than with respect to Indebtedness under Section 7.01(d) or Incurred pursuant to the Inside Maturity Exception, such modification, refinancing, refunding, renewal, replacement, exchange or extension has a final maturity date equal to or later than the final maturity date of, and has a Weighted Average Life to Maturity equal to or greater than the Weighted Average Life to Maturity of, the Indebtedness being modified, refinanced, refunded, renewed, replaced, exchanged or extended; (c) if the Indebtedness being modified, refinanced, refunded, renewed, replaced, exchanged or extended is subordinated in right of payment to the Obligations, such modification, refinancing, refunding, renewal, replacement, exchange or extension is subordinated in right of payment to the Obligations on terms, taken as a whole, as favorable in all material respects to the Lenders (including, if applicable, as to Collateral) as those contained in the documentation governing the Indebtedness being modified, refinanced, refunded, renewed, replaced, exchanged or extended or otherwise acceptable to the Administrative Agent; (d) if the Indebtedness being modified, refinanced, refunded, renewed, replaced, exchanged or extended is (i) unsecured, such modification, refinancing, refunding, renewal, replacement, exchange or extension is unsecured unless such Indebtedness can be secured by any Permitted Lien at such time, or (ii) if secured by Liens on the Collateral, such modification, refinancing, refunding, replacement, renewal or extension is secured to the same extent, including with respect to any subordination provisions, and subject to Applicable Intercreditor Arrangements unless such Indebtedness can be secured by any Permitted Lien at such time; (e) the terms and conditions (including, if applicable, as to collateral) of any such modified, refinanced, refunded, renewed, replaced, exchanged or extended (other than to the extent permitted by any other clause of this definition or with respect to interest rate, optional prepayment premiums and optional redemption provisions) Indebtedness are, either (i) substantially identical to or not materially more favorable to the investors providing such Permitted Refinancing, taken as a whole, than the terms and conditions of the Indebtedness being modified, refinanced, refunded, renewed, replaced, exchanged or extended, or (ii) when taken as a whole (other than interest rate, prepayment premiums and redemption premiums), not more restrictive to the Borrowers and the Restricted Subsidiaries than those set forth in this Agreement or are customary for similar indebtedness in light of current market conditions (provided that a certificate of a Responsible Officer of the Parent Borrower delivered to the Administrative Agent in good faith at least five Business Days prior to the incurrence of such Indebtedness, together with a reasonably detailed description of the material terms and conditions of such Indebtedness or drafts of the documentation relating thereto, stating that the Parent Borrower has determined in good

faith that such terms and conditions satisfy the requirement set out in this clause (e), shall be conclusive evidence that such terms and conditions satisfy such requirement unless the Administrative Agent provides notice to the Parent Borrower of its objection during such five Business Day period (including a reasonable description of the basis upon which it objects)), in each case, except for terms and conditions only applicable to periods after the Latest Maturity Date; and (f) such modification, refinancing, refunding, renewal, replacement, exchange or extension is incurred by the Person who is or would have been permitted to be the obligor or guarantor (or any successor thereto) on the Indebtedness being modified, refinanced, refunded, renewed, replaced or extended (it being understood that the roles of such obligors as a borrower or a guarantor with respect to such obligations may be interchanged).

"Permitted Transferee" means (a) in the case of the Sponsor, (i) any managing director, general partner, limited partner, director, officer or employee of the Sponsor (each, a "Sponsor Associate"), (ii) the heirs, executors, administrators, testamentary trustees, legatees or beneficiaries of any Sponsor Associate and (iii) any trust, the beneficiaries of which, or a corporation or partnership, the stockholders or partners of which, include only a Sponsor Associate, his or her spouse or former spouse, parents, siblings, members of his or her immediate family (including adopted children and step-children) and/or direct lineal descendants; and (b) in the case of any other Permitted Holder, (i) his or her executor, administrator, testamentary trustee, legatee or beneficiaries, (ii) his or her spouse or former spouse, parents, siblings, members of his or her immediate family (including adopted children and step-children) and/or direct lineal descendants or (iii) a trust, the beneficiaries of which, or a corporation or partnership, the stockholders or partners of which, include only a Permitted Holders and his or her spouse or former spouse, parents, siblings, members of his or her immediate family (including adopted children) and/or direct lineal descendants.

"Person" means any natural person, corporation, limited liability company, trust, joint venture, association, company, partnership, Governmental Authority, unincorporated organization or other entity.

"Plan" means any "employee benefit plan" (other than a Multiemployer Plan) within the meaning of Section 3(3) of ERISA that is maintained or is contributed to by a Loan Party or any ERISA Affiliate and is subject to Title IV of ERISA or the Pension Funding Rules.

"Platform" has the meaning specified in Section 6.02.

"Pledged Debt" means "Pledged Debt" as defined in the Security Agreement.

"Pledged Interests" means "Pledged Interests" as defined in the Security Agreement.

"Pounds Sterling" and "£" means freely transferable lawful money of the United Kingdom (expressed in Pounds Sterling).

"Preferred Stock" means any Equity Interest with preferential right of payment of dividends or upon liquidation, dissolution or winding up.

"Prepayment Amount" has the meaning specified in Section 2.05(b)(vi).

"Prepayment-Based Incremental Facility" has the meaning specified in Section 2.14(a).

"Prepayment Date" has the meaning specified in Section 2.05(b)(vi).

"Primary Disqualified Institution" has the meaning specified in the definition of "Disqualified Institution."

"Prime Rate" means the rate of interest last quoted by *The Wall Street Journal* as the "Prime Rate" in the U.S. 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 determined by the Administrative Agent) or any similar release by the Federal Reserve Board (as determined by the Administrative Agent). Each change in the Prime Rate shall be effective from and including the date such change is publicly announced or quoted as being effective.

"Pro Forma Basis," "Pro Forma Compliance" and "Pro Forma Effect" mean, with respect to the calculation of any test, financial ratio, basket or covenant under this Agreement, including the Consolidated First Lien Net Leverage Ratio, the Consolidated Total Net Leverage Ratio, Consolidated Senior Secured Net Leverage Ratio and the Cash Interest Coverage Ratio and the calculation of Consolidated Net Tangible Assets, of any Person and its Subsidiaries, as of any date, that pro forma effect will be given to the Transactions, any acquisition, merger, amalgamation, consolidation, Investment, any issuance, Incurrence, assumption or repayment or redemption of Indebtedness (including Indebtedness issued, Incurred or assumed or repaid or redeemed as a result of, or to finance, any relevant transaction and for which any such test, financial ratio, basket or covenant is being calculated), any issuance or redemption of Preferred Stock or Disqualified Stock, all sales, transfers and other dispositions or discontinuance of any Subsidiary, line of business, division, segment or operating unit, any operational change (including the entry into any material contract or arrangement) or any designation of a Restricted Subsidiary to an Unrestricted Subsidiary or of an Unrestricted Subsidiary to a Restricted Subsidiary, in each case that have occurred during the four consecutive fiscal quarter period of such Person being used to calculate such test, financial ratio, basket or covenant (the "Reference Period"), or subsequent to the end of the Reference Period but prior to such date or prior to or substantially simultaneously with the event for which a determination under this definition is made (including any such event occurring at a Person who became a Restricted Subsidiary of the subject Person or was merged, amalgamated or consolidated with or into the subject Person or any other Restricted Subsidiary of the subject Person after the commencement of the Reference Period), as if each such event occurred on the first day of the Reference Period; provided that (x) pro forma effect will be given to reasonably identifiable and quantifiable pro forma cost savings or expense reductions related to operational efficiencies (including the entry into any material contract or arrangement), strategic initiatives or purchasing improvements and other cost savings, improvements or synergies, in each case, that have been realized, or are reasonably expected to be realized, by such Person and its Restricted Subsidiaries based upon actions expected to be taken within 24 months after the consummation of the action as if such cost savings, expense reductions, improvements and synergies occurred (or were realized) on the first day of the Reference Period and (y) no amount shall be added back pursuant to this definition to the extent duplicative of amounts that are otherwise included in computing Consolidated EBITDA for such Reference Period.

For purposes of making any computation referred to above:

(1) if any Indebtedness bears a floating rate of interest and is being given pro forma effect, the interest on such Indebtedness shall be calculated as if the rate in effect on the date for which a determination under this definition is made had been the applicable rate for the entire period (taking into account any Swap Contracts applicable to such Indebtedness if such Swap Contracts has a remaining term in excess of 12 months);

(2) interest on a Capitalized Lease Obligation shall be deemed to accrue at an interest rate reasonably determined by a responsible financial or accounting officer, in his or her capacity as such and not in his or her personal capacity, of the Borrowers or a direct or indirect parent of the Borrowers to be the rate of interest implicit in such Capitalized Lease Obligation in accordance with GAAP;

(3) interest on 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 deemed to have been based upon the rate actually chosen, or, if none, then based upon such optional rate chosen as the Parent Borrower may designate;

(4) interest on any Indebtedness under a revolving credit facility or a Qualified Receivables Financing computed on a pro forma basis shall be computed based upon the average daily balance of such Indebtedness during the applicable period; and

(5) to the extent not already covered above, any such calculation may include adjustments calculated in accordance with Regulation S-X under the Securities Act.

Any pro forma calculation may include, without limitation, (1) adjustments calculated in accordance with Regulation S-X under the Securities Act and (2) adjustments calculated to give effect to any Pro Forma Cost Savings, to the extent such adjustments, without duplication, continue to be applicable to the Reference Period; provided that any such adjustments that consist of reductions in costs and other operating improvements or synergies shall be calculated in accordance with, and satisfy the requirements specified in, the definition of "Pro Forma Cost Savings."

"Pro Forma Cost Savings" means, without duplication of any amounts referenced in the definition of "Pro Forma Basis," an amount equal to the amount of cost savings, operating expense reductions, operating improvements (including the entry into any material contract or arrangement) and synergies, in each case, projected in good faith to be realized (calculated on a pro forma basis as though such items had been realized on the first day of such period) as a result of actions taken or expected to be taken by any Borrower (or any successor thereto) or any Restricted Subsidiary, net of the amount of actual benefits realized or expected to be realized during such period that are otherwise included in the calculation of Consolidated EBITDA from such actions; provided that such cost savings, operating expense reductions, operating improvements and synergies are factually supportable and reasonably identifiable (as determined in good faith by a responsible financial or accounting officer, in his or her capacity as such and not in his or her personal capacity, of the Parent Borrower (or any successor thereto) or any direct or indirect parent of the Parent Borrower) and are reasonably anticipated to result from actions taken or expected to be taken within 24 months after the date of which the calculation of Consolidated EBITDA is made; provided, further, that no cost savings, operating expense reductions, operating improvements and synergies shall be added pursuant to this definition to the extent duplicative of any expenses or charges otherwise added to Consolidated Net Income or Consolidated EBITDA, whether through a pro forma adjustment, add back, exclusion or otherwise, for such period.

"Pro Rata Share" means, with respect to each Lender and any Facility or all the Facilities or any Tranche or all the Tranches (as the case may be) at any time, a fraction (expressed as a percentage, carried out to the ninth decimal place, and subject to adjustment as provided in Section 2.17), the numerator of which is the amount of the Commitments of such Lender under the applicable Facility or the Facilities or Tranche or Tranches (and, in the case of any Term Loan Tranche after the applicable borrowing date and without duplication, the outstanding principal amount of Term Loans under such Tranche, of such Lender, at such time) at such time and the denominator of which is the amount of the Aggregate Commitments under the applicable Facility or the Facilities or Tranche or Tranches at such time (and, in the case of any Term Loan Tranche and without duplication, the outstanding principal amount of Term Loans under such Tranche, at such time); provided that if the commitment of each Lender to make Loans and the obligation of each L/C Issuer to make L/C Credit Extensions have been terminated pursuant to Section 8.02, then the Pro Rata Share of each Lender shall be determined based on the Pro Rata Share of such Lender immediately prior to such termination and after giving effect to any subsequent assignments made pursuant to the terms hereof. The initial Pro Rata Share of each Lender is set forth opposite the name of such Lender on Schedule 2.01 or in the Assignment and Assumption pursuant to which such Lender became a party hereto, as applicable.

"PTE" means a prohibited transaction class exemption issued by the U.S. Department of Labor, as any such exemption may be amended from time to time.

"Public Company" means any Person with a class or series of Voting Stock that is traded on a stock exchange or in theover-the-counter market.

"Public Lender" has the meaning specified in Section 6.02.

"QFC Credit Support" has the meaning specified in Section 10.26.

"Qualified Holding Company Indebtedness" means Indebtedness of Holdings (A) that is not subject to any Guarantee by any Subsidiary of Holdings (other than a Subsidiary as contemplated under clause (i) of the proviso in Section 7.09 of this Agreement), (B) that has no scheduled amortization or scheduled payments of principal and is not subject to mandatory redemption, repurchase, prepayment or sinking fund obligation (it being understood that such Indebtedness may have mandatory prepayment, repurchase or redemption provisions satisfying the requirements of clause (C) below), (C) that has mandatory prepayment, repurchase or redemption, covenant, default and remedy provisions customary for senior notes (or no more restrictive than is customary) of an issuer that is the parent of a borrower under senior secured credit facilities, and in any event, with respect to covenant, default and remedy provisions, no more restrictive (taken as a whole) than those set forth in this Agreement (other than provisions customary for senior notes of a holding company, including (x) customary assets sale, change of control provisions and customary acceleration rights after an event of default and (y) customary "AHYDO" payments) and (D) if such Indebtedness is secured, it shall only be secured by assets of any Parent Holding Company (other than Holdings) and

any Subsidiary of Holdings that is not prohibited from guaranteeing such Indebtedness as provided in clause (A) of this definition; provided that Holdings shall have delivered a certificate of a Responsible Officer to the Administrative Agent at least five Business Days (or such shorter period as may be agreed by the Administrative Agent) prior to the incurrence of such Indebtedness, together with a reasonably detailed description of the material terms and conditions of such Indebtedness or drafts of the documentation relating thereto, stating that Holdings has reasonably determined in good faith that such terms and conditions satisfy the foregoing requirement (and such certificate shall be conclusive evidence that such terms and conditions satisfy the foregoing requirement unless the Administrative Agent notifies Holdings within such applicable period that it disagrees with such determination (including a reasonably detailed description of the basis upon which it disagrees)); provided, further, that any such Indebtedness shall constitute Qualified Holding Company Indebtedness only if immediately after giving effect to the issuance or incurrence thereof and the use of proceeds thereof, no Event of Default shall have occurred and be continuing.

"Qualified IPO" means the issuance by Holdings or any Parent Holding Company 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) or through merger with a special purpose acquisition company resulting in such Capital Stock being listed on a nationally-recognized stock exchange in the applicable jurisdiction.

"Qualified Receivables Factoring" means any Factoring Transaction that meets the following conditions:

(1) such Factoring Transaction is non-recourse to, and does not obligate, any Borrower or any Restricted Subsidiary, or their respective properties or assets (other than Receivables Assets) in any way other than pursuant to Standard Securitization Undertakings,

(2) all sales, conveyances, assignments and/or contributions of Receivables Assets by any Borrower or any Restricted Subsidiary are made at Fair Market Value (as determined in good faith by the Borrower), and

(3) such Factoring Transaction (including financing terms, covenants, termination events (if any) and other provisions thereof) is on market terms at the time such Factoring Transaction is first entered into (as determined in good faith by the Parent Borrower) and may include Standard Securitization Undertakings.

The grant of a security interest in any accounts receivable of the Borrowers or any of their Restricted Subsidiaries (other than a Receivables Subsidiary) to secure this Agreement shall not be deemed a Qualified Receivables Factoring.

"Qualified Receivables Financing" means any Receivables Financing that meets the following conditions:

(1) the Board of Directors of the Parent Borrower, Holdings or any Parent Holding Company shall have determined in good faith that such Qualified Receivables Financing (including financing terms, covenants, termination events and other provisions) is in the aggregate economically fair and reasonable to the Borrowers and their Restricted Subsidiaries,

(2) all sales, conveyances, assignments and/or contributions of Receivables Assets by any Borrower or any Restricted Subsidiary to any Receivables Subsidiary and by any Receivables Subsidiary to any other Person are made at Fair Market Value (as determined in good faith by the Parent Borrower), and

(3) the financing terms, covenants, termination events and other provisions thereof shall be market terms at the time such Receivables Financing is first entered into (as determined in good faith by the Parent Borrower) and may include Standard Securitization Undertakings.

The grant of a security interest in any accounts receivable of the Borrowers or any of their Restricted Subsidiaries (other than a Receivables Subsidiary) to secure this Agreement shall not be deemed a Qualified Receivables Financing.

"Qualifying Bids" has the meaning specified in the definition of "Dutch Auction."

"Ratio-Based Incremental Facility" has the meaning specified in the Section 2.14(a).

"Ratio Debt" has the meaning specified in the first paragraph of Section 7.01.

"Receivables Assets" means accounts receivable (whether now existing or arising in the future) of the Borrowers or any of their Subsidiaries, and any assets related thereto including, without limitation, all collateral securing such accounts receivable, all contracts and all guarantees or other obligations in respect of such accounts receivable, proceeds of such accounts receivable and other assets which are customarily transferred or in respect of which security interests are customarily granted in connection with non-recourse, asset securitization or factoring transactions involving accounts receivable and any Swap Contracts entered into by any Borrower or any such Subsidiary in connection with such accounts receivable.

"Receivables Fees" means distributions or payments made directly or by means of discounts with respect to any participation interest issued or sold in connection with, and other fees paid to a Person that is not a Restricted Subsidiary in connection with, any Receivables Financing.

"Receivables Financing" means any transaction or series of transactions that may be entered into by any Borrower or any Restricted Subsidiary pursuant to which such Borrower or any such Restricted Subsidiary may sell, contribute, convey, assign or otherwise transfer Receivables Assets to (a) a Receivables Subsidiary (in the case of a transfer by the Borrowers or any of their Subsidiaries), and (b) any other Person (in the case of a transfer by a Receivables Subsidiary), which in either case, may include a backup or precautionary grant of security interest in such Receivables Assets so sold, contributed, conveyed, assigned or otherwise transferred.

"Receivables Repurchase Obligation" means any obligation of a seller of receivables in a Qualified Receivables Factoring or Qualified Receivables Financing to repurchase receivables arising as a result of a breach of a representation, warranty or covenant or otherwise, including as a result of a receivable or portion thereof becoming subject to any asserted defense, dispute, off-set or counterclaim of any kind as a result of any action taken by, any failure to take action by or any other event relating to the seller, in each case, that are customary (as determined in good faith by the Parent Borrower) for non-recourse receivables financings.

"Receivables Subsidiary" means a Wholly Owned Restricted Subsidiary of the Parent Borrower (or another Person formed for the purposes of engaging in a Qualified Receivables Financing with the Parent Borrower in which the Parent Borrower or any Subsidiary of the Parent Borrower or a direct or indirect parent of the Parent Borrower makes an Investment and to which the Parent Borrower or any Subsidiary of the Parent Borrower or a direct or indirect parent of the Parent Borrower sells, conveys, assigns or otherwise transfers Receivables Assets (which may include a backup or precautionary grant of security interest in such Receivables Assets sold, conveyed, assigned or otherwise transferred or purported to be so sold, conveyed, assigned or otherwise transferred)) which engages in no activities other than in connection with the purchase, acquisition or financing of Receivables Assets of the Parent Borrower and its Subsidiaries or a direct or indirect parent of the Parent Borrower, all proceeds thereof and all rights (contractual or other), collateral and other assets relating thereto, and any business or activities incidental or related to such business, and which is designated by the Board of Directors of the Parent Borrower or any Parent Holding Company (as provided below) as a Receivables Subsidiary and:

(1) no portion of the Indebtedness or any other obligations (contingent or otherwise) of which (i) is guaranteed by the Parent Borrower or any Restricted Subsidiary (other than a Receivables Subsidiary, excluding guarantees of obligations (other than the principal of, and interest on, Indebtedness) pursuant to Standard Securitization Undertakings), (ii) is recourse to or obligates the Parent Borrower or any Restricted Subsidiary (other than a Receivables Subsidiary) in any way other than pursuant to Standard Securitization Undertakings, or (iii) subjects any property or asset of the Parent Borrower or any Restricted Subsidiary (other than a Receivables Subsidiary), directly or indirectly, contingently or otherwise, to the satisfaction thereof, other than pursuant to Standard Securitization Undertakings,

(2) with which neither the Parent Borrower nor any Restricted Subsidiary (other than a Receivables Subsidiary) has any material contract, agreement, arrangement or understanding other than on terms which the Parent Borrower reasonably believes to be no less favorable to the Parent Borrower or such Subsidiary than those that might be obtained at the time from Persons that are not Affiliates of the Parent Borrower, and

(3) to which neither the Parent Borrower nor any other Subsidiary of the Parent Borrower has any obligation to maintain or preserve such entity's financial condition or cause such entity to achieve certain levels of operating results.

Any such designation by the Board of Directors of the Parent Borrower or any Parent Holding Company shall be evidenced to the Administrative Agent by filing with the Administrative Agent a certified copy of the resolution of the Board of Directors of the Parent Borrower or such Parent Holding Company giving effect to such designation and an officer's certificate certifying that such designation complied with the foregoing conditions.

"Recipient" means the Administrative Agent, any Lender and any L/C Issuer.

"Reference Period" has the meaning given to such term in the definition of "Pro Forma Basis."

"Reference Time" with respect to any setting of the then-current Benchmark means (1) if such Benchmark is the Screen Rate, 11:00 a.m. (London time) on the day that is two London banking days preceding the date of such setting, and (2) if such Benchmark is not the Screen Rate, the time determined by the Administrative Agent in its reasonable discretion.

"Refinancing" has the meaning given to such term in the definition of "Transactions."

"Refinancing Amendment" means an amendment to this Agreement, in form and substance reasonably satisfactory to the Administrative Agent, among the Borrowers, the Administrative Agent and the Lenders providing Specified Refinancing Debt, effecting the incurrence of such Specified Refinancing Debt in accordance with Section 2.18.

"Refinancing Indebtedness" has the meaning specified in Section 7.01.

"Refinancing Notes" means one or more series of senior unsecured notes, or senior secured notes secured by the Collateral on a*pari passu* basis with the Liens securing the Obligations or senior secured notes secured by the Collateral on a "junior" basis to the Liens securing the Obligations, in each case issued in respect of a refinancing of outstanding Indebtedness of the Borrowers under any one or more Term Loan Tranches; provided that, (a) if such Refinancing Notes shall be secured, then (i) such Refinancing Notes shall only be secured by a security interest in the Collateral that secured the Term Loan Tranche being refinanced, and (ii) such Refinancing Notes shall be issued subject to Applicable Intercreditor Arrangements; (b) other than Refinancing Notes incurred under the Inside Maturity Exception, no Refinancing Notes shall (i) mature prior to the Latest Maturity Date with respect to Term Loans then in effect immediately after giving effect to such refinancing or (ii) be subject to any amortization prior to the final maturity thereof, or be subject to any mandatory redemption or prepayment provisions or rights (except (x) customary assets sale, casualty events or similar event, change of control provisions, special mandatory redemptions in connection with customary escrow arrangements and customary acceleration rights after an event of default and (y) customary "AHYDO" payments); (c) the covenants, events of default, guarantees, collateral and other terms of such Refinancing Notes are customary for similar debt securities in light of then-prevailing market conditions at the time of issuance (it being understood that no Refinancing Notes shall include any financial maintenance covenants (including indirectly by way of a cross-default to this Agreement), but that customary cross-acceleration provisions may be included and that any negative covenants with respect to indebtedness, investments, liens or restricted payments shall be incurrence-based) and in any event are not materially more favorable (taken as a whole) to the investors providing such Refinancing Notes, taken as a whole, than the terms and conditions of the Indebtedness being refinanced by such Refinancing Notes (excluding pricing and optional prepayment or redemption terms), except for covenants or other provisions (x) applicable only to periods after the Latest Maturity Date then in effect immediately after giving effect to such refinancing or (y) reasonably satisfactory to the Administrative Agent or as are, in

consultation with the Administrative Agent, incorporated into this Agreement (or any other applicable Loan Document) for the benefit of all existing Lenders (to the extent applicable to such Lender) without further amendment requirements (provided that a certificate of a Responsible Officer of the Parent Borrower delivered to the Administrative Agent in good faith at least five Business Days (or such shorter period as may be agreed by the Administrative Agent) prior to the incurrence of such Refinancing Notes, together with a reasonably detailed description of the material terms and conditions of such Refinancing Notes or drafts of the documentation relating thereto, stating that the Parent Borrower has determined in good faith that such terms and conditions satisfy the requirement set forth in this clause (c), shall be conclusive evidence that such terms and conditions satisfy such requirement unless the Administrative Agent provides notice to the Parent Borrower of its objection during such five Business Day period (or shorter) (including a reasonable description of the basis upon which it objects)); (d) such Refinancing Notes may not have obligors or Liens that are more extensive than those which applied to the Indebtedness being refinanced (it being understood that the roles of such obligors as a borrower or a guarantor with respect to such obligations may be interchanged); and (e) the Net Cash Proceeds of such Refinancing Notes shall be applied, substantially concurrently with the incurrence thereof, to the pro rata prepayment of outstanding Term Loans under the applicable Term Loan Tranche being so refinanced and the payment of fees, expenses and premiums, if any, payable in connection therewith.

"Refinancing Notes Indentures" means, collectively, the indentures or other similar agreements pursuant to which any Refinancing Notes are issued, together with all instruments and other agreements in connection therewith, as amended, supplemented or otherwise modified from time to time in accordance with the terms thereof, but only to the extent permitted under the terms of the Loan Documents.

"Refunding Capital Stock" has the meaning specified in Section 7.05

"Register" has the meaning specified in Section 10.07(c).

"Regulated Entity" means (a) any swap dealer registered with the U.S. Commodity Futures Trading Commission or security-based swap dealer registered with the U.S. Securities and Exchange Commission, as applicable; or (b) any commercial bank with a consolidated combined capital and surplus of at least $5,000,000,000 that is (i) a U.S. depository institution the deposits of which are insured by the Federal Deposit Insurance Corporation; (ii) a corporation organized under section 25A of the U.S. Federal Reserve Act of 1913; (iii) a branch, agency or commercial lending company of a foreign bank operating pursuant to approval by and under the supervision of the Board of Directors of the Federal Deposit Insurance Corporation under 12 C.F.R. part 211; (iv) a non-U.S. branch of a foreign bank managed and controlled by a U.S. branch referred to in clause (iii); or (v) any other U.S. or non-U.S. depository institution or any branch, agency or similar office thereof supervised by a bank regulatory authority in any jurisdiction.

"Regulation S-X" means Regulation S-X under the Securities Act.

"Related Business Assets" means assets (other than cash or Cash Equivalents) used or useful in a Similar Business;provided that any assets received by the Borrowers or a Restricted Subsidiary in exchange for assets transferred by the Borrowers or a Restricted Subsidiary will not be deemed to be Related Business Assets if they consist of securities of a Person, unless such Person is, or upon receipt of the securities of such Person, such Person would become, a Restricted Subsidiary.

"Related Parties" means, with respect to any Person, such Person's Affiliates and the partners, members, directors, managers, officers, employees, agents, attorneys-in-fact, trustees and advisors of such Person and of such Person's Affiliates.

"Release" means any release, spill, emission, leaking, dumping, injection, pouring, deposit, disposal, discharge, dispersal, migration or leaching of Hazardous Materials into or through the Environment.

"Release/Subordination Event" has the meaning specified in Section 9.11(b).

"Relevant Governmental Body" means the Federal Reserve Board and/or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Federal Reserve Board and/or the Federal Reserve Bank of New York or any successor thereto.

"Relevant Transaction" has the meaning specified in Section 2.05(b)(ii).

"Replaceable Lender" has the meaning specified in Section 3.08(a).

"Replacement Assets" means (1) substantially all the assets of a Person primarily engaged in a Similar Business or (2) a majority of the Voting Stock of any Person primarily engaged in a Similar Business that will become, on the date of acquisition thereof, a Restricted Subsidiary.

"Reply Amount" has the meaning specified in the definition of "Dutch Auction."

"Reply Discount" has the meaning specified in the definition of "Dutch Auction."

"Reportable Event" means any of the events set forth in Section 4043(c) of ERISA or the regulations issued thereunder, other than events for which the 30-day notice period has been waived.

"Repricing Event" means (i) any prepayment or repayment of the Initial Term Loans, in whole or in part, with the proceeds of, or conversion of any portion of the Initial Term Loans into, any new or replacement tranche of syndicated term loans under credit facilities incurred for the primary purpose of repaying, refinancing, or replacing Initial Term Loans with loans bearing interest with an All-in Yield less than the All-in Yield applicable to such portion of the Initial Term Loans (as such comparative yields are determined in the reasonable judgment of the Administrative Agent consistent with generally accepted financial practices) and (ii) any amendment to the Term Facility which reduces the All-in Yield applicable to the Initial Term Loans;provided that a Repricing Event shall not include any event described above that is not consummated for the primary purpose of lowering the effective interest cost or weighted average yield applicable to the Initial Term Loans, including, without limitation, in the context of a transaction involving an initial public offering, a Change of Control or a Transformative Event.

"Request for Credit Extension" means (a) with respect to a Borrowing, conversion or continuation of Loans, a Committed Loan Notice, and (b) with respect to an L/C Credit Extension, a Letter of Credit Application.

"Required Lenders" means, as of any date of determination, Lenders having more than 50% of the sum of the (a) Total Outstandings (with the aggregate amount of each Lender's risk participation and funded participation in L/C Obligations being deemed "held" by such Lender for purposes of this definition), (b) aggregate unused Term Commitments and (c) aggregate unused Revolving Credit Commitments; provided that the unused Term Commitments of, unused Revolving Credit Commitment of, and the portion of the Total Outstandings held or deemed held by (x) any Defaulting Lender shall be excluded for purposes of making a determination of Required Lenders and (y) any Affiliate Lenders (other than Debt Fund Affiliates) shall be deemed to have voted in the same proportion as Lenders that are not Affiliate Lenders vote on such matter; provided that, for purposes of this definition, the outstanding principal amount of Alternative Currency Loans at any time shall be determined using the Dollar Equivalent thereof at the most recent Revaluation Date.

"Required Revolving Lenders" means, as of any date of determination, Revolving Credit Lenders holding more than 50% of the sum of (a) Total Revolving Credit Outstandings (with the aggregate amount of each Revolving Credit Lender's risk participation and funded participation in L/C Obligations being deemed "held" by such Revolving Credit Lender for purposes of this definition) and (b) aggregate unused Revolving Credit Commitments; provided that the unused Revolving Credit Commitment of, and the portion of the Total Revolving Credit Outstandings held or deemed held by, any Defaulting Lender shall be excluded for purposes of making a determination of Required Revolving Lenders; provided that, for purposes of this definition, the outstanding principal amount of Alternative Currency Loans at any time shall be determined using the Dollar Equivalent thereof at the most recent Revaluation Date.

"Resolution Authority" means an EEA Resolution Authority or, with respect to any UK Financial Institution, a UK Resolution Authority.

"Responsible Officer" means the chief executive officer, representative, director, manager, president, vice president, executive vice president, chief financial officer, treasurer or assistant treasurer, secretary or assistant secretary, an authorized signatory, an attorney-in-fact (to the extent empowered by the board of directors/managers of Holdings or the Parent Borrower), or other similar officer of a Loan Party. Any document delivered hereunder that is signed by a Responsible Officer of a 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.

"Restricted Investment" means an Investment other than a Permitted Investment. If any Investment (or a portion thereof) would be permitted at any time, whether at the time of declaration or payment, purchase, redemption, defeasance or other acquisition or retirement, or at the time of the making thereof, or subsequently at a later time, pursuant to one or more of the exceptions contained in the definition of "Permitted Investments," the Parent Borrower may divide, classify and/or reclassify such Investment (or a portion thereof) in any manner that complies with this definition and may later divide, classify and/or reclassify any such Investment so long as the Investment (as so divided, classified and/or reclassified) would be permitted to be made in reliance on the applicable exception as of the date of such reclassification.

"Restricted Payment" has the meaning specified in Section 7.05.

"Restricted Subsidiary" means any Subsidiary of Parent Borrower that is not an Unrestricted Subsidiary.

"Retained Asset Sale Proceeds" has the meaning specified in Section 2.05(b)(ii).

"Retained Excess Cash Flow Amount" means, at any date of determination, an amount, no less than zero and determined on a cumulative basis, that is equal to the aggregate cumulative sum of Excess Cash Flow that is not required to be applied to make a payment under Section 2.05(b)(i) for each completed fiscal year commencing with the first full fiscal year after the Closing Date.

"Retired Capital Stock" has the meaning specified in Section 7.05.

"Return Bid" has the meaning specified in the definition of "Dutch Auction."

"Revaluation Date" means (a) with respect to any Alternative Currency Loan, each of the following: (i) each date of a Eurocurrency Rate Borrowing of a Revolving Credit Loan denominated in an Alternative Currency, (ii) each date of a continuation of a Eurocurrency Rate Revolving Credit Loan denominated in an Alternative Currency pursuant to Section 2.02, and (iii) such additional dates as the Administrative Agent shall determine or the Majority Lenders under the Revolving Credit Facility shall require; and (b) with respect to any Letter of Credit denominated in an Alternative Currency, each of the following: (i) each date of issuance of any such Letter of Credit, (ii) each date of an amendment of any such Letter of Credit having the effect of increasing the amount thereof, (iii) each date of any payment by the L/C Issuer under any such Letter of Credit, and (iv) such additional dates as the Administrative Agent or the L/C Issuer shall determine or the Majority Lenders under the Revolving Credit Facility shall require.

"Revolving Commitment Increase Lender" has the meaning specified in Section 2.14(e).

"Revolving Credit Borrowing" means a borrowing under the Revolving Credit Facility consisting of simultaneous Revolving Credit Loans of the same Type and, in the case of Eurocurrency Rate Loans, having the same Interest Period made by each of the Revolving Credit Lenders pursuant to Section 2.01(b).

"Revolving Credit Commitments" means, as to any Revolving Credit Lender, its obligation to (a) make Revolving Credit Loans to the Borrowers pursuant to Section 2.01(b), and (b) purchase participations in L/C Obligations, in an aggregate principal amount not to exceed the amount set forth under the heading "Revolving Credit Commitment" opposite such Lender's name on Schedule 2.01, or in the Assignment and Assumption pursuant to

which such Lender became a party hereto, as applicable, as the same may be adjusted from time to time in accordance with this Agreement. The aggregate Revolving Credit Commitments shall be $180,000,000 on the Closing Date, as such amount may be adjusted from time to time in accordance with the terms of this Agreement.

"Revolving Credit Commitment Increase" has the meaning specified in Section 2.14(a).

"Revolving Credit Facility" means, at any time, the aggregate amount of the Revolving Credit Lenders' Revolving Credit Commitments at such time.

"Revolving Credit Lender" means, at any time, any Lender that has a Revolving Credit Commitment at such time (and after the termination of all Revolving Credit Commitments, any Lender that holds any Outstanding Amount in respect of Revolving Credit Loans and/or L/C Obligations).

"Revolving Credit Loan" has the meaning specified in Section 2.01(b).

"Revolving Credit Note" means a promissory note of the Borrowers payable to any Revolving Credit Lender or its registered assigns, in substantially the form of Exhibit C-2 hereto, evidencing the aggregate indebtedness of the Borrowers to such Revolving Credit Lender resulting from the Revolving Credit Loans made by such Revolving Credit Lender.

"Revolving Tranche" means (a) the Revolving Credit Facility and (b) any Specified Refinancing Debt constituting revolving credit facility commitments, in each case, including the extensions of credit made thereunder. Additional Revolving Tranches may be added after the Closing Date as provided in Section 2.14, *i.e.*, New Revolving Commitments.

"Sale/Leaseback Transaction" means an arrangement relating to real property now owned or hereafter acquired by any Borrower or a Restricted Subsidiary whereby any Borrower or a Restricted Subsidiary transfers such property to a Person and such Borrower or such Restricted Subsidiary leases it from such Person, other than leases between a Borrower and a Restricted Subsidiary or between Restricted Subsidiaries.

"Sanctions Laws and Regulations" means economic or financial sanctions or trade embargoes imposed, administered or enforced from time to time by (a) the U.S. government, including those administered by the U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC") or the U.S. Department of State, or (b) the United Nations Security Council, the European Union, any European Union member state or Her Majesty's Treasury of the United Kingdom or any other governmental authority with jurisdiction over Holdings, the Borrowers or any of their respective Subsidiaries.

"S&P" means Standard & Poor's Financial Services LLC, and any successor thereto.

"Screen Rate" means, for any day and time, with respect to any Eurocurrency Rate Borrowing in Dollars and for any Interest Period, the London interbank offered rate as administered by ICE Benchmark Administration (or any other Person that takes over the administration of such rate for the relevant currency) for a period equal in length to such Interest Period as displayed on such day and time on pages LIBOR01 or LIBOR02 of the Reuters screen that displays such rate (or, in the event such rate does not appear on a Reuters page or screen, on any successor or substitute page on such screen 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); provided that if the Screen Rate as so determined would be less than zero, such rate shall be deemed to zero for the purposes of this Agreement.

"SEC" means the Securities and Exchange Commission, or any Governmental Authority succeeding to any of its principal functions.

"Secured Cash Management Agreement" means any Cash Management Agreement that is entered into by and between any Loan Party and any Cash Management Bank, except for any such Cash Management Agreement designated by the Parent Borrower in writing to the Administrative Agent and the relevant Cash Management Bank or Hedge Bank, as applicable, as an "unsecured cash management agreement" as of the Closing Date or, if later, on or about the time of entering into such Cash Management Agreement.

"Secured Hedge Agreement" means any Swap Contract permitted under Article VII that is entered into by and between any Loan Party and any Hedge Bank, except for any such Swap Contract designated by the Parent Borrower and the applicable Hedge Bank in writing to the Administrative Agent as an "unsecured hedge agreement" as of the Closing Date or, if later, as of the time of entering into such Swap Contract.

"Secured Obligations" has the meaning specified in the Security Agreement.

"Secured Parties" means, collectively, the Administrative Agent, the Collateral Agent, the Lenders (including, for the avoidance of doubt, the L/C Issuers), the Hedge Banks to the extent they are party to one or more Secured Hedge Agreements, the Cash Management Banks to the extent they are party to one or more Secured Cash Management Agreements and each co-agent or subagent appointed by the Administrative Agent or the Collateral Agent from time to time pursuant to Article IX.

"Securities Act" means the U.S. Securities Act of 1933, as amended, and the rules and regulations of the SEC promulgated thereunder.

"Security Agreement" means, collectively, the Security Agreement dated as of the date hereof executed by the Loan Parties party thereto, substantially in the form of Exhibit G, as amended, supplemented or otherwise modified from time to time in accordance with the terms thereof, together with each other security agreement and security agreement supplement executed and delivered pursuant to Section 6.12, 6.14 or 6.16.

"Security Agreement Supplement" has the meaning specified in the Security Agreement.

"Similar Business" means any business engaged or proposed to be engaged in by Holdings and its Subsidiaries on the Closing Date and any business or other activities that are similar, ancillary, complementary, incidental or related thereto, or an extension, development or expansion of, the businesses in which Holdings and its Subsidiaries are engaged on the Closing Date.

"SOFR" with respect to any day means the secured overnight financing rate published for such day by the Federal Reserve Bank of New York, as the administrator of the benchmark, (or a successor administrator) on the Federal Reserve Bank of New York's Website.

"SOFR-Based Rate" means SOFR, Daily Simple SOFR, Compounded SOFR or Term SOFR.

"Solvent" means, with respect to any Person on any date of determination, that on such date (a) the fair value of the assets of such Person is greater than the total amount of liabilities, including contingent liabilities, of such Person, (b) the present fair salable value of the assets of such Person is greater than or equal to the total amount that will be required to pay the probable liabilities, including contingent liabilities, of the Loan Parties as they become absolute and matured, (c) the capital of such Person is not unreasonably small in relation to its business as contemplated on such date of determination, (d) such Person has not and does not intend to, and does not believe that it will, incur debts or other obligations, including current obligations, beyond its ability to pay such debts and liabilities as they become due (whether at maturity or otherwise) and (e) such Person is "solvent" within the meaning given to that term and similar terms under Laws applicable to such Person relating to fraudulent transfers and conveyances, transactions at an undervalue, unfair preferences or equivalent concepts. The amount of contingent liabilities at any time shall be computed as the amount that, in the light of all the facts and circumstances existing at such time, represents the amount that can reasonably be expected to become an actual or matured liability or, if a different methodology is prescribed by applicable Laws, as prescribed by such Laws.

"SPC" has the meaning specified in Section 1.01(g).

"Specified Refinancing Agent" has the meaning specified in Section 2.18(a).

"Specified Refinancing Debt" has the meaning specified in Section 2.18(a).

"Specified Refinancing Revolving Credit Commitment" has the meaning specified in Section 2.18(a).

"Specified Refinancing Revolving Loans" means Specified Refinancing Debt constituting revolving loans.

"Specified Refinancing Term Commitment" has the meaning specified in Section 2.18(a).

"Specified Refinancing Term Loans" means Specified Refinancing Debt constituting term loans.

"Specified Transaction" means any incurrence or repayment of Indebtedness (excluding Indebtedness incurred for working capital purposes) or Investment that results in a Person becoming a Subsidiary, any designation of a Subsidiary as a Restricted Subsidiary or an Unrestricted Subsidiary, any acquisition or any Disposition that results in a Restricted Subsidiary ceasing to be a Subsidiary of a Borrower, any Investment constituting an acquisition of assets constituting a business unit, line of business or division of another Person or any Disposition of a business unit, line of business or division of the Borrowers or any of the Restricted Subsidiaries, in each case whether by merger, consolidation, amalgamation or otherwise or any material restructuring of the Borrowers or implementation of any initiative not in the ordinary course of business.

"Sponsor" means GTCR LLC or any of its Control Investment Affiliates and, in each case (whether individually or as a group), Affiliates of each of the foregoing (but excluding any operating portfolio companies of the foregoing).

"Sponsor Model" means the model delivered to the Arrangers on September 21, 2020 (together with any updates or modifications thereto reasonably agreed between the Parent Borrower and the Arrangers).

"Standard Securitization Undertakings" means representations, warranties, covenants, indemnities and guarantees of performance entered into by any Borrower or any Subsidiary of a Borrower which the Parent Borrower has determined in good faith to be customary in a Factoring Transaction or Receivables Financing, including, without limitation, those relating to the servicing of the assets of a Receivables Subsidiary, it being understood that any Receivables Repurchase Obligation shall be deemed to be a Standard Securitization Undertaking.

"Stated Maturity" means with respect to any security, the date specified in such security as the fixed date on which the final payment of principal of such security is due and payable, including pursuant to any mandatory redemption provision (but excluding any provision providing for the repurchase of such security at the option of the holder thereof upon the happening of any contingency unless such contingency has occurred).

"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 FRB 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 of the FRB). Such reserve percentages shall include those imposed pursuant to such Regulation D. 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.

"Stock Certificates" has the meaning specified in Section 4.01.

"Subject Lien" has the meaning specified in Section 7.02.

"Subordinated Indebtedness" means (a) with respect to any Borrower, any Indebtedness of such Borrower which is by its terms expressly subordinated in right of payment to the Obligations, and (b) with respect to any Guarantor, any Indebtedness of such Guarantor which is by its terms expressly subordinated in right of payment to its Guarantee of the Obligations.

"Subsidiary" means, with respect to any Person (1) any corporation, association or other business entity (other than a partnership, joint venture, limited liability company or similar entity) of which more than 50% of the total voting power of the Voting Stock is at the time of determination owned or controlled, directly or indirectly, by such Person or one or more of the other Subsidiaries of that Person or a combination thereof, (2) any partnership, joint venture, limited liability company or similar entity of which (x) more than 50% of the capital accounts, distribution rights, total equity and voting interests or general and limited partnership interests, as applicable, are owned or controlled, directly or indirectly, by such Person or one or more of the other Subsidiaries of that Person or a combination thereof, whether in the form of membership, general, special or limited partnership interests or otherwise, and (y) such Person or any Restricted Subsidiary of such Person is a controlling general partner or otherwise controls such entity and (3) any Person that is consolidated in the consolidated financial statements of the specified Person in accordance with GAAP.

"Subsidiary Guarantor" means, collectively, all Guarantors other than Holdings.

"Subsidiary Guaranty" means, collectively, the Subsidiary Guaranty made by the Subsidiary Guarantors in favor of the Administrative Agent on behalf of the Secured Parties, substantially in the form of Exhibit F-2, as amended, supplemented or otherwise modified from time to time in accordance with the terms thereof, together with each other guaranty and guaranty supplement delivered pursuant to Section 6.12 or 6.16.

"Subsidiary Redesignation" has the meaning given to such term in the definition of "Unrestricted Subsidiary".

"Supplemental Agent" has the meaning specified in Section 9.14(a).

"Supported QFC" has the meaning specified in Section 10.26.

"Swap Contract" means (a) any and all rate swap transactions, basis swaps, credit derivative transactions, forward rate transactions, commodity swaps, commodity options, forward commodity contracts, equity or equity index swaps or options, bond or bond price or bond index swaps or options or forward bond or forward bond price or forward bond index transactions, interest rate options, forward foreign exchange transactions, cap transactions, floor transactions, collar transactions, currency swap transactions, cross-currency rate swap transactions, currency options, spot contracts, or any other similar transactions or any combination of any of the foregoing (including any options to enter into any of the foregoing), whether or not any such transaction is governed by or subject to any master agreement, and (b) any and all transactions of any kind, and the related confirmations, which are subject to the terms and conditions of, or governed by, any form of master agreement published by the International Swaps and Derivatives Association, Inc., any International Foreign Exchange Master Agreement, or any other master agreement, including any obligations or liabilities under any such master agreement.

"Swap Obligation" means, with respect to any 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.

"Swap Termination Value" means, in respect of any one or more Swap Contracts, after taking into account the effect of any legally enforceable netting agreement relating to such Swap Contracts, (a) for any date on or after the date such Swap Contracts have been closed out and termination value(s) determined in accordance therewith, such termination value(s), and (b) for any date prior to the date referenced in clause (a), the amount(s) determined as the mark-to-market value(s) for such Swap Contracts, as determined based upon one or more mid-market or other readily available quotations provided by any recognized dealer in such Swap Contracts (which may include a Lender or any Affiliate of a Lender).

"Tax Distributions" has the meaning assigned to such term in Section 7.05(13).

"Taxes" means all present or 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.

"Term Borrowing" means a borrowing of the same Type of Term Loan of a single Tranche from all the Lenders having Term Commitments or Term Loans of the respective Tranche on a given date (or resulting from a conversion or conversions on such date) having in the case of Eurocurrency Rate Loans, the same Interest Period.

"Term Commitment" means, as to each Term Lender, (i) its Initial Term Commitment, (ii) its Term Commitment Increase, (iii) its New Term Commitment or (iv) its Specified Refinancing Term Commitment. The amount of each Lender's Initial Term Commitment is as set forth in the definition thereof and the amount of each Lender's other Term Commitments shall be as set forth in the Assignment and Assumption, or in the amendment or agreement relating to the respective Term Commitment Increase, New Term Commitment or Specified Refinancing Term Commitment pursuant to which such Lender shall have assumed its Term Commitment, as the case may be, as such amounts may be adjusted from time to time in accordance with this Agreement.

"Term Commitment Increase" has the meaning specified in Section 2.14(a).

"Term Facility" means a facility in respect of any Term Loan Tranche, as the context may require.

"Term Lender" means (a) at any time on or prior to the Closing Date, any Lender that has an Initial Term Commitment at such time and (b) at any time after the Closing Date, any Lender that holds Term Loans and/or Term Commitments at such time.

"Term Loan" means an advance made by any Term Lender under any Term Facility.

"Term Loan Tranche" means the respective facility and commitments utilized in making Term Loans hereunder, with there being one Tranche on the Closing Date, i.e., Initial Term Loans and Initial Term Commitments. Additional Term Loan Tranches may be added after the Closing Date pursuant to the terms hereof, i.e., New Term Loans, Specified Refinancing Term Loans, New Term Commitments and Specified Refinancing Term Commitments.

"Term Note" means a promissory note of the Borrowers payable to any Term Lender or its registered assigns, in substantially the form of Exhibit C-1 hereto, evidencing the indebtedness of the Borrowers to such Term Lender resulting from the Term Loans under the same Term Loan Tranche made or held by such Term Lender.

"Term SOFR" means the forward-looking term rate based on SOFR that has been selected or recommended by the Relevant Governmental Body.

"Threshold Amount" means the greater of (x) $33,000,000 and (y) 33% of Consolidated EBITDA.

"Total Outstandings" means the aggregate Outstanding Amount of all Loans and all L/C Obligations.

"Total Revolving Credit Outstandings" means the aggregate Outstanding Amount of all Revolving Credit Loans and L/C Obligations.

"Tranche" means any Term Loan Tranche or any Revolving Tranche.

"Transactions" means, collectively, each of the following transactions:

(a) the Borrowers obtaining the Facilities;

(b) the repayment, redemption, repurchase, defeasance, discharge, refinancing or termination (or the giving of notice for the repayment or redemption thereof to the extent accompanied by any prepayments or deposits required to defease, terminate and satisfy and discharge in full the obligations under any related indentures or notes) of all existing third party Indebtedness for borrowed money of the Borrowers and their Subsidiaries under the Existing Credit Agreements and the termination and release of all related guaranties and security interests (or making arrangements for such release that are reasonably satisfactory to the Administrative Agent) (the "Refinancing");

(c) the payment of a dividend, redemption or other distribution to any of the Borrowers' direct or indirect equityholders in an aggregate amount not to exceed $225,000,000 within ten (10) Business Days of the Closing Date; and

(d) the payment of all fees, costs and expenses incurred in connection with the transactions described in the foregoing provisions of this definition (the "Transaction Costs").

"Transaction Agreement Date" has the meaning specified in Section 1.02.

"Transaction Costs" has the meaning given to such term in the definition of "Transactions."

"Transformative Event" means any merger, acquisition, investment, dissolution, liquidation, consolidation or disposition that is either (a) not permitted by the terms of the Loan Documents immediately prior to the consummation of such transaction or (b) if permitted by the terms of the Loan Documents immediately prior to the consummation of such transaction, would not provide Holdings, the Borrowers and their Restricted Subsidiaries with adequate flexibility under the Loan Documents for the continuation and/or expansion of their combined operations following such consummation, as reasonably determined by the Borrowers acting in good faith.

"Type" means, with respect to a Loan, its character as a Base Rate Loan or a Eurocurrency Rate Loan.

"UK Financial Institution" means any BRRD Undertaking (as such term is defined under the PRA Rulebook (as amended form time to time) promulgated by the United Kingdom Prudential Regulation Authority) or any person falling within IFPRU 11.6 of the FCA Handbook (as amended from time to time) promulgated by the United Kingdom Financial Conduct Authority, which includes certain credit institutions and investment firms, and certain affiliates of such credit institutions or investment firms.

"UK Resolution Authority" means the Bank of England or any other public administrative authority having responsibility for the resolution of any UK Financial Institution.

"Unadjusted Benchmark Replacement" means the Benchmark Replacement excluding the Benchmark Replacement Adjustment.

"Undisclosed Administration" means in relation to a Lender or its direct or indirect parent company the appointment of an administrator, provisional liquidator, conservator, receiver, trustee, custodian or other similar official by a supervisory authority or regulator under or based on the law in the country where such Person is subject to home jurisdiction supervision if applicable law requires that such appointment is not to be publicly disclosed.

"Unrestricted Lender" means any Regulated Entity, any Revolving Lender as of the Closing Date, any Lead Arranger or any of their respective Affiliates.

"Unfunded Advances/Participations" means (a) with respect to the Administrative Agent, the aggregate amount, if any (i) made available to the Borrowers on the assumption that each Lender has made available to the Administrative Agent such Lender's share of the applicable Borrowing available to the Administrative Agent as contemplated by Section 2.12(b) and (ii) with respect to which a corresponding amount shall not in fact have been returned to the Administrative Agent by the Borrowers or made available to the Administrative Agent by any such Lender, and (b) with respect to any L/C Issuer, the aggregate amount, if any, of amounts drawn under Letters of Credit in respect of which a Revolving Credit Lender shall have failed to make Revolving Credit Loans or L/C Advances to reimburse such L/C Issuer pursuant to Section 2.03(d).

"Unfunded Pension Liability" means the excess of a Plan's benefit liabilities under Section 4001(a)(16) of ERISA over the current value of such Plan's assets, determined in accordance with assumptions used for funding the Plan pursuant to Section 412 of the Code for the applicable plan year.

"Uniform Commercial Code" or "UCC" means the Uniform Commercial Code as the same may from time to time be in effect in the State of New York or the Uniform Commercial Code (or similar code or statute) of another jurisdiction, to the extent it may be required to apply to any item or items of Collateral.

"United States" and "U.S." mean the United States of America.

"Unpaid Amount" has the meaning specified in Section 7.05.

"Unreimbursed Amount" has the meaning specified in Section 2.03(d)(i).

"Unrestricted Subsidiary" means:

(1) any Subsidiary of a Borrower Party that at the time of determination shall be designated an Unrestricted Subsidiary by the Board of Directors of such Borrower Party in the manner provided below; and

(2) any Subsidiary of an Unrestricted Subsidiary.

The Board of Directors of any Borrower Party, Holdings or any Parent Holding Company may designate any Subsidiary of such Borrower Party (including any existing Subsidiary and any newly acquired or newly formed Subsidiary of such Borrower Party) to be an Unrestricted Subsidiary unless such Subsidiary or any of its Subsidiaries owns any Capital Stock or Indebtedness of, or owns or holds any Lien on any property of, a Borrower or any other Subsidiary of a Borrower that is not a Subsidiary of the Subsidiary to be so designated at the time of such designation; provided, however, that the Subsidiary to be so designated and its Subsidiaries do not at the time of designation have any Indebtedness pursuant to which the lender has recourse to any of the assets of the Parent Borrower or any of its Restricted Subsidiaries; provided, further, however, that immediately after giving effect to such designation no Event of Default shall have occurred and be continuing.

The Board of Directors of any Borrower Party or any Parent Holding Company may designate any Unrestricted Subsidiary to be a Restricted Subsidiary (a "Subsidiary Redesignation"); provided, however, that immediately after giving effect to such designation, the Borrowers could incur $1.00 of additional Indebtedness on a Pro Forma Basis taking into account such designation, and no Event of Default shall have occurred and be continuing. Any Indebtedness of such Subsidiary and any Liens encumbering its assets at the time of such designation shall be deemed newly incurred or established, as applicable, at such time.

"U.S. Person" means any Person that is a "United States person" as defined in Section 7701(a)(30) of the Code.

"U.S. Special Resolution Regimes" has the meaning specified in Section 10.26.

"U.S. Tax Compliance Certificate" has the meaning assigned to such term in Section 3.01(g)(ii).

"Voting Stock" of any Person as of any date means the Capital Stock of such Person that is at the time entitled to vote (without regard to the occurrence of any contingency) in the election of the Board of Directors of such Person.

"Weighted Average Life to Maturity" means, when applied to any Indebtedness or Disqualified Stock or Preferred Stock, as the case may be, at any date, the number of years (and/or portion thereof) 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 of such Indebtedness or redemption or similar payment, in respect of such Disqualified Stock or Preferred Stock, 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 Restricted Subsidiary" means any Wholly Owned Subsidiary that is a Restricted Subsidiary.

"Wholly Owned Subsidiary" of any Person means a direct or indirect Subsidiary of such Person 100% of the outstanding Capital Stock or other ownership interests of which (other than directors' qualifying shares or shares or interests required to be held by foreign nationals or other third parties to the extent required by applicable law) shall at the time be owned by such Person or by one or more Wholly Owned Subsidiaries of such Person.

"Withholding Agent" shall mean any Loan Party, the Administrative Agent and any other applicable withholding agent.

"Working Capital" means, with respect to the Borrowers and the Restricted Subsidiaries on a consolidated basis, Consolidated Current Assets minus Consolidated Current Liabilities.

"Write-Down and Conversion Powers" means (a) 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 and (b) with respect to the United Kingdom, any powers of the applicable Resolution Authority under the Bail-In Legislation to cancel, reduce, modify or change the form of a liability of any UK Financial Institution or any contract or instrument under which that liability arises, to convert all or part of that liability into shares, securities or obligations of that person or any other person, to provide that any such contract or instrument is to have effect as if a right had been exercised under it or to suspend any obligation in respect of that liability or any of the powers under that Bail-In Legislation that are related to or ancillary to any of those powers.

Section 1.02 Other Interpretive Provisions. With reference to this Agreement and each other Loan Document, unless otherwise specified herein or in such other Loan Document:

(a) The meanings of defined terms are equally applicable to the singular and plural forms of the defined terms.

(b) The words "herein," "hereto," "hereof" and "hereunder" and words of similar import when used in any Loan Document shall refer to such Loan Document as a whole and not to any particular provision thereof.

(c) References in this Agreement to an Exhibit, Schedule, Article, Section, clause or subclause refer (A) to the appropriate Exhibit or Schedule to, or Article, Section, clause or subclause in this Agreement or (B) to the extent such references are not present in this Agreement, to the Loan Document in which such reference appears.

(d) The term "including" is by way of example and not limitation.

(e) The term "documents" includes any and all instruments, documents, agreements, certificates, notices, reports, financial statements and other writings, however evidenced, whether in physical or electronic form.

(f) Any reference herein to any Person shall be construed to include such Person's successors and assigns.

(g) In the computation of periods of time from a specified date to a later specified date, the word "from" means "from and including;" the words "to" and "until" each mean "to but excluding;" and the word "through" means "to and including."

(h) Section headings herein and in the other Loan Documents are included for convenience of reference only and shall not affect the interpretation of this Agreement or any other Loan Document.

(i) In measuring compliance with this Agreement with respect to any (x) Investment or acquisition, in each case, for which Holdings or any Subsidiary thereof may not terminate its obligations under the documentation therefor due to a lack of financing for such Investment or acquisition (whether by merger, consolidation or other business combination or acquisition of Capital Stock or otherwise) as applicable and (y) repayment, repurchase or refinancing of Indebtedness or Restricted Payment with respect to which an irrevocable notice of repayment (or similar irrevocable notice), which may be conditional, has been delivered, in each case for purposes of determining:

(1) whether any Indebtedness (including Acquired Indebtedness) that is being incurred in connection with such Investment, acquisition, Restricted Payment or repayment, repurchase or refinancing of Indebtedness is permitted to be incurred in compliance with Section 7.01;

(2) whether any Lien being incurred in connection with such Investment, acquisition, Restricted Payment or repayment, repurchase or refinancing of Indebtedness or to secure any such Indebtedness is permitted to be incurred in accordance with Section 7.02 or the definition of "Permitted Liens";

(3) whether any other transaction undertaken or proposed to be undertaken in connection with such Investment, Restricted Payment, acquisition or repayment, repurchase or refinancing of Indebtedness complies with the covenants or agreements contained in this Agreement, requires accuracy of any representations and warranties, or requires that no Default or Event of Default has occurred; and

(4) any calculation of the ratios or baskets, including Cash Interest Coverage Ratio, Consolidated First Lien Net Leverage Ratio, Consolidated Total Net Leverage Ratio, Consolidated Senior Secured Net Leverage Ratio, Consolidated Net Income, Consolidated EBITDA and/or Pro Forma Cost Savings and baskets determined by reference to Consolidated EBITDA or Consolidated Net Tangible Assets and, whether a Default or Event of Default exists in connection with the foregoing,

at the option of the Parent Borrower, the date that the definitive agreement for such Restricted Payment, Investment, acquisition or repayment, repurchase or refinancing of Indebtedness is entered into or notice, which may be conditional, of such repayment, repurchase or refinancing of Indebtedness is given to the holders of such Indebtedness or, at the election of the Parent Borrower, any date thereafter (the "Transaction Agreement Date"), may be used as the applicable date of determination, as the case may be, in each case with such pro forma adjustments as are appropriate and consistent with the pro forma adjustment provisions set forth in the definition of "Pro Forma Basis" or "Consolidated EBITDA." For the avoidance of doubt, if the Parent Borrower elects to use the Transaction Agreement Date as the applicable date of determination in accordance with the foregoing, (a) any fluctuation or change in the Cash Interest Coverage Ratio, Consolidated First Lien Net Leverage Ratio, Consolidated Total Net Leverage Ratio, Consolidated Senior Secured Net Leverage Ratio, Consolidated Net Income, Consolidated EBITDA, Consolidated Net Tangible Assets and/or Pro Forma Cost Savings of the Borrowers from the Transaction Agreement Date to the consummation of such Restricted Payment, Investment, acquisition or repayment, repurchase or refinancing of Indebtedness, will not be taken into account for purposes of determining whether any Indebtedness or Lien that is being incurred in connection with such Restricted Payment, Investment, acquisition or repayment, repurchase or refinancing of Indebtedness, or in connection with compliance by the Borrowers or any of the Restricted Subsidiaries with any other provision of the Loan Documents or any other transaction undertaken in connection with such Restricted Payment, Investment, acquisition or repayment, repurchase or refinancing of Indebtedness, is permitted to be incurred and (b) until such Restricted Payment, Investment, acquisition or repayment, repurchase or refinancing of Indebtedness is consummated or such definitive agreements are terminated (or conditions in any conditional notice can no longer be met or such notice is otherwise revoked or withdrawn by the Parent Borrower), such Restricted Payment, Investment, acquisition or repayment, repurchase or refinancing of Indebtedness and all transactions proposed to be undertaken in connection therewith (including the incurrence of Indebtedness and Liens) will be given pro forma effect when determining compliance of other transactions (including the incurrence of Indebtedness and Liens unrelated

to such Restricted Payment, Investment, acquisition or repayment, repurchase or refinancing of Indebtedness) that are consummated after the Transaction Agreement Date and on or prior to the consummation of such Restricted Payment, Investment, acquisition or repayment, repurchase or refinancing of Indebtedness and any such transactions (including any incurrence of Indebtedness and the use of proceeds thereof) will be deemed to have occurred on the date the definitive agreements are entered and outstanding thereafter for purposes of calculating any baskets or ratios under the Loan Documents after the date of such agreement and before the consummation of such Restricted Payment, Investment, acquisition or repayment, repurchase or refinancing of Indebtedness.

(j) As used in Article VII and the definitions of "Permitted Investments" and "Permitted Liens", the term "Consolidated EBITDA" is deemed to refer to Consolidated EBITDA of the Borrower Parties for the four fiscal quarter period most recently then ended for which financial statements have been delivered pursuant to Section 6.01(a) or (b), as applicable, calculated on a Pro Forma Basis.

(k) [Reserved].

(l) Any reference herein to a merger, transfer, consolidation, amalgamation, consolidation, assignment, sale, disposition or transfer, or similar term, shall be deemed to apply to a division of or by a limited liability company, or an allocation of assets to a series of a limited liability company (or the unwinding of such a division or allocation), as if it were a merger, transfer, consolidation, amalgamation, consolidation, assignment, sale or transfer, or similar term, as applicable, to, of or with a separate Person. Notwithstanding anything to the contrary in this Agreement, (i) any division of a limited liability company shall constitute a separate Person hereunder, and each resulting division of any limited liability company that, prior to such division, is a Subsidiary, Restricted Subsidiary, Unrestricted Subsidiary, a Borrower, a Guarantor, a joint venture or any other like term shall remain a Subsidiary, Restricted Subsidiary, Unrestricted Subsidiary, a Borrower, a Guarantor, a joint venture, or other like term, respectively, after giving effect to such division, and any resulting divisions of such Persons shall remain subject to the same restrictions applicable to the pre-division predecessor of such divisions, and (ii) any resulting divisions of Holdings shall remain subject to the same restrictions applicable to Holdings under this Agreement.

(m) All references to "in the ordinary course of business" of the Parent Borrower or any Subsidiary thereof means (i) in the ordinary course of business of, or in furtherance of an objective that is in the ordinary course of business of the Parent Borrower or such Subsidiary, as applicable, (ii) customary and usual in the industry or industries of the Parent Borrower and its Subsidiaries in the United States or any other jurisdiction in which the Parent Borrower or any Subsidiary does business, as applicable, or (iii) generally consistent with the past or current practice of the Parent Borrower or such Subsidiary, as applicable, or any similarly situated businesses of the United States or any other jurisdiction in which the Parent Borrower or any Subsidiary does business, as applicable.

Section 1.03 Accounting Terms.

(a) All accounting terms not specifically or completely defined herein shall be construed in conformity with, and all financial data (including financial ratios and other financial calculations) required to be submitted pursuant to this Agreement shall be prepared in conformity with, GAAP, as in effect from time to time.

(b) If at any time any change in GAAP or the application thereof would affect the computation or interpretation of any financial ratio, basket, requirement or other provision set forth in any Loan Document, and either the Parent Borrower or the Required Lenders shall so request, the Administrative Agent and the Parent Borrower shall negotiate in good faith to amend such ratio, basket, requirement or other provision to preserve the original intent thereof in light of such change in GAAP or the application thereof (subject to the approval of the Required Lenders not to be unreasonably withheld, conditioned or delayed) (provided that any change affecting the computation of the ratio set forth in Section 7.08 shall be subject solely to the approval of the Required Revolving Lenders (not to be unreasonably withheld, conditioned or delayed) and the Parent Borrower); provided that, until so amended, (i) (A) such ratio, basket, requirement or other provision shall continue to be computed or interpreted in accordance with GAAP or the application thereof prior to such change therein and (B) the Parent Borrower shall provide to the Administrative Agent and the Lenders a written reconciliation in form and substance reasonably satisfactory to the Administrative Agent, between calculations of such ratio, basket, requirement or other provision made before and after giving effect to such change in GAAP or the application thereof or (ii) the Parent Borrower may elect to fix GAAP (for purposes of such ratio, basket, requirement or other provision) as of another later date notified in writing to the Administrative Agent from time to time.

(c) Notwithstanding anything to the contrary contained herein, all such financial statements shall be prepared, and all financial covenants contained herein or in any other Loan Document shall be calculated, in each case, without giving effect to any election under FASB ASC 825 (or any similar accounting principle) permitting a Person to value its financial liabilities at the fair value thereof.

Section 1.04 Rounding. Any financial ratios required to be maintained by the Parent Borrower, or satisfied in order for a specific action to be permitted, under this Agreement shall be calculated by dividing the appropriate component by the other component, carrying the result to one place more than the number of places by which such ratio is expressed herein and rounding the result up or down to the nearest number (with a rounding-up if there is no nearest number).

Section 1.05 References to Agreements and Laws. Unless otherwise expressly provided herein, (a) references to Organization Documents, agreements (including the Loan Documents) and other contractual instruments shall be deemed to include all subsequent amendments, restatements, extensions, supplements and other modifications thereto, but only to the extent that such amendments, restatements, extensions, supplements and other modifications are permitted by any Loan Document and (b) references to any Law shall include all statutory and regulatory provisions consolidating, amending, replacing, supplementing or interpreting such Law.

Section 1.06 Times of Day. Unless otherwise specified, all references herein to times of day shall be references to Eastern time (daylight savings or standard, as applicable).

Section 1.07 Timing of Payment or Performance. When the 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 specifically provided in Section 2.12 or as described in the definition of Interest Period) or performance shall extend to the immediately succeeding Business Day.

Section 1.08 Currency Equivalents Generally.

(a) Any amount specified in this Agreement (other than in Articles II, IX and X or as set forth in clause (b) of this Section 1.08) or any of the other Loan Documents to be in Dollars shall also include the equivalent of such amount in any currency other than Dollars, such equivalent amount to be determined at the rate of exchange quoted by the Reuters World Currency Page for such other currency at 11:00 a.m. (London time) on such day (or, in the event such rate does not appear on any Reuters World Currency 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, or, in the absence of such agreement, such rate shall instead be the arithmetic average of the spot rates of exchange of the Administrative Agent in the market where its foreign currency exchange operations in respect of such currency are then being conducted, at or about 10:00 a.m. (New York City time) on such date for the purchase of Dollars for delivery two Business Days later); provided that if any basket is exceeded solely as a result of fluctuations in applicable currency exchange rates after the last time such basket was utilized, such basket will not be deemed to have been exceeded solely as a result of such fluctuations in currency exchange rates. Any determinations as to the Dollar Equivalent of Revolving Credit Loans or Letters of Credit denominated in an Alternative Currency, the amount of fees owing in respect of Letters of Credit denominated in an Alternative Currency and the amount of the Unreimbursed Amount owing to each L/C Issuer shall be made by the Administrative Agent as of the most recent Revaluation Date and such determination shall be conclusive absent manifest error.

(b) For purposes of determining the Consolidated First Lien Net Leverage Ratio, the Consolidated Total Net Leverage Ratio and the Consolidated Senior Secured Net Leverage Ratio, amounts denominated in a currency other than Dollars will be converted to Dollars for the purposes of (A) testing the Financial Covenant, at the Dollar Equivalent at such date, and (B) calculating any Consolidated Total Net Leverage Ratio, the Consolidated First Lien Net Leverage Ratio (other than for the purposes of determining compliance with Section 7.08) and Consolidated Senior Secured Net Leverage Ratio, at the Dollar Equivalent at such date, and will, in the case of Indebtedness and Consolidated Funded Indebtedness, be the weighted average exchange rates used for determining Consolidated EBITDA for the relevant period, provided that if any Borrower Party has entered into any currency Swap Contracts in respect of any borrowings, the currency and amount of such borrowings shall be determined by first taking into account the effects of that currency Swap Contract.

(c) The Administrative Agent or any L/C Issuer, as applicable, shall use the currency exchange rate as of each Revaluation Date for the purpose of calculating Dollar Equivalent amounts of the Revolving Credit Loans denominated in an Alternative Currency. Such currency exchange rates shall become effective as of such Revaluation Date and shall be the currency exchange rate employed in converting any amounts between the applicable currencies for such purposes until the next Revaluation Date to occur.

Section 1.09 Benchmark Conforming Changes. The Administrative Agent does not warrant, nor accept responsibility, nor shall the Administrative Agent have any liability with respect to (i) Benchmark Replacement Conforming Changes, (ii) the administration, submission or any other matter relating to the rates in the definition of Benchmark or with respect to any rate that is an alternative, comparable or successor rate thereto or (iii) the effect of any of the foregoing.

Section 1.10 Letter of Credit Amounts. Unless otherwise specified herein, the amount of a Letter of Credit at any time shall be deemed to be the Dollar Equivalent of the stated amount of such Letter of Credit in effect at such time after giving effect to any expiration periods applicable thereto; provided, however, that (i) if any presentation of drawing documents shall have been made on or prior to the expiration date of such Letter of Credit and the applicable L/C Issuer shall not yet have honored such drawing or given notice of dishonor, the amount of such Letter of Credit that is the subject of such drawing shall be treated as still outstanding and (ii) with respect to any Letter of Credit that, by its terms or the terms of any Issuer Document related thereto, provides for one or more automatic increases in the stated amount thereof, the amount of such Letter of Credit shall be deemed to be the Dollar Equivalent of the maximum stated amount of such Letter of Credit after giving effect to all such increases, whether or not such maximum stated amount is in effect at such time.

Section 1.11 Pro Forma Calculations. Notwithstanding anything to the contrary herein (subject to Section 1.02(i)), the Consolidated First Lien Net Leverage Ratio, the Consolidated Total Net Leverage Ratio, the Consolidated Senior Secured Net Leverage Ratio, Cash Interest Coverage Ratio, Consolidated EBITDA and Consolidated Net Tangible Assets shall be calculated (including for purposes of Sections 2.14 and 2.15) on a Pro Forma Basis with respect to each Specified Transaction occurring during the applicable four quarter period to which such calculation relates, and/or subsequent to the end of such four-quarter period but not later than the date of such calculation; provided that notwithstanding the foregoing, when calculating the Consolidated First Lien Net Leverage Ratio for purposes of determining (i) the Applicable Rate, (ii) the Applicable Commitment Fee and (iii) actual compliance (and not Pro Forma Compliance or compliance on a Pro Forma Basis) with the Financial Covenant, any Specified Transaction and any related adjustment contemplated in the definition of Pro Forma Basis (and corresponding provisions of the definition of Consolidated EBITDA) that occurred subsequent to the end of the applicable four quarter period shall not be given Pro Forma Effect.

Section 1.12 Calculation of Baskets. If any of the baskets set forth in this Agreement are exceeded solely as a result of fluctuations to Consolidated Net Tangible Assets or any currency exchange rates for the most recently completed fiscal quarter after the last time such baskets were calculated for any purpose under this Agreement, such baskets will not be deemed to have been exceeded solely as a result of such fluctuations.

ARTICLE II.
The Commitments and Credit Extensions

Section 2.01 The Loans.

(a) The Initial Term Borrowing. Subject to the terms and conditions set forth herein, each Term Lender with an Initial Term Commitment severally agrees to make a single loan denominated in Dollars (the "Initial Term Loans") to the Borrowers on the Closing Date in an amount not to exceed such Term Lender's Initial Term Commitment. The Initial Term Borrowing shall consist of Initial Term Loans made simultaneously by the Term Lenders in accordance with their respective Initial Term Commitments. Amounts borrowed under this Section 2.01(a) and subsequently repaid or prepaid may not be reborrowed (it being understood, however, that prepayments will be taken into account for purposes of any Prepayment-Based Incremental Facility to the extent provided by Section 2.14).

The Initial Term Loans may be Base Rate Loans or Eurocurrency Rate Loans as further provided herein. Notwithstanding the Borrowers' joint and several liability for all payments to be made under this Agreement, as of the Closing Date, each Borrower hereby agrees, solely as between such Persons that, including for federal or state income tax purposes, the initial principal amount of the outstanding Initial Term Borrowing of the Parent Borrower is $302,403,901.26, the initial principal amount of the outstanding Initial Term Borrowing of Vector is $119,069,918.06, the initial principal amount of the outstanding Initial Term Borrowing of Cygnus is $117,054,873.04 and the initial principal amount of the outstanding Initial Term Borrowing of TriLink is $61,471,307.64.

(b) The Revolving Credit Borrowings. Subject to the terms and conditions set forth herein, each Revolving Credit Lender severally agrees to make loans denominated in Dollars or in one or more Alternative Currencies (each such loan, a "Revolving Credit Loan") to the Borrowers from time to time after the Closing Date, on any Business Day until and excluding the Business Day preceding the Maturity Date for the Revolving Credit Facility, in an aggregate amount not to exceed at any time outstanding the amount of such Lender's Revolving Credit Commitment; provided, however, that after giving effect to any Revolving Credit Borrowing, (i) the Total Revolving Credit Outstandings shall not exceed the Revolving Credit Facility and (ii) the aggregate Outstanding Amount of the Revolving Credit Loans of any Lender, plus such Lender's Pro Rata Share of the Outstanding Amount of all L/C Obligations shall not exceed such Lender's Revolving Credit Commitment. Within the limits of each Lender's Revolving Credit Commitment, and subject to the other terms and conditions hereof, the Borrowers may borrow under this Section 2.01(b), prepay under Section 2.05, and reborrow under this Section 2.01(b). Revolving Credit Loans may be Base Rate Loans (in the case of Revolving Credit Loans denominated in Dollars) or Eurocurrency Rate Loans, as further provided herein. To the extent that any portion of the Revolving Credit Facility has been refinanced with one or more new revolving credit facilities constituting Specified Refinancing Debt, each Revolving Credit Borrowing (including any deemed Revolving Credit Borrowings made pursuant to Section 2.03) shall be allocated pro rata among the Revolving Tranches.

(c) After the Closing Date, subject to and upon the terms and conditions set forth herein, each Lender with a Term Commitment (other than an Initial Term Commitment) with respect to any Tranche of Term Loans (other than Initial Term Loans) severally agrees to make a Term Loan denominated in Dollars under such Tranche to the Borrowers in an amount not to exceed such Term Lender's Term Commitment under such Tranche on the date of incurrence thereof, which Term Loans under such Tranche shall be incurred pursuant to a single drawing on the date set forth for such incurrence. Such Term Loans may be Base Rate Loans or Eurocurrency Rate Loans as further provided herein. Once repaid, Term Loans incurred hereunder may not be reborrowed (it being understood, however, that prepayments will be taken into account for purposes of any Prepayment-Based Incremental Facility to the extent provided by Section 2.14).

Section 2.02 Borrowings, Conversions and Continuations of Loans.

(a) Each Term Borrowing, each Revolving Credit Borrowing, each conversion of Term Loans, Specified Refinancing Revolving Loans or Revolving Credit Loans from one Type to the other, and each continuation of Eurocurrency Rate Loans, shall be made upon irrevocable notice by the Parent Borrower to the Administrative Agent. Each such notice must be in writing and must be received by the Administrative Agent not later than (i) 12:00 p.m. (New York City time) three Business Days prior to the requested date of any Borrowing of, conversion of Base Rate Loans to, or continuation of, Eurocurrency Rate Loans (or in the case of any such Term Borrowing to be made on the Closing Date, one Business Day prior to the Closing Date), (ii) 12:00 p.m. on the requested date of any Term Borrowing of Base Rate Loans or of any conversion of Eurocurrency Rate Loans to Base Rate Loans and (iii) 12:00 p.m. on the requested date of any Revolving Credit Borrowing of Base Rate Loans or of any conversion of Eurocurrency Rate Loans to Base Rate Loan. Each notice pursuant to this Section 2.02(a) shall be delivered to the Administrative Agent in the form of a written Committed Loan Notice, appropriately completed and signed by a Responsible Officer of the Parent Borrower.

Each Borrowing of, conversion to or continuation of Eurocurrency Rate Loans shall be (i) in a principal amount of $2,000,000 (or the Alternative Currency Equivalent of such amount), or (ii) a whole multiple of $1,000,000 (or the Alternative Currency Equivalent of such amount) in excess thereof. Except as provided in Section 2.03(d), each Borrowing of, or conversion to, Base Rate Loans shall be (i) in a principal amount of $500,000, or (ii) a whole multiple of $500,000 (or the Alternative Currency Equivalent of such amount) in excess thereof.

Each Committed Loan Notice shall specify (i) whether the Borrowers are requesting a Term Borrowing, a Revolving Credit Borrowing, a conversion of a Tranche of Term Loans, Specified Refinancing Revolving Loans or Revolving Credit Loans from one Type to the other, or a continuation of Eurocurrency Rate Loans, (ii) the requested date of the Borrowing, conversion or continuation, as the case may be (which shall be a Business Day), (iii) the principal amount of Loans to be borrowed, converted or continued, (iv) the Type of Loans to be borrowed or to which existing Tranche of Term Loans, Specified Refinancing Revolving Loans or Revolving Credit Loans are to be converted, (v) if applicable, the duration of the Interest Period with respect thereto, (vi) the applicable Borrower to which such Loan shall be made, and (vii) if applicable, the currency in which the Revolving Credit Loans to be borrowed are to be denominated. If, with respect to any Eurocurrency Rate Loans, the Parent Borrower fails to specify a Type of Loan in a Committed Loan Notice or if the Parent Borrower fails to give a timely notice requesting a conversion or continuation, then the applicable Tranche of Term Loans, Specified Refinancing Revolving Loans, or Revolving Credit Loans shall be made as, or converted to, Eurocurrency Rate Loans with an Interest Period of 1 month. Any such automatic conversion or continuation pursuant to the immediately preceding sentence shall be effective as of the last day of the Interest Period then in effect with respect to the applicable Eurocurrency Rate Loans. If the Parent Borrower requests a Borrowing of, conversion to, or continuation of Eurocurrency Rate Loans in any such Committed Loan Notice, but fails to specify an Interest Period, it will be deemed to have specified an Interest Period of one month. If no currency for a Borrowing of Revolving Credit Loans is specified, the requested Borrowing shall be in Dollars.

(b) Following receipt of a Committed Loan Notice, the Administrative Agent shall promptly notify each applicable Lender of the amount of its ratable share of the applicable Tranche of Term Loans, Specified Refinancing Revolving Loans or Revolving Credit Loans, and if no timely notice of a conversion or continuation of Eurocurrency Rate Loan is provided by the Parent Borrower, the Administrative Agent shall notify each Lender of the details of any automatic conversion to Eurocurrency Rate Loans with an Interest Period of one month as described in Section 2.02(a). In the case of a Term Borrowing or a Revolving Credit Borrowing, each Appropriate Lender shall make the amount of its Loan available to the Administrative Agent in immediately available funds at the Administrative Agent's Office not later than 3:00 p.m. (New York City time), on the Business Day specified in the applicable Committed Loan Notice. Each Lender may, at its option, make any Loan available to the Borrowers by causing any foreign or domestic branch or Affiliate of such Lender to make such Loan; provided that 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. Upon satisfaction of the applicable conditions set forth in Section 4.02 (or, if such Borrowing is the initial Credit Extension, Section 4.01 and Section 4.02), the Administrative Agent shall make all funds so received available to the Borrowers in like funds as received by the Administrative Agent either by (i) crediting the account of the Borrowers on the books of the Administrative Agent with the amount of such funds or (ii) wire transfer of such funds, in each case in accordance with instructions provided to (and reasonably acceptable to) the Administrative Agent by the Parent Borrower; provided, however, that if, on the date the Committed Loan Notice with respect to such Borrowing is given by the Borrower, there are L/C Borrowings outstanding, then the proceeds of such Borrowing shall be applied, first, to the payment in full of any such L/C Borrowings, and second, to the Borrowers as provided above.

(c) Except as otherwise provided herein, a Eurocurrency Rate Loan may be continued or converted only on the last day of an Interest Period for such Eurocurrency Rate Loan unless the Borrowers pay the amount due under Section 3.06 in connection therewith. During the existence of an Event of Default, at the election of the Administrative Agent or the Required Lenders, no Loans may be requested as, converted to or continued as Eurocurrency Rate Loans.

(d) The Administrative Agent shall promptly notify the Parent Borrower and the Lenders of the interest rate applicable to any Interest Period for Eurocurrency Rate Loans upon determination of such interest rate. The determination of the Eurocurrency Rate by the Administrative Agent shall be conclusive in the absence of manifest error.

(e) After giving effect to all Term Borrowings, all Revolving Credit Borrowings, all conversions of Term Loans or Revolving Credit Loans from one Type to the other, and all continuations of Term Loans or Revolving Credit Loans of the same Type, there shall not be more than ten Interest Periods in effect.

(f) The failure of any Lender to make the Loan to be made by it as part of any Borrowing shall not relieve any other Lender of its obligation, if any, hereunder to make its Loan on the date of such Borrowing, but no Lender shall be responsible for the failure of any other Lender to make the Loan to be made by such other Lender on the date of any Borrowing, which for the avoidance of doubt does not limit such Lender's obligations under Section 2.17.

Section 2.03 Letters of Credit.

(a) The Letter of Credit Commitment. (i) Subject to the terms and conditions set forth herein, (A) each L/C Issuer agrees, in reliance upon (among other things) the agreements of the other Revolving Credit Lenders set forth in this Section 2.03, (1) from time to time on any Business Day during the period from the Closing Date until the Letter of Credit Expiration Date, to issue Letters of Credit denominated in Dollars or an Alternative Currency for the account of the Parent Borrower or any Restricted Subsidiary (provided that the Borrowers hereby irrevocably agree to reimburse the applicable L/C Issuer for amounts drawn on any Letters of Credit issued for the account of the Parent Borrower or any Restricted Subsidiary on a joint and several basis with such Restricted Subsidiary) and to amend or renew Letters of Credit previously issued by it, in accordance with Section 2.03(c), and (2) to honor drafts under the Letters of Credit and (B) the Revolving Credit Lenders severally agree to participate in Letters of Credit issued for the account of the Parent Borrower or any Restricted Subsidiary; provided that no L/C Issuer shall be obligated to make any L/C Credit Extension with respect to any Letter of Credit, and no Lender shall be obligated to participate in any Letter of Credit, if as of the date of such L/C Credit Extension (w) the aggregate amount of L/C Obligations owing to such L/C Issuer would exceed the Letter of Credit Commitment of such L/C Issuer, (x) the Total Revolving Credit Outstandings would exceed the Revolving Credit Facility, (y) the aggregate Outstanding Amount of the Revolving Credit Loans of any Lender, plus such Lender's Pro Rata Share of the Outstanding Amount of all L/C Obligations, would exceed such Lender's Revolving Credit Commitment or (z) the Outstanding Amount of the L/C Obligations would exceed the Letter of Credit Sublimit. Within the foregoing limits, and subject to the terms and conditions hereof, the Borrowers' ability to obtain Letters of Credit shall be fully revolving, and accordingly the Borrowers may, during the foregoing period, obtain Letters of Credit to replace Letters of Credit that have expired or that have been drawn upon and reimbursed. All Letters of Credit shall be denominated in Dollars or an Alternative Currency. In the event of any inconsistency between the terms and conditions of this Agreement and the terms and conditions of any Letter of Credit, the terms and conditions of this Agreement shall control.

(ii) No L/C Issuer shall be under any obligation to issue any Letter of Credit (and, in the case of clause (B) and (C), no L/C Issuer shall issue any Letter of Credit) if:

(A) any order, judgment or decree of any Governmental Authority or arbitrator shall by its terms purport to enjoin or restrain such L/C Issuer from issuing such Letter of Credit, or any Law applicable to such L/C Issuer or any request or directive (whether or not having the force of Law) from any Governmental Authority with jurisdiction over such L/C Issuer shall prohibit, or request that such L/C Issuer refrain from, the issuance of letters of credit generally or such Letter of Credit in particular or shall impose upon such L/C Issuer with respect to such Letter of Credit any restriction, reserve or capital requirement (for which such L/C Issuer is not otherwise compensated hereunder) not in effect on the Closing Date, or shall impose upon such L/C Issuer any unreimbursed loss, cost or expense which was not applicable on the Closing Date and which, in each case, such L/C Issuer in good faith deems material to it;

(B) subject to Section 2.03(c)(iii), the expiry date of such requested Letter of Credit would occur more than 12 months after the date of issuance or last renewal, unless the Required Revolving Lenders and the applicable L/C Issuer, in their sole discretion, have approved such expiry date;

(C) the expiry date of such requested Letter of Credit would occur after the Letter of Credit Expiration Date, unless (i) all the Revolving Credit Lenders and the applicable L/C Issuer have approved such expiry date and/or (ii) the applicable L/C Issuer has approved such expiry date and such requested Letter of Credit has been Cash Collateralized by the applicant requesting such Letter of Credit in accordance with Section 2.16 at least three Business Days prior to the Letter of Credit Expiration Date;

(D) the issuance of such Letter of Credit would violate one or more generally applicable policies of such L/C Issuer in place at the time of such request;

(E) such Letter of Credit is in an initial stated amount of less than $5,000 (or the Alternative Currency Equivalent of such amount) or such lesser amount as is acceptable to the applicable L/C Issuer in its sole discretion;

(F) such Letter of Credit is denominated in a currency other than Dollars or an Alternative Currency;

(G) such Letter of Credit is not a standby letter of credit; or

(H) any Revolving Credit Lender is at that time a Defaulting Lender, unless the applicable L/C Issuer has entered into arrangements, including reallocation of the Defaulting Lender's Pro Rata Share of the outstanding L/C Obligations pursuant to Section 2.17(a)(iv) or the delivery of Cash Collateral in accordance with Section 2.16 with the Borrowers or such Lender to eliminate such L/C Issuer's actual or potential Fronting Exposure (after giving effect to Section 2.17(a)(iv)) with respect to the Defaulting Lender arising from either the Letter of Credit then proposed to be issued or that Letter of Credit and all other L/C Obligations as to which such L/C Issuer has actual or potential Fronting Exposure under such Tranche.

(iii) No L/C Issuer shall be under any obligation to amend any Letter of Credit if (A) such L/C Issuer would have no obligation at such time to issue such Letter of Credit in its amended form under the terms hereof or (B) the beneficiary of such Letter of Credit does not accept the proposed amendment to such Letter of Credit.

(iv) Each L/C Issuer shall act on behalf of the Revolving Credit Lenders with respect to any Letters of Credit issued by it and the documents associated therewith, and each L/C Issuer shall have all of the benefits and immunities (A) provided to the Administrative Agent in Article IX with respect to any acts taken or omissions suffered by such L/C Issuer in connection with Letters of Credit issued by it or proposed to be issued by it and Issuer Documents pertaining to such Letters of Credit as fully as if the term "Administrative Agent" as used in Article IX included each L/C Issuer with respect to such acts or omissions, and (B) as additionally provided herein with respect to each L/C Issuer.

(b) The foregoing benefits and immunities shall not excuse any L/C Issuer from liability to the Borrowers to the extent of any direct damages (as opposed to indirect, special, consequential, punitive or exemplary damages claims which are hereby waived by the Borrowers to the extent permitted by applicable law) suffered by the Borrowers that are caused by such the L/C Issuer's gross negligence or willful misconduct as determined by a court of competent jurisdiction in a final and nonappealable judgment.

(c) Procedures for Issuance and Amendment of Letters of Credit; Auto-Renewal Letters of Credit (i) Each Letter of Credit shall be issued or amended, as the case may be, upon the request of the Parent Borrower delivered to the applicable L/C Issuer (with a copy to the Administrative Agent) in the form of a Letter of Credit Application, including agreed-upon draft language for such Letter of Credit reasonably acceptable to the applicable L/C Issuer (it being understood that such draft language for each such Letter of Credit must be in English or, if agreed to in the sole discretion of the applicable L/C issuer, accompanied by an English translation certified by the Parent Borrower to be a true and correct English translation), appropriately completed and signed by a Responsible Officer of the Parent Borrower. Such Letter of Credit Application must be received by the applicable L/C Issuer and the Administrative Agent not later than 2:00 p.m. (New York City time) at least five Business Days (or such shorter period as such L/C Issuer and the Administrative Agent may agree in a particular instance in their sole discretion) prior to the proposed issuance date or date of amendment, as the case may be. In the case of a request for an initial issuance of a Letter of Credit, such Letter of Credit Application shall specify in form and detail reasonably satisfactory to the applicable L/C Issuer: (A) the proposed issuance date of the requested Letter of Credit (which shall be a Business Day not later than 30 days prior to the Maturity Date of the Revolving Credit Facility, unless the Administrative Agent and the applicable L/C Issuer otherwise agree); (B) the amount thereof and the currency in which such Letter of Credit is to be denominated; (C) the expiry date thereof; (D) the name and address of the beneficiary thereof; (E) the documents to be presented by such beneficiary in case of any drawing thereunder; (F) the full text of any certificate or other documents to be presented by such beneficiary in case of any drawing thereunder; (G) the Person for whose account the requested Letter of Credit is to be issued (which must be a Borrower Party); and (H) such other matters as the applicable L/C Issuer may reasonably request. In the case of a request for an amendment of any outstanding Letter of Credit, such Letter of Credit Application shall specify in form and detail reasonably satisfactory to the applicable L/C Issuer: (1) the Letter of Credit to be amended; (2) the proposed date of amendment thereof (which shall be a Business Day); (3) the nature of the proposed amendment and (4) such other matters as the applicable L/C Issuer may reasonably request.

(ii) Promptly following delivery of any Letter of Credit Application to the applicable L/C Issuer, the Parent Borrower will confirm with the Administrative Agent that the Administrative Agent has received a copy of such Letter of Credit Application and, if the Administrative Agent has not received a copy of such Letter of Credit Application, then the Parent Borrower will provide the Administrative Agent with a copy thereof. Upon receipt by such L/C Issuer of confirmation from the Administrative Agent that the requested issuance or amendment is permitted in accordance with the terms hereof, then, subject to the terms and conditions hereof, such L/C Issuer shall, on the requested date, issue a Letter of Credit for the account of the Parent Borrower or any Restricted Subsidiary (as designated in the Letter of Credit Application) or enter into the applicable amendment, as the case may be. Immediately upon the issuance of each Letter of Credit, each Revolving Credit Lender shall be deemed to, and hereby irrevocably and unconditionally agrees to, purchase from the applicable L/C Issuer a risk participation in such Letter of Credit in an amount equal to such Lender's Pro Rata Share of the Revolving Credit Facility multiplied by the amount of such Letter of Credit.

(iii) If the Parent Borrower on behalf of the applicable Borrower Party so requests in any applicable Letter of Credit Application, the applicable L/C Issuer may, in its sole and absolute discretion, agree to issue a Letter of Credit that has automatic renewal provisions (each, an "Auto-Renewal Letter of Credit"); provided that any such Auto-Renewal Letter of Credit must permit such L/C Issuer to prevent any such renewal at least once in each twelve-month period (commencing with the date of issuance of such Letter of Credit) by giving prior notice to the beneficiary thereof not later than a day in each such twelve-month period to be agreed upon at the time such Letter of Credit is issued. Unless otherwise directed by the applicable L/C Issuer, the Parent Borrower shall not be required to make a specific request to such L/C Issuer for any such renewal. Once an Auto-Renewal Letter of Credit has been issued, the Revolving Credit Lenders shall be deemed to have authorized (but may not require) the applicable L/C Issuer to permit the renewal of such Letter of Credit at any time to an expiry date not later than the Letter of Credit Expiration Date; provided, however, that such L/C Issuer shall not be required to permit any such renewal if such L/C Issuer has determined that it would have no obligation at such time to issue such Letter of Credit in its renewed form under the terms hereof (by reason of the provisions of Section 2.03(a)(ii) or otherwise).

(iv) Promptly after its delivery of any Letter of Credit or any amendment to a Letter of Credit to an advising bank with respect thereto or to the beneficiary thereof, the applicable L/C Issuer will also (A) deliver to the Parent Borrower, the applicable Borrower Party and the Administrative Agent a true and complete copy of such Letter of Credit or amendment and (B) the Administrative Agent in turn will notify each Revolving Credit Lender of such issuance or amendment and the amount of such Revolving Credit Lender's Pro Rata Share therein.

(v) Notwithstanding anything to the contrary set forth above, the issuance of any Letters of Credit by any L/C Issuer under this Agreement shall be subject to such reasonable additional letter of credit issuance procedures and requirements as may be required by such L/C Issuer's internal letter of credit issuance policies and procedures, in its sole discretion, as in effect at the time of such issuance, including requirements with respect to the prior receipt by such L/C Issuer of customary "know your customer" information regarding a prospective account party or applicant that is not a Borrower hereunder, as well as regarding any beneficiaries of a requested Letter of Credit. Additionally, if (a) the beneficiary of a Letter of Credit issued hereunder is an issuer of a letter of credit not governed by this Agreement for the account of the Parent Borrower or any Restricted Subsidiary (an "Other LC"), and (b) such Letter of Credit is issued to provide credit support for such Other LC, no amendments may be made to such Other LC without the consent of the applicable L/C Issuer hereunder.

(d) Drawings and Reimbursements; Funding of Participations. (i) Upon receipt from the beneficiary of any Letter of Credit drawing under such Letter of Credit, the applicable L/C Issuer shall notify the Parent Borrower thereof. Each L/C Issuer shall notify the Parent Borrower on the date of any payment by such L/C Issuer under a Letter of Credit (each such date, an "Honor Date"), and the Borrowers shall reimburse such L/C Issuer through the Administrative Agent in the Dollar Equivalent of such drawing no later than on the next succeeding Business Day (and any reimbursement made on such next Business Day shall be taken into account in computing interest and fees in respect of any such Letter of Credit) after the Parent Borrower shall have received notice of such payment with interest on the amount so paid or disbursed by such L/C Issuer, to the extent not reimbursed prior to 3:00 p.m. (New

York City time) on the applicable Honor Date, from and including the date paid or disbursed to but excluding the date such L/C Issuer was reimbursed by the Borrowers therefor at a rate per annum equal to the Base Rate as in effect from time to time *plus* the Applicable Rate as in effect from time to time for Revolving Credit Loans that are maintained as Base Rate Loans. If the Borrowers fail to so reimburse such L/C Issuer on such next Business Day, the Administrative Agent shall promptly notify each Revolving Credit Lender of the Honor Date, the amount of the unreimbursed drawing (the "Unreimbursed Amount"), and the amount of such Revolving Credit Lender's Pro Rata Share thereof. In such event, in the case of an Unreimbursed Amount, the Borrowers shall be deemed to have requested a Revolving Credit Borrowing of Base Rate Loans in Dollars to be disbursed on such date in an amount equal to the Dollar Equivalent of the Unreimbursed Amount, in accordance with the requirements of Section 2.02 but without regard to the minimum and multiples specified in Section 2.02 for the principal amount of Base Rate Loans or Eurocurrency Rate Loans, as the case may be, but subject to the amount of the unutilized portion of the Revolving Credit Commitments and the conditions set forth in Section 4.02 (other than the delivery of a Committed Loan Notice). Any notice given by an L/C Issuer or the Administrative Agent pursuant to this Section 2.03(d)(i) may be given by telephone if promptly confirmed in writing; provided that the lack of such a prompt confirmation shall not affect the conclusiveness or binding effect of such notice.

(ii) Each Revolving Credit Lender (including each Lender acting as an L/C Issuer) shall upon any notice pursuant to Section 2.03(d)(i) make funds available (and the Administrative Agent may apply Cash Collateral provided for this purpose) for the account of the applicable L/C Issuer, at the Administrative Agent's Office in an amount equal to, and in the same currency as, its applicable Pro Rata Share of the Unreimbursed Amount not later than 3:00 p.m. (New York City time) on the Business Day specified in such notice by the Administrative Agent, whereupon, subject to the provisions of Section 2.03(d)(iii), each Revolving Credit Lender that so makes funds available shall be deemed to have made a Base Rate Revolving Credit Loan to the Borrowers in such amount. The Administrative Agent shall promptly remit the funds so received to the applicable L/C Issuer.

(iii) With respect to any Unreimbursed Amount that is not fully refinanced by a Revolving Credit Borrowing of Base Rate Loans because the conditions set forth in Section 4.02 cannot be satisfied or for any other reason, the Borrowers shall be deemed to have incurred from the applicable L/C Issuer an L/C Borrowing denominated in Dollars in the Dollar Equivalent amount of the Unreimbursed Amount that is not so refinanced, which L/C Borrowing shall be due and payable on demand (together with interest) and shall bear interest at the Default Rate then applicable to Base Rate Revolving Credit Loans. In such event, each Revolving Credit Lender's payment to the Administrative Agent for the account of the applicable L/C Issuer pursuant to Section 2.03(d)(ii) shall be deemed payment in respect of its participation in such L/C Borrowing and shall constitute an L/C Advance from such Lender in satisfaction of its participation obligation under this Section 2.03.

(iv) Until each Revolving Credit Lender funds its Revolving Credit Loan or L/C Advance pursuant to this Section 2.03(d) to reimburse the applicable L/C Issuer for any amount drawn under any Letter of Credit, interest in respect of such Lender's applicable Pro Rata Share of such amount shall be solely for the account of such L/C Issuer.

(v) Each Revolving Credit Lender's obligation to make Revolving Credit Loans or L/C Advances to reimburse the applicable L/C Issuer for amounts drawn under Letters of Credit, as contemplated by this Section 2.03(d), shall be absolute and unconditional and shall not be affected by any circumstance, including (A) any setoff, counterclaim, recoupment, defense or other right which such Lender may have against such L/C Issuer, the Borrowers or any other Person for any reason whatsoever, (B) the occurrence or continuance of a Default or (C) any other occurrence, event or condition, whether or not similar to any of the foregoing; provided, however, that each Revolving Credit Lender's obligation to make Revolving Credit Loans pursuant to this Section 2.03(d) is subject to the conditions set forth in Section 4.02 (other than delivery by the Parent Borrower of a Committed Loan Notice). No such making of an L/C Advance shall relieve or otherwise impair the obligation of the Borrowers to reimburse the applicable L/C Issuer for the amount of any payment made by the applicable L/C Issuer under any Letter of Credit, together with interest as provided herein.

(vi) If any Revolving Credit Lender fails to make available to the Administrative Agent for the account of the applicable L/C Issuer any amount required to be paid by such Lender pursuant to the foregoing provisions of this Section 2.03(d) by the time specified in Section 2.03(d)(ii), then, without limiting the other provisions of this Agreement, such L/C Issuer shall be entitled to recover from such 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 L/C Issuer at a rate per annum equal to the greater of the NYFRB Rate from time to time in effect and a rate reasonably determined by such L/C Issuer in accordance with banking industry rules on interbank compensation, plus any reasonable administrative, processing or similar fees customarily charged by such L/C Issuer in connection with the foregoing. If such Lender pays such principal amount, the amount so paid (less interest and fees) shall constitute such Lender's Loan included in the relevant Borrowing or L/C Advance in respect of the relevant L/C Borrowing, as the case may be. A certificate of the applicable L/C Issuer submitted to any Revolving Credit Lender (through the Administrative Agent) with respect to any amounts owing under this Section 2.03(d)(vi) shall be conclusive absent manifest error.

(e) Repayment of Participations. (i) If, at any time after an L/C Issuer has made a payment under any Letter of Credit issued by it and has received from any Revolving Credit Lender such Lender's L/C Advance in respect of such payment in accordance with Section 2.03(d), the Administrative Agent receives for the account of such L/C Issuer any payment in respect of the related Unreimbursed Amount or interest thereon (whether directly from the Borrowers or otherwise, including proceeds of Cash Collateral applied thereto by the Administrative Agent), the Administrative Agent will distribute to such Lender its applicable Pro Rata Share thereof (appropriately adjusted, in the case of interest payments, to reflect the period of time during which such Lender's L/C Advance was outstanding) in the same funds as those received by the Administrative Agent.

(ii) If any payment received by the Administrative Agent for the account of an L/C Issuer pursuant to Section 2.03(d)(i) is required to be returned under any of the circumstances described in Section 10.06 (including pursuant to any settlement entered into by such L/C Issuer in its discretion), each Revolving Credit Lender shall pay to the Administrative Agent for the account of such L/C Issuer its applicable Pro Rata Share thereof on demand of the Administrative Agent, plus interest thereon from the date of such demand to the date such amount is returned by such Lender, at a rate per annum equal to the NYFRB Rate from time to time in effect. The obligations of the Lenders under this clause shall survive the payment in full of the Obligations and the termination of this Agreement.

(f) Obligations Absolute. The obligation of the Borrowers to reimburse the applicable L/C Issuer for each drawing under each Letter of Credit and to repay each L/C Borrowing shall be absolute, unconditional and irrevocable, and shall be paid strictly in accordance with the terms of this Agreement under all circumstances, including the following:

(i) any lack of validity or enforceability of such Letter of Credit, this Agreement, or any other agreement or instrument relating thereto;

(ii) the existence of any claim, counterclaim, setoff, defense or other right that the Parent Borrower or any Subsidiary may have at any time against any beneficiary or any transferee of such Letter of Credit (or any Person for whom any such beneficiary or any such transferee may be acting), the applicable L/C Issuer or any other Person, whether in connection with this Agreement, the transactions contemplated hereby or by such Letter of Credit or any agreement or instrument relating thereto, or any unrelated transaction;

(iii) any draft, demand, certificate or other document presented under such Letter of Credit proving to be forged, fraudulent, invalid or insufficient in any respect or any statement therein being untrue or inaccurate in any respect; or any loss or delay in the transmission or otherwise of any document required in order to make a drawing under such Letter of Credit;

(iv) any payment by the applicable L/C Issuer under such Letter of Credit against presentation of a draft, certificate or other drawing document that does not comply with the terms of such Letter of Credit; or any payment made by the applicable L/C Issuer under such Letter of Credit to any Person purporting to be a trustee in bankruptcy, debtor-in-possession, assignee for the benefit of creditors, administrator, administrative receiver, judicial manager, liquidator, receiver or other representative of or successor to any beneficiary or any transferee of such Letter of Credit, including any arising in connection with any proceeding under any Debtor Relief Law;

(v) any exchange, release or non-perfection of any Collateral, or any release or amendment or waiver of or consent to departure from the Guaranty or any other guarantee, for all or any of the Obligations of the Borrowers in respect of such Letter of Credit; or

(vi) any other circumstance or happening whatsoever, whether or not similar to any of the foregoing, including any other circumstance that might otherwise constitute a defense available to, or a legal or equitable discharge of, or provide a right of setoff against the Borrowers' obligations hereunder.

The Borrowers shall promptly examine a copy of each Letter of Credit and each amendment thereto that is delivered to it and, in the event of any claim of noncompliance with the instructions of the Borrowers or other irregularity, the Parent Borrower will promptly notify the applicable L/C Issuer. The Borrowers shall be conclusively deemed to have waived any such claim against any L/C Issuer and its correspondents unless such notice is given as aforesaid.

(g) Role of L/C Issuer. Each Lender and each Borrower agree that, in paying any drawing under a Letter of Credit, the applicable L/C Issuer shall not have any responsibility to obtain any document (other than any sight draft, certificates and other documents expressly required by the Letter of Credit) or to ascertain or inquire as to the validity or accuracy of any such document or the authority of the Person executing or delivering any such document. None of the applicable L/C Issuer, any Agent-Related Person nor any of the respective correspondents, participants or assignees of the applicable L/C Issuer shall be liable to any Lender for (i) any action taken or omitted in connection herewith at the request or with the approval of the Revolving Credit Lenders or the Required Revolving Lenders, as applicable; (ii) any action taken or omitted in the absence of gross negligence or willful misconduct as determined by a court of competent jurisdiction in a final and nonappealable judgment or (iii) the due execution, effectiveness, validity or enforceability of any document or instrument related to any Letter of Credit or Letter of Credit Application. The Borrowers hereby assume all risks of the acts or omissions of any beneficiary or transferee with respect to its use of any Letter of Credit; provided, however, that this assumption is not intended to, and shall not, preclude the Borrowers from pursuing such rights and remedies as it may have against the beneficiary or transferee at Law or under any other agreement. None of the applicable L/C Issuer, any Agent-Related Person, nor any of the respective correspondents, participants or assignees of such L/C Issuer, shall be liable or responsible for any of the matters described in clauses (i) through (v) of Section 2.03(f); provided, however, that anything in such clauses to the contrary notwithstanding, the Borrowers may have a claim against such L/C Issuer, and such L/C Issuer may be liable to the Borrowers, to the extent, but only to the extent, of any direct, as opposed to indirect, special, punitive, consequential or exemplary, damages suffered by the Borrowers which a court of competent jurisdiction determines in a final non-appealable judgment were caused by such L/C Issuer's willful misconduct or gross negligence. In furtherance and not in limitation of the foregoing, the applicable L/C Issuer may, in its sole discretion, either accept documents that appear on their face to be in order and make payment upon such documents, without responsibility for further investigation, regardless of any notice or information to the contrary, and such L/C Issuer shall not be responsible for the validity or sufficiency of any instrument transferring or assigning or purporting to transfer or assign a Letter of Credit or the rights or benefits thereunder or proceeds thereof, in whole or in part, which may prove to be invalid or ineffective for any reason 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.

(h) Letter of Credit Fees. The Borrowers shall pay to the Administrative Agent for the account of each Revolving Credit Lender in accordance with its applicable Pro Rata Share, a Letter of Credit fee in Dollars which shall accrue for each Letter of Credit in an amount equal to the Applicable Rate then in effect for Eurocurrency Rate Loans with respect to the Revolving Credit Facility multiplied by the daily maximum Dollar Equivalent amount then available to be drawn under such Letter of Credit (whether or not such maximum amount is then in effect under such Letter of Credit if such maximum amount increases automatically pursuant to the terms of such Letter of Credit); provided, however, that any Letter of Credit fees otherwise payable for the account of a Defaulting Lender with respect to any Letter of Credit as to which such Defaulting Lender has not provided Cash Collateral satisfactory to the applicable L/C Issuer pursuant to this Section 2.03 shall be payable, to the maximum extent permitted by applicable Law, to the other Revolving Credit Lenders in accordance with the upward adjustments in their respective applicable Pro Rata Shares allocable to such Letter of Credit pursuant to Section 2.17(a)(iv) with the balance of such fee, if any, payable to the applicable L/C Issuer for its own account. Such Letter of Credit fees shall be computed on a quarterly basis in arrears and shall be due and payable on the last Business Day of each fiscal quarter, in respect of the quarterly period then ending (or portion thereof, in the case of the first payment), commencing with the first such date to occur

after the issuance of such Letter of Credit, on the Letter of Credit Expiration Date and thereafter on demand. If there is any change in the Applicable Rate during any quarter, the daily maximum amount of each Letter of Credit shall be computed and multiplied by the Applicable Rate separately for each period during such quarter that such Applicable Rate was in effect.

(i) Fronting Fee and Documentary and Processing Charges Payable to an L/C Issuer. The Borrowers shall pay directly to the applicable L/C Issuer for its own account a fronting fee in Dollars equal to 0.125% of the maximum daily Dollar Equivalent amount available to be drawn under such Letter of Credit on a quarterly basis in arrears. Such fronting fee shall be due and payable on the last Business Day of each fiscal quarter beginning with the last Business Day of the first full fiscal quarter to end after the Closing Date in respect of the quarterly period then ending (or portion thereof, in the case of the first payment), commencing with the first such date to occur after the issuance of such Letter of Credit, on the Letter of Credit Expiration Date and thereafter on demand. For purposes of computing the maximum daily amount available to be drawn under any Letter of Credit, the amount of such Letter of Credit shall be determined in accordance with Section 1.09. In addition, the Borrowers shall pay directly to the applicable L/C Issuer for its own account the customary issuance, presentation, administration, amendment and other processing fees, and other standard costs and charges, of such L/C Issuer relating to letters of credit as from time to time in effect. Such customary fees and standard costs and charges are due and payable within five Business Days of demand and are nonrefundable.

(j) Conflict with Letter of Credit Application. In the event of any conflict between the terms hereof and the terms of any Letter of Credit Application, the terms hereof shall control.

(k) Reporting. To the extent that any Letters of Credit are issued by an L/C Issuer other than the Administrative Agent, each such L/C Issuer shall furnish to the Administrative Agent a report detailing the daily L/C Obligations outstanding under all Letters of Credit issued by it, such report to be in a form and at reporting intervals as shall be agreed between the Administrative Agent and such L/C Issuer; provided that in no event shall such reports be furnished at intervals greater than 31 days.

(l) Provisions Related to Extended Revolving Credit Commitments. If the Maturity Date in respect of any Tranche of Revolving Credit Commitments occurs prior to the expiration of any Letter of Credit, then (i) if one or more other Tranches of Revolving Credit Commitments in respect of which the Maturity Date shall not have occurred are then in effect, such Letters of Credit shall automatically be deemed to have been issued (including for purposes of the obligations of the Revolving Credit Lenders to purchase participations therein and to make Revolving Credit Loans and payments in respect thereof pursuant to this Section 2.03) under (and ratably participated in by Lenders pursuant to) the Revolving Credit Commitments in respect of such non-terminating Tranches up to an aggregate amount not to exceed the aggregate principal amount of the unutilized Revolving Credit Commitments thereunder at such time (it being understood that no partial face amount of any Letter of Credit may be so reallocated) and to the extent any Letters of Credit are not able to be reallocated pursuant to this clause (l) and there are outstanding Revolving Credit Loans under the non-terminating Tranches, the Borrowers agree to repay all such Revolving Credit Loans (or such lesser amount as is necessary to reallocate all Letters of Credit pursuant to this clause (l)) or (ii) to the extent not reallocated pursuant to immediately preceding clause (i), the Borrowers shall Cash Collateralize any such Letter of Credit in accordance with Section 2.16 but only up to the amount of such Letter of Credit not so reallocated. Except to the extent of reallocations of participations pursuant to clause (i) of the immediately preceding sentence, the occurrence of a Maturity Date with respect to a given tranche of Revolving Credit Commitments shall have no effect upon (and shall not diminish) the percentage participations of the Revolving Credit Lenders in any Letter of Credit issued before such Maturity Date.

Section 2.04 [Reserved].

Section 2.05 Prepayments.

(a) Optional. (i) A Borrower may, upon notice by the Parent Borrower substantially in the form ofExhibit L-1 to the Administrative Agent, at any time or from time to time voluntarily prepay Loans in whole or in part without premium or penalty except as set forth in Section 2.05(a)(iii) below; provided that (1) such notice must be received by the Administrative Agent not later than 2:00 p.m. (New York City time) (A) three Business Days prior to any date of prepayment of Eurocurrency Rate Loan and (B) on the date of prepayment of Base Rate Loans (or such

shorter period as the Administrative Agent shall agree); (2) any prepayment of Eurocurrency Rate Loans shall be (x) in a principal amount of $2,000,000 (or the Alternative Currency Equivalent of such amount), or (y) a whole multiple of $1,000,000 (or the Alternative Currency Equivalent of such amount) in excess thereof; and (3) any prepayment of Base Rate Loans shall be (x) in a principal amount of $500,000 (or the Alternative Currency Equivalent of such amount), or (y) a whole multiple of $500,000 (or the Alternative Currency Equivalent of such amount) in excess thereof or, in each case, if less, the entire principal amount thereof then outstanding. Each such notice shall specify the date, amount and currency of such prepayment, the Tranche of Loans to be prepaid, the Type(s) of Loans to be prepaid and, if Eurocurrency Rate Loans are to be prepaid, the Interest Period(s) of such Loans (except that if the class of Loans to be prepaid includes both Base Rate Loans and Eurocurrency Rate Loans, absent direction by the Parent Borrower, the applicable prepayment shall be applied first to Base Rate Loans to the full extent thereof before application to Eurocurrency Rate Loans, in each case in a manner that minimizes the amount payable by the applicable Borrower in respect of such prepayment pursuant to Section 3.06). The Administrative Agent will promptly notify each Lender of its receipt of each such notice, and of the amount of such Lender's ratable portion of such prepayment (based on such Lender's ratable share of the relevant Facility). If such notice is given by the Parent Borrower, subject to clause (ii) below, the applicable Borrower shall make such prepayment and the payment amount specified in such notice shall be due and payable on the date specified therein. Any prepayment of a Eurocurrency Rate Loan shall be accompanied by all accrued interest thereon, together with any additional amounts required pursuant to Section 2.05(a)(iii) and Section 3.06. Each prepayment of the principal of, and interest on, any Revolving Credit Loans denominated in an Alternative Currency shall be made in the relevant Alternative Currency. Subject to Section 2.17, each prepayment of outstanding Term Loan Tranches pursuant to this Section 2.05(a) shall be applied to the Term Loan Tranche or Term Loan Tranches designated on such notice on a *pro rata* basis within such Term Loan Tranche. Subject to Section 2.17, each prepayment of an outstanding Term Loan Tranche pursuant to this Section 2.05(a) shall be applied to the remaining amortization payments of such Term Loan Tranche as directed by the Parent Borrower (or, if the Parent Borrower has not made such designation, in direct order of maturity), but, in any event, on a *pro rata* basis to the Lenders within such Term Loan Tranche.

(ii) Notwithstanding anything to the contrary contained in this Agreement, any notice of prepayment under Section 2.05(a)(i) may state that it is conditioned upon the occurrence or non-occurrence of any event specified therein (including the effectiveness of other credit facilities), in which case such notice may be revoked by the Parent Borrower (by written notice to the Administrative Agent on or prior to the specified effective date) if such condition is not satisfied or specify that such notice is not automatically extended until the occurrence of such event specified therein.

(iii) If the Borrowers, in connection with, or resulting in, any Repricing Event (A) make a voluntary prepayment of any Initial Term Loans pursuant to Section 2.05(a), (B) make a repayment of any Initial Term Loans pursuant to Section 2.05(b)(iii) or (C) effects any amendment with respect to the Initial Term Loans for purposes of effectuating a Repricing Event, in each case, on or prior to the date that is six (6) months after the Closing Date, the Borrowers shall pay to the Administrative Agent, for the ratable account of the applicable Term Lenders (x) with respect to clauses (A) and (B), a prepayment premium in an amount equal to 1.00% of the principal amount of Term Loans prepaid or repaid and (y) with respect to clause (C), a prepayment premium in an amount equal to 1.00% of the principal amount of the affected Term Loans held by the Term Lenders not consenting to such amendment.

(b) Mandatory. (i) For any Excess Cash Flow Period, within ten Business Days after financial statements have been delivered pursuant to Section 6.01(a) and the related Compliance Certificate has been delivered pursuant to Section 6.02(b) (or, if later, the date on which such financial statements and such Compliance Certificate are required to be delivered), the Parent Borrower shall prepay an aggregate principal amount of Term Loans in an amount equal to (A) 50% (as may be adjusted pursuant to the proviso below) of Excess Cash Flow for such Excess Cash Flow Period, *minus* (B) the sum of (1) the aggregate amount of voluntary principal prepayments of the Loans and any other Indebtedness secured on a *pari passu* basis with the Term Loans, in each case, made during the period commencing on the first day of the relevant Excess Cash Flow Period and ending on the date immediately prior to the date on which the relevant Excess Cash Flow prepayment is or would be required to be made (including prepayments at a discount to par and open market purchases, with credit given for the par amount of the Indebtedness so prepaid) (except prepayments of Loans under any Revolving Tranche or any other revolving Indebtedness that are not accompanied by a corresponding permanent commitment reduction of the Revolving Tranches or the corresponding revolving credit commitments, as applicable), in each case other than to the extent that any such prepayment is funded with the proceeds of Specified Refinancing Debt, Refinancing Notes or any other long-term Indebtedness, (2) the sum

of (I) repayments, prepayments, repurchases, redemptions and other cash payments made with respect to the principal of any Indebtedness (including principal representing capitalized interest) or the principal component of any Capitalized Lease Obligations of such Person or any of its Restricted Subsidiaries during such period (excluding voluntary and mandatory prepayments of Term Loans and any such payment from the proceeds of long-term Indebtedness, but including all premium, make-whole or penalty payments paid in cash (to the extent such payments are not expensed during such period or are not deducted in calculating Consolidated Net Income and such payments are not otherwise prohibited under this Agreement) and all repayments with respect to revolving Indebtedness to the extent accompanied by a corresponding reduction in commitments); provided that, with respect to any mandatory prepayment of Indebtedness (other than, for the avoidance of doubt, Term Loans), such prepayments shall only be deducted pursuant to this clause (i) to the extent not deducted in the computation of net proceeds in respect of the asset disposition or condemnation giving rise thereto; (II) (x) cash payments made by such Person or any of its Restricted Subsidiaries during such period in respect of capital expenditures, acquisitions (including of intellectual property) and Investments and (y) cash payments that such Person or any of its Restricted Subsidiaries has committed to make or is required to make in respect of capital expenditures, acquisitions (including of intellectual property) and Investments within 365 days after the end of such period pursuant to binding obligations entered into prior to or during such period or, at the Parent Borrower's option, after the end of such period and prior to the date of such Excess Cash Flow payment for such period; provided that amounts described in this clause (y) will not reduce Excess Cash Flow in subsequent periods, and, to the extent not paid, will increase Excess Cash Flow in the subsequent period, (III) (x) cash payments made by such Person or any of its Restricted Subsidiaries during such period in respect of Taxes (including distributions to any Parent Holding Company in respect of Taxes), to the extent such payments exceed the amount of tax expense deducted in calculating such Consolidated Net Income, and (y) cash payments that such Person or any of its Restricted Subsidiaries will be required to make in respect of Taxes (including distributions to any Parent Holding Company in respect of Taxes) within 180 days after the end of such period, and (IV) to the extent not deducted in arriving at Consolidated Net Income, cash fees, expenses and purchase price adjustments incurred in connection with the Transactions, any acquisition consummated before or after the Closing Date or any Permitted Investment, Equity Issuance or debt issuance (whether or not consummated) and any Restricted Payment made to pay any of the foregoing incurred by Holdings and (3) any amount not required to be applied to such prepayment pursuant to Section 2.05(b)(viii) or (ix); provided that such percentage in respect of any Excess Cash Flow Period shall be reduced to 25% or 0% if the Consolidated First Lien Net Leverage Ratio (calculated after giving Pro Forma Effect to any prepayment or reduction as set forth in clause (B) above) as of the last day of the fiscal year to which such Excess Cash Flow Period relates was equal to or less than 4.75:1.00 or 4.25:1.00, respectively; provided, further, that no prepayment shall be required with respect to any Excess Cash Flow Period to the extent Excess Cash Flow for such period is equal to or less than $10,000,000 (and for such period such prepayment shall be limited to the amount in excess of $10,000,000); provided, further, that, if the Consolidated First Lien Net Leverage Ratio on a Pro Forma Basis after giving effect to any prepayment pursuant to clause (B) above and any Excess Cash Flow prepayment would result in the percentage in respect of the applicable Excess Cash Flow Period being reduced to 25% or 0%, then such reduced percentage applicable to the Excess Cash Flow prepayment required to be made shall apply; provided further that to the extent the amount of prepayments pursuant to subclause (B) above exceeds the amount that would otherwise be payable pursuant to this Section 2.05(b) in any given fiscal year, the excess thereof may be applied, in the Borrowers' discretion, to any amount of Excess Cash Flow payable pursuant to this Section 2.05(b) in the immediately following fiscal year.

(ii) If any Asset Sale or Casualty Event (or series of related Asset Sales or Casualty Events) results in the receipt by any Borrower or any Restricted Subsidiary of aggregate Net Cash Proceeds in excess of $10,000,000 ("Relevant Transaction"), then, except to the extent the Parent Borrower elects to reinvest all or a portion of such Net Cash Proceeds in accordance with Section 7.04, the Borrowers shall prepay, subject to Section 2.05(b)(viii), an aggregate principal amount of Term Loans in an amount equal to 100% (as may be adjusted pursuant to the second proviso below) of the Net Cash Proceeds received from such Relevant Transaction within 15 Business Days of the end of such reinvestment period by such Borrower or such Restricted Subsidiary; provided that such Borrower may use a portion of the Net Cash Proceeds received from such Relevant Transaction to prepay or repurchase any other Indebtedness (and, in the case of revolving indebtedness, permanently reduce related commitments) that is secured by the Collateral on a *pari passu* basis with Liens securing the Obligations to the extent such other Indebtedness and the Liens securing the same are permitted hereunder and the documentation governing such other Indebtedness requires such a prepayment or repurchase thereof with the proceeds of such Relevant Transaction, to the extent not deducted in the calculation of Net Cash Proceeds, in each case in an amount not to exceed the product of (1) the amount of such Net Cash Proceeds and (2) a fraction, the numerator of which is the outstanding principal amount of such other

Indebtedness (or to the extent such amount is not in Dollars, such equivalent amount of such Indebtedness converted into Dollars as determined in accordance with Section 1.08) and the denominator of which is the aggregate outstanding principal amount of Term Loans and such other Indebtedness (or to the extent such amount is not in Dollars, such equivalent amount of such Indebtedness converted into Dollars as determined in accordance with Article I); provided, further, that, so long as no Event of Default shall have occurred and be continuing or would result therefrom, such prepayment percentage shall be reduced from 100% to 50% or 0% if, on a Pro Forma Basis after giving effect to such Asset Sale or Casualty Event, as the case may be, and the use of proceeds therefrom, the Consolidated First Lien Net Leverage Ratio would be equal to or less than 4.75:1.00 or 4.25:1.00 (such amounts not required to be prepaid as a result of such prepayment percentage reduction, the "Retained Asset Sale Proceeds"), respectively; provided, further, that only the amount of Net Cash Proceeds in excess of $10,000,000 in any fiscal year shall be subject to prepayment pursuant to this Section 2.05(b)(ii).

(iii) Upon the incurrence or issuance by any Borrower or any Restricted Subsidiary of any Refinancing Notes, any Specified Refinancing Term Loans or any Indebtedness not expressly permitted to be incurred or issued pursuant to Section 7.01, the Borrowers shall prepay an aggregate principal amount of Term Loan Tranches in an amount equal to 100% of all Net Cash Proceeds received therefrom immediately upon receipt thereof by such Borrower or such Restricted Subsidiary.

(iv) Upon the incurrence by any Borrower or any Restricted Subsidiary of any Specified Refinancing Debt constituting revolving credit facilities, the Borrowers shall prepay an aggregate principal amount of Revolving Credit Loans (and correspondingly reduce commitments) in an amount equal to 100% of all Net Cash Proceeds received therefrom immediately upon receipt thereof by the Borrowers or such Restricted Subsidiary.

(v) If for any reason the sum of the Total Revolving Credit Outstandings or the sum of outstanding Specified Refinancing Revolving Loans at any time exceed the sum of the Revolving Tranche in respect thereof (including after giving effect to any reduction in the Revolving Credit Commitments pursuant to Section 2.06), the Borrowers shall immediately prepay the Loans under the applicable Revolving Tranche and/or Cash Collateralize the L/C Obligations related thereto in an aggregate amount equal to such excess; provided, however, that the Borrowers shall not be required to Cash Collateralize the L/C Obligations pursuant to this Section 2.05(b)(v) unless after the prepayment in full of the Loans under the applicable Revolving Tranche the sum of the Total Revolving Credit Outstandings or the outstanding Specified Refinancing Revolving Loans, as the case may be, exceed the aggregate Revolving Credit Commitments or the commitments to make Specified Refinancing Revolving Loans, as the case may be, then in effect.

(vi) Subject to Section 2.17, each prepayment of Term Loans pursuant to this Section 2.05(b) shall be applied to each Term Loan Tranche on a *pro rata* basis (or, if agreed to in writing by the Majority Lenders of a Term Loan Tranche, in a manner that provides for more favorable prepayment treatment of other Term Loan Tranches, so long as each other such Term Loan Tranche receives its Pro Rata Share of any amount to be applied more favorably, except to the extent otherwise agreed by the Majority Lenders of each Term Loan Tranche receiving less than such Pro Rata Share) (other than a prepayment of (x) Term Loans or Revolving Credit Loans, as applicable, with the proceeds of Indebtedness incurred pursuant to Section 2.18, which shall be applied to the Term Loan Tranche or Revolving Tranche, as applicable, being refinanced pursuant thereto or (y) Term Loans with the proceeds of any Refinancing Notes issued to the extent permitted under Section 7.01(a), which shall be applied to the Term Loan Tranche being refinanced pursuant thereto). Amounts to be applied to a Term Loan Tranche in connection with prepayments made pursuant to this Section 2.05(b) shall be applied to the remaining scheduled installments with respect to such Term Loan Tranche as directed by the Parent Borrower, and absent such direction, in direct order of maturity. Each prepayment of Term Loans under a Facility pursuant to this Section 2.05(b) shall be applied on a *pro rata* basis to the then outstanding Base Rate Loans and Eurocurrency Rate Loans under such Facility; provided that, if there are no Declining Lenders with respect to such prepayment, then the amount thereof shall be applied first to Base Rate Loans under such Facility to the full extent thereof before application to Eurocurrency Rate Loans, in each case in a manner that minimizes the amount payable by the Borrowers in respect of such prepayment pursuant to Section 3.06.

(vii) All prepayments under this Section 2.05 shall be made together with, in the case of any such prepayment of a Eurocurrency Rate Loan on a date other than the last day of an Interest Period therefor, any amounts owing in respect of such Eurocurrency Rate Loan pursuant to Section 3.06 and, to the extent applicable, any additional

amounts required pursuant to Section 2.05(a)(iii). Notwithstanding any of the other provisions of this Section 2.05(b), so long as no Event of Default shall have occurred and be continuing, if any prepayment of Eurocurrency Rate Loans is required to be made under this Section 2.05(b), other than on the last day of the Interest Period therefor, the Borrowers may, in its sole discretion, deposit the amount of any such prepayment otherwise required to be made thereunder into a Cash Collateral account until the last day of such Interest Period, at which time the Administrative Agent shall be authorized (without any further action by or notice to or from the Borrowers or any other Loan Party) to apply such amount to the prepayment of such Loans in accordance with this Section 2.05(b) (it being agreed, for clarity, that interest shall continue to accrue on the Loans so prepaid until the amount so deposited is actually applied to prepay such Loans). Upon the occurrence and during the continuance of any Event of Default, the Administrative Agent shall also be authorized (without any further action by or notice to or from the Borrowers or any other Loan Party) to apply such amount to the prepayment of the outstanding Loans in accordance with this Section 2.05(b).

(viii) Notwithstanding any other provisions of this Section 2.05, to the extent that any or all of the Net Cash Proceeds of any Asset Sale by a Foreign Subsidiary (or a Domestic Subsidiary of a Foreign Subsidiary) (a "Foreign Disposition") or the Net Cash Proceeds of any Casualty Event from a Foreign Subsidiary (or a Domestic Subsidiary of a Foreign Subsidiary) (a "Foreign Casualty Event"), in each case giving rise to a prepayment event pursuant to Section 2.05(b)(ii), or Excess Cash Flow giving rise to a prepayment event pursuant to Section 2.05(b)(i) are or is prohibited, restricted or delayed by applicable local law, rule or regulation (including, without limitation, financial assistance and corporate benefit restrictions and fiduciary and statutory duties of any director or officer of such Subsidiaries) from being repatriated to the Parent Borrower or so prepaid or such repatriation or prepayment would present a material risk of liability for the applicable Subsidiary or its directors or officers (or gives rise to a material risk of breach of fiduciary or statutory duties by any director or officer), the portion of such Net Cash Proceeds or Excess Cash Flow so affected will not be required to be applied to repay Term Loans at the times provided in this Section 2.05 but may be retained by the applicable Foreign Subsidiary.

(ix) Notwithstanding any other provisions of this Section 2.05, to the extent that the Parent Borrower has determined in good faith that repatriation of any or all of the Net Cash Proceeds of any Foreign Disposition or any Foreign Casualty Event, in each case giving rise to a prepayment event pursuant to Section 2.05(b)(ii), or Excess Cash Flow giving rise to a prepayment event pursuant to Section 2.05(b)(i) would have an adverse tax cost consequence (that are not de minimis) on the Parent Borrower or any Subsidiary or their Affiliates (taking into account any foreign tax credit or benefit actually realized in connection with such repatriation) with respect to such Net Cash Proceeds or Excess Cash Flow, the Net Cash Proceeds or Excess Cash Flow so affected may be retained by the applicable Foreign Subsidiary.

(c) Term Lender Opt-Out. With respect to any prepayment of Initial Term Loans and, unless otherwise specified in the documents therefor, other Term Loan Tranches pursuant to Section 2.05(b)(i) or (ii), any Appropriate Lender, at its option (but solely to the extent the Parent Borrower elects for this clause (c) to be applicable to a given prepayment), other than in connection with any Refinancing Notes or any Specified Refinancing Term Loans, may elect not to accept such prepayment as provided below. The Parent Borrower may notify the Administrative Agent of any event giving rise to a prepayment under Section 2.05(b)(i) or (ii) at least ten Business Days prior to the date of such prepayment. Each such notice shall specify the date of such prepayment and provide a reasonably detailed calculation of the amount of such prepayment that is required to be made under Section 2.05(b)(ii) or (iii) (the "Prepayment Amount"). The Administrative Agent will promptly notify each Appropriate Lender of the contents of any such prepayment notice so received from the Parent Borrower, including the date on which such prepayment is to be made (the "Prepayment Date"). Any Appropriate Lender may (but solely to the extent the Parent Borrower elects for this clause (c) to be applicable to a given prepayment) decline to accept all (but not less than all) of its share of any such prepayment (any such Lender, a "Declining Lender") by providing written notice to the Administrative Agent no later than five Business Days after the date of such Appropriate Lender's receipt of notice from the Administrative Agent regarding such prepayment. If any Appropriate Lender does not give a notice to the Administrative Agent on or prior to such fifth Business Day informing the Administrative Agent that it declines to accept the applicable prepayment, then such Lender will be deemed to have accepted such prepayment. On any Prepayment Date, an amount equal to the Prepayment Amount minus the portion thereof allocable to Declining Lenders, in each case for such Prepayment Date, shall be paid to the Administrative Agent by the Parent Borrower and applied by the Administrative Agent ratably to prepay Term Loans under the Term Loan Tranches owing to Appropriate Lenders (other than Declining Lenders) in the manner described in Section 2.05(b) for such prepayment. Any amounts that would otherwise have been applied to prepay Term Loans owing to Declining Lenders shall be retained by the Parent Borrower (such amounts, "Declined Amounts").

(d) All Loans shall be repaid, whether pursuant to this Section 2.05 or otherwise, in the currency in which they were made.

Section 2.06 Termination or Reduction of Commitments.

(a) Optional. The Borrowers may, upon written notice by the Parent Borrower to the Administrative Agent, terminate the unused portions of the Commitments under any Term Loan Tranche, the Letter of Credit Sublimit, or the unused Revolving Credit Commitments under any Revolving Tranche, or from time to time permanently reduce the unused portions of the Commitments under any Term Loan Tranche, the Letter of Credit Sublimit, or the unused Revolving Credit Commitments under any Revolving Tranche; provided that (i) any such notice shall be received by the Administrative Agent three Business Days (or such shorter period as the Administrative Agent shall agree) prior to the date of termination or reduction, (ii) any such partial reduction shall be in an aggregate amount of $500,000 or any whole multiple of $100,000 in excess thereof and (iii) the Borrowers shall not terminate or reduce (A) the Commitments under any Tranche of the Revolving Credit Facility if, after giving effect thereto and to any concurrent prepayments hereunder, (x) the Total Revolving Credit Outstandings would exceed the Revolving Credit Facility or (y) the Total Revolving Credit Outstandings with respect to such Tranche would exceed the Revolving Credit Commitments under such Tranche, or (B) the Letter of Credit Sublimit if, after giving effect thereto, the Outstanding Amount of L/C Obligations not fully Cash Collateralized hereunder would exceed the Letter of Credit Sublimit. Any such notice of termination or reduction of commitments pursuant to this Section 2.06(a) may state that it is conditioned upon the occurrence or non-occurrence of any event specified therein (including the effectiveness of other credit facilities), in which case such notice may be revoked by the Parent Borrower (by written notice to the Administrative Agent on or prior to the specified effective date) if such condition is not satisfied. For the avoidance of doubt, (i) upon termination of the Aggregate Commitments and payment in full of all Obligations in cash and in immediately available funds (other than (A) contingent indemnification obligations as to which no claim has been asserted and (B) obligations and liabilities under Secured Cash Management Agreements and Secured Hedge Agreements) and the expiration without any pending drawing or termination of all Letters of Credit (other than Letters of Credit which have been Cash Collateralized), this Agreement shall automatically terminate and the Administrative Agent shall comply with Section 9.01(c) and Section 9.11.

(b) Mandatory. (i) The Aggregate Commitments under a Term Loan Tranche shall be automatically and permanently reduced to zero on the date of the initial incurrence of Term Loans under such Term Loan Tranche, which in the case of the Initial Term Commitments shall be the Closing Date.

(ii) Upon the incurrence by the Borrowers or any Restricted Subsidiary of any Specified Refinancing Debt constituting revolving credit facilities, the Revolving Credit Commitments of the Lenders under the Tranche of Revolving Credit Loans being refinanced shall be automatically and permanently reduced on a ratable basis by an amount equal to 100% of the Commitments under such revolving credit facilities.

(iii) If after giving effect to any reduction or termination of Revolving Credit Commitments under this Section 2.06, the Letter of Credit Sublimit exceeds the amount of the Revolving Credit Facility at such time, the Letter of Credit Sublimit shall be automatically reduced by the amount of such excess.

(iv) The aggregate Revolving Credit Commitments with respect to any Tranche of the Revolving Credit Facility shall automatically and permanently be reduced to zero on the Maturity Date with respect to such Tranche of the Revolving Credit Facility.

(c) Application of Commitment Reductions; Payment of Fees. The Administrative Agent will promptly notify the applicable Lenders of the applicable Facility of any termination or reduction of the Commitments under any Term Loan Tranche, the Letter of Credit Sublimit or the Revolving Credit Commitments under this Section 2.06. Upon any reduction of Commitments under a Facility or a Tranche thereof, the Commitment of each Lender under such Facility or Tranche thereof shall be reduced by such Lender's ratable share of the amount by which such Facility or Tranche thereof is reduced (other than the termination of the Commitment of any Lender as provided in Section 3.08). All commitment fees accrued until the effective date of any termination of the Aggregate Commitments and

unpaid, shall be paid on the effective date of such termination. For the avoidance of doubt, to the extent that any portion of the Revolving Credit Loans have been refinanced with one or more new revolving credit facilities constituting Specified Refinancing Debt, any prepayments of Revolving Credit Loans made pursuant to this Section 2.06 (other than any prepayments of revolving Loans made pursuant to Section 2.06(b)(ii)) shall be allocated ratably among the Revolving Tranches.

Section 2.07 Repayment of Loans.

(a) Initial Term Loans. The Borrowers shall repay to the Administrative Agent for the ratable account of the applicable Term Lenders the aggregate principal amount of all Initial Term Loans outstanding in consecutive quarterly installments as follows (which installments shall, to the extent applicable, be reduced as a result of the application of prepayments in accordance with the order of priority set forth in Sections 2.05 and 2.06, or be increased as a result of any increase in the amount of Initial Term Loans pursuant to Section 2.14 (such increased amortization payments to be calculated in the same manner (and on the same basis) as the schedule set forth below for the Initial Term Loans made as of the Closing Date)):

Date	Amount
The last Business Day of each fiscal quarter ending prior to the Maturity Date for the Term Facilities starting with the last Business Day in the fiscal quarter ending on March 31, 2021	0.25% of the aggregate principal amount of the aggregate initial principal amount of the Initial Term Loans on the Closing Date
Maturity Date for the Initial Term Loans	All unpaid aggregate principal amounts of any outstanding Initial Term Loans

provided, however, that (i) if the date scheduled for any principal repayment installment is not a Business Day, such principal repayment installment shall be repaid on the next preceding Business Day, and (ii) the final principal repayment installment of the Initial Term Loans shall be repaid on the Maturity Date for the Initial Term Loans and in any event shall be in an amount equal to the aggregate principal amount of all Initial Term Loans outstanding on such date; provided, further, that this Section 2.07(a) may be amended (at the option of the Parent Borrower), as it relates to any then-existing tranche of Term Loans to increase the amortization with respect thereto, in connection with the Borrowing of any Incremental Term Loans that constitute Pari Passu Indebtedness if and to the extent necessary so that such Incremental Term Loans and the applicable existing Term Loans form the same Class of Term Loans and to the extent practicable, a "fungible" tranche, in each case, without the consent of any party hereto, and (y) such amendments shall not decrease any amortization payment to any Lender that would have otherwise been payable to such Lender prior thereto.

(b) Revolving Credit Loans. The Borrowers shall repay in the currencies in which such revolving Credit Loans are denominated to the Administrative Agent for the ratable account of the Appropriate Lenders on the applicable Maturity Date for the Revolving Credit Facilities of a given Tranche the aggregate principal amount of all of the Revolving Credit Loans of such Tranche outstanding on such date.

(c) All Loans shall be repaid, whether pursuant to this Section 2.07 or otherwise, in the currency in which they were made.

Section 2.08 Interest.

(a) Subject to the provisions of the following sentence, (i) each Eurocurrency Rate Loan under a Facility shall bear interest on the outstanding principal amount thereof for each Interest Period at a rate per annum equal to the sum of (A) the Adjusted Eurocurrency Rate for such Interest Period *plus* (B) the Applicable Rate for Eurocurrency Rate Loans under such Facility; and (ii) each Base Rate Loan under a Facility shall bear interest on the outstanding principal amount thereof from the applicable borrowing date or conversion date, as the case may be, at a rate per annum equal to the sum of (A) the Base Rate *plus* (B) the Applicable Rate for Base Rate Loans under such Facility.

After the occurrence and during the continuance of an Event of Default, the Borrowers shall pay interest on all overdue Obligations hereunder, which shall include all Obligations following an acceleration pursuant to Section 8.02 (including an automatic acceleration) at a fluctuating interest rate per annum at all times equal to the Default Rate to the fullest extent permitted by applicable Laws. Accrued and unpaid interest on past due amounts (including interest on past due interest) shall be due and payable upon demand.

(b) Accrued interest on each Loan shall be due and payable in arrears on each Interest Payment Date applicable thereto and at such other times as may be specified herein; provided that in the event of any repayment or prepayment of any Loan (other than Revolving Credit Loans bearing interest based on the Base Rate that are repaid or prepaid without any corresponding termination or reduction of the Revolving Credit Commitments,) accrued interest on the principal amount repaid or prepaid shall be payable on the date of such repayment or prepayment. Interest hereunder shall be due and payable in accordance with the terms hereof before and after judgment, and before and after the commencement of any proceeding under any Debtor Relief Law.

(c) Interest on each Loan shall be payable in the currency in which each Loan was made.

(d) All computations of interest hereunder shall be made in accordance with Section 2.10 of this Agreement.

Section 2.09 Fees. In addition to certain fees described in Sections 2.03(h) and (i):

(a) Commitment Fee. The Borrowers shall pay to the Administrative Agent for the account of each Revolving Credit Lender in accordance with its Pro Rata Share of each Tranche of the Revolving Credit Facility, a commitment fee equal to the Applicable Commitment Fee multiplied by the actual daily amount by which the aggregate Revolving Credit Commitments under such Tranche exceed the sum of (A) the Outstanding Amount of Revolving Credit Loans under such Tranche and (B) the Outstanding Amount of L/C Obligations under such Tranche, subject to adjustment as provided in Section 2.17. The commitment fee shall accrue at all times from the Closing Date until the Maturity Date for the Revolving Credit Facility, and shall be due and payable quarterly in arrears on the last Business Day of each fiscal quarter, commencing with the last Business Day of the first full fiscal quarter to end following the Closing Date, and on the Maturity Date for the Revolving Credit Facility.

(b) Other Fees. The Borrowers shall pay to the Lenders, the Arrangers and the Administrative Agent such fees as shall have been separately agreed upon in writing in the amounts and at the times so specified.

Section 2.10 Computation of Interest and Fees; Retroactive Adjustments of Applicable Rate.

(a) All computations of interest for Base Rate Loans shall be made on the basis of a year of 365 or 366 days, as the case may be, and actual days elapsed. All other computations of fees and interest shall be made on the basis of a 360-day year and actual days elapsed (which results in more fees or interest, as applicable, being paid than if computed on the basis of a 365-day year) or, in the case of interest in respect of Revolving Credit Loans denominated in an Alternative Currency as to which generally accepted market practice differs from the foregoing, in accordance with such generally accepted market practice. 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, subject to Section 2.12(a), bear interest for one day. Each determination by the Administrative Agent of an interest rate or fee hereunder shall be conclusive and binding for all purposes, absent manifest error.

(b) If, as a result of any restatement of or other adjustment to the financial statements of Holdings or for any other reason, the Parent Borrower or the Lenders determine that (i) the Consolidated First Lien Net Leverage Ratio as calculated by the Parent Borrower as of any applicable date was inaccurate and (ii) a proper calculation of such ratio would have resulted in higher interest and/or fees for any period, the Borrowers shall be obligated to pay to the Administrative Agent for the account of the applicable Lenders or the applicable L/C Issuer, as the case may be, promptly on demand by the Administrative Agent (or, after the occurrence of an actual or deemed entry of an order

for relief with respect to the Borrowers under the Bankruptcy Code of the United States, automatically and with any such demand by the Administrative Agent being excused), an amount equal to the excess of the amount of interest and fees that should have been paid for such period over the amount of interest and fees actually paid for such period. This clause shall not limit the rights of the Administrative Agent, any Lender or the applicable L/C Issuer, as the case may be, under Section 2.03(d)(iii), Section 2.03(h) or (i), Section 2.08(b) or under Article VIII. Except in any case where a demand is excused as provided above, any additional interest and fees under this Section 2.10(b) shall not be due and payable until a demand is made for such payment by the Administrative Agent and accordingly, any nonpayment of such interest and fees as result of any such inaccuracy shall not constitute a Default (whether retroactively or otherwise), and none of such additional amounts shall be deemed overdue or accrue interest at the Default Rate, in each case at any time prior to the date that is five Business Days following such demand.

Section 2.11 Evidence of Indebtedness.

(a) The Credit Extensions made by each Lender shall be evidenced by one or more accounts or records maintained by such Lender and evidenced by one or more entries in the Register maintained by the Administrative Agent, acting solely for purposes of Treasury Regulations Section 5f.103-1(c), as a non-fiduciary agent for the Borrowers, in each case in the ordinary course of business. The accounts or records maintained by the Administrative Agent and each Lender shall be prima facie evidence absent manifest error of the amount of the Credit Extensions made by the Lenders to the Borrowers and the interest and payments thereon. Any failure to so record or any error in doing so shall not, however, limit the obligation of the Borrowers hereunder to pay any amount owing with respect to the Obligations. In the event of any conflict between the accounts and records maintained by any Lender and the accounts and records of the Administrative Agent in respect of such matters, the accounts and records of the Administrative Agent shall control in the absence of manifest error. Upon the written request of any Lender made through the Administrative Agent, the Borrowers shall execute and deliver to such Lender (through the Administrative Agent) a Note payable to such Lender, which shall evidence such Lender's Loans in addition to such accounts or records. Each Lender may attach schedules to its Note and endorse thereon the date, Type (if applicable), amount and maturity of its Loans and payments with respect thereto.

(b) In addition to the accounts and records referred to in Section 2.11(a), each Lender and the Administrative Agent shall maintain in accordance with its usual practice accounts or records and, in the case of the Administrative Agent, entries in the Register, evidencing the purchases and sales by such Lender of participations in Letters of Credit. In the event of any conflict between the accounts and records maintained by the Administrative Agent and the accounts and records of any Lender in respect of such matters, the accounts and records of the Administrative Agent shall control in the absence of manifest error.

(c) Entries made in good faith by the Administrative Agent in the Register pursuant to Sections 2.11(a) and (b), and by each Lender in its accounts or records pursuant to Sections 2.11(a) and (b), shall be *prima facie* evidence of the amount of principal and interest due and payable or to become due and payable from the Borrowers to, in the case of the Register, each Lender and, in the case of such accounts or records, such Lender, under this Agreement and the other Loan Documents, absent manifest error; provided that the failure of the Administrative Agent or such Lender to make an entry, or any finding that an entry is incorrect, in the Register or such accounts or records shall not limit the obligations of the Borrowers under this Agreement and the other Loan Documents.

Section 2.12 Payments Generally; Administrative Agent's Clawback.

(a) General. All payments to be made by the Borrowers shall be made without condition or deduction for any counterclaim, defense, recoupment or setoff. Except as otherwise expressly provided herein, all payments by the Borrowers hereunder shall be made to the Administrative Agent, for the account of the respective Lenders to which such payment is owed, at the Administrative Agent's Office in Dollars and in immediately available funds not later than 3:00 p.m. (New York City time) on the date specified herein. The Administrative Agent will promptly distribute to each Lender its ratable share in respect of the relevant Facility or Tranche thereof (or other applicable share as provided herein) of such payment in like funds as received by wire transfer to such Lender's Lending Office. All payments received by the Administrative Agent after 3:00 p.m. (New York City time) shall, at the option of the Administrative Agent, be deemed received on the next succeeding Business Day and any applicable interest or fee shall continue to accrue. If any payment to be made by the Borrowers shall come due on a day other than a Business Day, payment shall be made on the next following Business Day, and such extension of time shall be reflected in computing interest or fees, as the case may be; provided, however, that, if such extension would cause payment of interest on or principal of Eurocurrency Rate Loans to be made in the next succeeding calendar month, such payment shall be made on the immediately preceding Business Day.

(b) (i) Funding by Lenders; Presumption by Administrative Agent. Unless the Administrative Agent shall have received notice from a Lender prior to the proposed date of any Borrowing of Eurocurrency Rate Loans (or, in the case of any Term Borrowing or Revolving Credit Borrowing of Base Rate Loans, prior to 1:00 p.m. (New York City time) on the date of such Borrowing) that such Lender will not make available to the Administrative Agent such Lender's share of such Borrowing, the Administrative Agent may assume that such Lender has made such share available on such date in accordance with and at the time required by Section 2.02(b) and may, in reliance upon such assumption, make available to the Borrowers a corresponding amount. In such event, if any Lender does not in fact make its share of the applicable Borrowing available to the Administrative Agent, then such Lender and the Borrowers severally agree to pay to the Administrative Agent forthwith on demand an amount equal to such applicable share in immediately available funds with interest thereon, for each day from and including the date such amount is made available to the Borrowers by the Administrative Agent to but excluding the date of payment to the Administrative Agent, at (A) in the case of a payment to be made by such Lender, the greater of the NYFRB Rate and a rate reasonably determined by the Administrative Agent in accordance with banking industry rules on interbank compensation, plus any reasonable administrative, processing or similar fees customarily charged by the Administrative Agent in connection with the foregoing and (B) in the case of a payment to be made by the Borrowers, the interest rate applicable to Base Rate Loans under the applicable Facility. If both the Borrowers and such Lender pay such interest to the Administrative Agent for the same or an overlapping period, the Administrative Agent shall promptly remit to the Borrowers the amount of such interest paid by the Borrowers for such period. If such Lender pays its share of the applicable Borrowing to the Administrative Agent, then the amount so paid (less interest and fees) shall constitute such Lender's Loan included in such Borrowing. Any payment by the Borrowers shall be without prejudice to any claim the Borrowers may have against a Lender that shall have failed to make its share of any Borrowing available to the Administrative Agent.

(ii) Payments by the Borrowers; Presumptions by Administrative Agent. Unless the Administrative Agent shall have received notice from the Parent Borrower prior to the date on which any payment is due to the Administrative Agent for the account of the Lenders or an L/C Issuer hereunder that the Borrowers will not make such payment, the Administrative Agent may assume that the Borrowers have made such payment on such date in accordance herewith and may, in reliance upon such assumption, distribute to the Appropriate Lenders or the applicable L/C Issuer, as the case may be, the amount due. In such event, if the Borrowers do not in fact make such payment, then each of the Appropriate Lenders or the applicable L/C Issuer, as the case may be, severally agrees to repay to the Administrative Agent forthwith on demand the amount so distributed to such Lender or such L/C Issuer, in immediately available funds with interest thereon, for each day from and including the date such amount is distributed by the Administrative Agent to but excluding the date of payment to the Administrative Agent, at the greater of the NYFRB Rate and a rate reasonably determined by the Administrative Agent in accordance with banking industry rules on interbank compensation, plus any reasonable administrative, processing or similar fees customarily charged by the Administrative Agent in connection with the foregoing.

A notice of the Administrative Agent to any Lender or the Parent Borrower with respect to any amount owing under this Section 2.12(b) shall be conclusive, absent manifest error.

(c) Failure to Satisfy Conditions Precedent. If any Lender makes available to the Administrative Agent funds for any Loan to be made by such Lender as provided in the foregoing provisions of this Article II, and such funds are not made available to the Borrowers by the Administrative Agent because the conditions to the applicable Credit Extension set forth in Article IV are not satisfied or waived in accordance with the terms hereof, the Administrative Agent shall return such funds (in like funds as received from such Lender) to such Lender on demand, without interest.

(d) Obligations of the Lenders Several. The obligations of the Lenders hereunder to make Loans, to fund participations in Letters of Credit and to make payments pursuant to Section 9.07 are several and not joint. The failure of any Lender to make any Loan or to fund any such participation or to make any payment under Section 9.07 on any date required hereunder shall not relieve any other Lender of its corresponding obligation to do so on such date, and no Lender shall be responsible for the failure of any other Lender to so make its Loan, to fund its participation or to make its payment under Section 9.07.

(e) Funding Source. Nothing herein shall be deemed to obligate any Lender to obtain the funds for any Loan in any particular place or manner or to constitute a representation by any Lender that it has obtained or will obtain the funds for any Loan in any particular place or manner.

(f) Insufficient Funds. If at any time insufficient funds are received by and available to the Administrative Agent to pay fully all amounts of principal, L/C Borrowings, interest and fees then due hereunder, such funds shall be applied (i) first, toward payment of interest and fees then due hereunder, ratably among the parties entitled thereto in accordance with the amounts of interest and fees then due to such parties, and (ii) second, toward payment of principal and L/C Borrowings then due hereunder, ratably among the parties entitled thereto in accordance with the amounts of principal and L/C Borrowings then due to such parties.

(g) Unallocated Funds. If the Administrative Agent receives funds for application to the Obligations of the Loan Parties under or in respect of the Loan Documents under circumstances for which the Loan Documents do not specify the manner in which such funds are to be applied, the Administrative Agent may, but shall not be obligated to, elect to distribute such funds to each of the Lenders in accordance with such Lender's ratable share of the sum of (a) the Outstanding Amount of all Loans outstanding at such time and (b) the Outstanding Amount of all L/C Obligations outstanding at such time, in repayment or prepayment of such of the outstanding Loans or other Obligations then owing to such Lender.

Section 2.13 Sharing of Payments. If, other than as expressly provided elsewhere herein (including the application of funds arising from the existence of a Defaulting Lender), any Lender shall obtain on account of the Loans made by it, or the participations in L/C Obligations held by it, any payment (whether voluntary, involuntary, through the exercise of any right of setoff, or otherwise) in excess of its ratable share (or other share contemplated hereunder) thereof, such Lender shall immediately (a) notify the Administrative Agent of such fact and (b) purchase from the other Lenders such participations in the Loans made by them and/or such subparticipations in the participations in L/C Obligations held by them, as the case may be, as shall be necessary to cause such purchasing Lender to share the excess payment in respect of such Loans or such participations, as the case may be, *pro rata* with each of them; provided, however, that if all or any portion of such excess payment is thereafter recovered from the purchasing Lender under any of the circumstances described in Section 10.06 (including pursuant to any settlement entered into by the purchasing Lender in its discretion), such purchase shall to that extent be rescinded and each other Lender shall repay to the purchasing Lender the purchase price paid therefor, together with an amount equal to such paying Lender's ratable share (according to the proportion of (i) the amount of such paying Lender's required repayment to (ii) the total amount so recovered from the purchasing Lender) of any interest or other amount paid or payable by the purchasing Lender in respect of the total amount so recovered, without further interest thereon. The Borrowers agree that any Lender so purchasing a participation from another Lender may, to the fullest extent permitted by Law, exercise all its rights of payment (including the right of setoff, but subject to Section 10.09) with respect to such participation as fully as if such Lender were the direct creditor of the Borrowers 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 2.13 and will in each case notify the Lenders following any such purchases or repayments. Each Lender that purchases a participation pursuant to this Section 2.13 shall from and after 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. For the avoidance of doubt, the provisions of this Section shall not be construed to apply to (A) the application of Cash Collateral provided for in Section 2.16, (B) the assignments and participations (including by means of a Dutch Auction and open market debt repurchases) described in Section 10.07, (C) (i) the incurrence of any New Term Loans in accordance with Section 2.14, (ii) the prepayment of Revolving Credit Loans in accordance with Section 2.14(e) in connection with a Revolving Credit Commitment Increase or (iii) any Specified Refinancing Debt in accordance with Section 2.18, (D) any loan modification offer described in Section 10.01, or (E) any applicable circumstances contemplated by Sections 2.05(b), 2.14, 2.17 or 3.08.

Section 2.14 Incremental Facilities.

(a) The Borrowers may, from time to time after the Closing Date, upon notice by the Parent Borrower to the Person appointed by the Borrower to arrange an incremental Facility (such Person (who (i) may be the Administrative Agent, if it so agrees, or (ii) any other Person appointed by the Parent Borrower), the "Incremental Arranger") specifying the proposed amount thereof and the proposed currency denomination thereof, request (i) an increase in the Commitments under any Revolving Tranche (which shall be on the same terms as, and become part of, the Revolving Tranche proposed to be increased) (a "Revolving Credit Commitment Increase"), (ii) an increase in any Term Loan Tranche then outstanding (which shall be on the same terms as, and become part of, the Term Loan Tranche proposed to be increased hereunder (except as otherwise provided in clause (d) below with respect to amortization)) (each, a "Term Commitment Increase"), (iii) the addition of one or more new revolving credit facilities to the Facilities, in each case, in such currency or currencies as the Parent Borrower identifies in such notice (each, a "New Revolving Facility" and, any advance made by a Lender thereunder, a "New Revolving Loan"; and the commitments thereof, the "New Revolving Commitment") and (iv) the addition of one or more new term loan facilities, in each case, in such currency or currencies as the Parent Borrower identifies in such notice (each, a "New Term Facility"; and any advance made by a Lender thereunder, a "New Term Loan"; and the commitments thereof, the "New Term Commitment" and together with the Revolving Credit Commitment Increase, the New Revolving Commitments and the Term Commitment Increase, the "New Loan Commitments") in an amount not to exceed the sum of (x) the greater of (A) $100,000,000 and (B) Consolidated EBITDA for the most recently ended four fiscal quarter period for which internal financial statements are available (and after giving effect to any acquisition consummated concurrently therewith on a Pro Forma Basis and all other appropriate pro forma adjustment events consistent with the definition of "Consolidated EBITDA" and Section 1.10) (the "Cash-Capped Incremental Facility"), (y) an unlimited amount (the "Ratio-Based Incremental Facility") so long as the Maximum Leverage / Minimum Interest Coverage Requirement is satisfied and (z) an amount equal to (i)(A) all voluntary prepayments of (1) Term Loans made pursuant to Section 2.05(a) and (2) New Incremental Notes that are secured on a *pari passu* basis with the Term Loans and (B) all repurchases of (1) Term Loans made pursuant to the terms hereof and (2) New Incremental Notes that are secured on a *pari passu* basis with the Term Loans, (ii) voluntary prepayments of all other Indebtedness secured by a Lien that is *pari passu* with the Liens securing the Obligations and (iii) voluntary prepayments of Revolving Credit Loans made pursuant to Section 2.05(a) to the extent accompanied by a corresponding, permanent reduction in the Revolving Credit Commitments pursuant to Section 2.06(a), in each case, to the extent not funded with the proceeds of long term Indebtedness (excluding, for the avoidance of doubt, proceeds of any revolving credit facility (including the Revolving Credit Facility)) and in the case of any such prepayment or repurchase at a price below par, based on the amount of the actual cash expenditure (the "Prepayment-Based Incremental Facility") (such sum, at any such time, the "Incremental Amount"); provided that any such request for an increase shall be in a minimum amount of the lesser of (x) $5,000,000 or, in the case of any New Loan Commitments denominated in an Alternative Currency, the Alternative Currency Equivalent of such amount, and (y) the entire amount of any increase that may be requested under this Section 2.14; provided, further, that for purposes of any New Loan Commitments established pursuant to this Section 2.14 and New Incremental Notes issued pursuant to Section 2.15:

(A) the Borrowers shall be deemed to have used amounts under the Prepayment-Based Incremental Facility, if any, prior to utilization of the Cash-Capped Incremental Facility, and the Borrowers shall be deemed to have used the Ratio-Based Incremental Facility (to the extent compliant therewith) prior to utilization of the Cash-Capped Incremental Facility and the Prepayment-Based Incremental Facility,

(B) New Loan Commitments pursuant to this Section 2.14 and New Incremental Notes pursuant to Section 2.15 may be incurred under the Ratio-Based Incremental Facility (to the extent compliant therewith), the Cash-Capped Incremental Facility and the Prepayment-Based Incremental Facility, and proceeds from any such incurrence may be utilized in a single transaction by first calculating the incurrence under the Ratio-Based Incremental Facility (without inclusion of any amounts substantially concurrently utilized pursuant to the Cash-Capped Incremental Facility or the Prepayment-Based Incremental Facility) and then calculating the incurrence under the Prepayment-Based Incremental Facility (without inclusion of any amounts substantially concurrently utilized pursuant to the Cash-Capped Incremental Facility) and/or the incurrence under the Cash-Capped Incremental Facility,

(C) the Borrowers may redesignate all or any portion of Indebtedness originally designated as incurred under the Cash-Capped Incremental Facility or the Prepayment-Based Incremental Facility as having been incurred under the Ratio-Based Incremental Facility so long as, at the time of such redesignation, the Borrowers would be permitted to incur the aggregate principal amount of Indebtedness being so

redesignated under the Ratio-Based Incremental Facility (which, for the avoidance of doubt, shall have the effect of increasing the Cash-Capped Incremental Facility or the Prepayment-Based Incremental Facility, as applicable, by the amount of such redesignated Indebtedness); provided, that such Indebtedness shall be automatically redesignated to the extent that, at the end of any fiscal quarter, such redesignation would be permitted under this clause (C), and

(D) solely for the purpose of calculating the Consolidated First Lien Net Leverage Ratio, the Consolidated Senior Secured Net Leverage Ratio or the Consolidated Total Net Leverage Ratio to determine the availability under the Ratio-Based Incremental Facility at the time of incurrence, any cash proceeds incurred pursuant to this Section 2.14 and/or New Incremental Notes being incurred at such test date in calculating such Consolidated First Lien Net Leverage Ratio, Consolidated Senior Secured Net Leverage Ratio or Consolidated Total Net Leverage Ratio shall be excluded (it being understood that to the extent such proceeds are to be used to repay Indebtedness, the Borrowers shall be permitted to give Pro Forma Effect to such repayment).

The Borrowers may designate any Incremental Arranger of any New Loan Commitments with such titles under the New Loan Commitments as Borrower may deem appropriate.

(b) Any Lender approached to participate in any New Loan Commitments may elect or decline, in its sole discretion, to participate in such increase or new facility. The Borrowers may also invite additional Eligible Assignees reasonably satisfactory to the Incremental Arranger and, solely in connection with a Revolving Credit Commitment Increase or New Revolving Facility, with the consent of the Administrative Agent, each L/C Issuer (in each case, to the extent the consent of any of the foregoing would be required to assign Revolving Credit Loans or Term Loans, as applicable, to such Eligible Assignee, which consents shall not be unreasonably withheld, conditioned or delayed) to become Lenders pursuant to a joinder agreement to this Agreement. Neither the Administrative Agent nor the Collateral Agent (in their respective capacities as such) shall be required to execute, accept or acknowledge any joinder agreement pursuant to this Section 2.14 and such execution shall not be required for any such joinder agreement to be effective; provided that, with respect to any New Loan Commitments, the Borrowers must provide to the Administrative Agent (x) the documentation providing for such New Loan Commitments and (y) a notice of the identity of any new Lender; provided further, that such new Lender shall agree to provide applicable "know your customer", anti-money laundering rules and regulations, including the Patriot Act, and other customary onboarding information reasonably requested by the Administrative Agent upon request.

(c) If (i) a Revolving Tranche or a Term Loan Tranche is increased in accordance with this Section 2.14 or (ii) a New Term Facility or New Revolving Facility is added in accordance with this Section 2.14, the Borrowers shall determine the effective date (the "Increase Effective Date") and the final allocation of such increase, New Term Facility or New Revolving Facility among the applicable Lenders. The Incremental Arranger shall promptly notify the applicable Lenders of the final allocation of such increase, New Term Facility or New Revolving Facility and the Increase Effective Date. In connection with (i) any increase in a Term Loan Tranche or Revolving Tranche or (ii) any addition of a New Term Facility or New Revolving Facility, in each case, pursuant to this Section 2.14, this Agreement and the other Loan Documents may be amended in a writing (which may be executed and delivered by the Borrowers and the Incremental Arranger (and the Lenders hereby authorize the any such Incremental Arranger to execute and deliver any such documentation)) in order to establish the New Term Facility or New Revolving Facility or to effectuate the increases to the Term Loan Tranche or Revolving Tranche and to reflect any technical changes necessary or appropriate to give effect to such increase or new facility in accordance with its terms as set forth herein, including, for the avoidance of doubt, at the option of the Parent Borrower, with respect to any increase in the Applicable Rate relating to any existing Term Facility to bring such Applicable Rate in line with the New Term Facility to achieve fungibility with such existing Term Facility. As of the Increase Effective Date, in the case of an increase to an existing Term Loan Tranche, the amortization schedule for the Term Loan Tranche then increased set forth in Section 2.07(a) (or any other applicable amortization schedule for New Term Loans or Specified Refinancing Term Loans) shall be amended in writing (which may be executed and delivered by the Borrowers and the Incremental Arranger (and the Lenders hereby authorize any such Incremental Arranger to execute and deliver any such documentation)) to increase the then-remaining unpaid installments of principal by an aggregate amount equal to the additional Loans under such Term Loan Tranche being made on such date, such aggregate amount to be applied to increase such installments ratably in accordance with the amounts in effect immediately prior to the Increase Effective Date.

(d) With respect to any Revolving Credit Commitment Increase, Term Commitment Increase or addition of New Term Facility or New Revolving Facility pursuant to this Section 2.14, (i) no Event of Default (subject to Section 1.02(i) in connection with any acquisition Investment, Restricted Payment or other transaction permitted pursuant to this Agreement as described in Section 1.02(i)) would exist after giving effect to such increase; (ii) (A) in the case of any increase of the Revolving Tranche, (1) the final maturity shall be the same as the Maturity Date applicable to the Revolving Credit Facility, (2) no amortization or mandatory commitment reduction prior to the Maturity Date applicable to the Revolving Credit Facility shall be required and (3) the terms and documentation applicable to the Revolving Credit Facility shall apply, (B) in the case of any New Revolving Facility, (1) other than with respect to any Extendable Bridge Loans, the final maturity shall be no earlier than the Maturity Date applicable to the Revolving Credit Facility and (2) no amortization or mandatory commitment reduction prior to the Maturity Date applicable to the Revolving Credit Facility shall be required, (C) in the case of any increase of a Term Loan Tranche, the final maturity of the Term Loans, New Term Loans or Specified Refinancing Term Loans increased pursuant to this Section shall be no earlier than the Latest Maturity Date for, and such additional Loans shall not have a Weighted Average Life to Maturity shorter than the longest remaining Weighted Average Life to Maturity of, any other outstanding Term Loans, New Term Loans or Specified Refinancing Term Loans, as applicable; provided that Extendable Bridge Loans and Indebtedness Incurred pursuant to the Inside Maturity Date Exception may have a maturity date earlier than the Latest Maturity Date of all then outstanding Term Loans and the Weighted Average Life to Maturity thereof may be shorter than the then longest remaining Weighted Average Life to Maturity of any then outstanding Term Loans, and (D) in the case of any New Term Facility other than in the case of Extendable Bridge Loans and Indebtedness Incurred pursuant to the Inside Maturity Date Exception, (1) such New Term Facility shall have a final maturity no earlier than the then Latest Maturity Date of any Term Loan Tranche and (2) the Weighted Average Life to Maturity of such New Term Facility shall be no shorter than that of any existing Term Loan Tranche; (iii) all other terms applicable to any New Term Facility or Revolving Facility (including, subject to any applicable limitations specifically set forth above in this clause (d) or below in clause (f), will be as agreed between the Borrowers and the Lenders providing such New Revolving Facility or New Term Facility; provided that the negative covenants and events of default will (x) be not materially more favorable, taken as a whole, to such Lenders than the terms of such existing Revolving Facility (in the case of any New Revolving Facility) or existing Term Facility (in the case of a New Term Facility) unless (A) the Lenders under the existing Revolving Facility or Term Facility, as applicable, also receive the benefits of such more favorable terms (and to the extent the existing Lenders under the Revolving Facility or New Term Facility are to receive the benefit of such terms, such terms may be incorporated into the Loan Documents for the benefit of all existing Lenders under the Revolving Facility or Term Facility without further amendment requirements) or (B) any such provisions apply only after the maturity date of the initial Revolving Facility or Term Facility, as applicable or (y) be reasonably acceptable to the Administrative Agent; and (iv) to the extent reasonably requested by the Incremental Arranger, the Incremental Arranger shall have received legal opinions, resolutions, officers' certificates and/or reaffirmation agreements consistent with those delivered on the Closing Date under Section 4.01 or delivered from time to time pursuant to Section 6.12, Section 6.14 and/or Section 6.16 with respect to Holdings and the Borrowers and each material Subsidiary Guarantor that is organized in a jurisdiction for which counsel to the Administrative Agent advises that such deliveries are reasonably necessary to preserve the Collateral in such jurisdiction (other than changes to such legal opinions resulting from a change in Law, change in fact or change to counsel's form of opinion reasonably satisfactory to the Incremental Arranger). Subject to the foregoing, the conditions precedent to each such increase or New Loan Commitment shall be agreed to by the Lenders providing such increase or New Loan Commitment, as applicable, and the Borrowers.

(e) On the Increase Effective Date with respect to an increase to an existing Revolving Tranche, (x) each Revolving Credit Lender immediately prior to such increase will automatically and without further act be deemed to have assigned to each Lender providing a portion of the increase to the Revolving Credit Commitments (each, a "Revolving Commitment Increase Lender"), and each such Revolving Commitment Increase Lender will automatically and without further act (except that each Revolving Commitment Increase Lender shall be required to purchase at par any L/C Advance so acquired) be deemed to have assumed, a portion of such Revolving Credit Lender's participations hereunder in outstanding L/C Obligations such that, after giving effect to each such deemed assignment and assumption of participations, the percentage of the aggregate outstanding participations hereunder in L/C Obligations represented by such Revolving Commitment Increase Lender will equal the percentage of the aggregate Revolving Credit Commitments of all Revolving Credit Lenders represented by such Revolving Commitment Increase Lender's Revolving Credit Commitment and (y) if, on the date of such increase, there are any Revolving Credit Loans outstanding, such Revolving Credit Loans shall on or prior to the Increase Effective Date be prepaid from the proceeds of Revolving Credit Loans made hereunder (reflecting such increase in Revolving Credit

Commitments), which prepayment shall be accompanied by accrued interest on the Revolving Credit Loans being prepaid and any costs incurred by any Lender in accordance with Section 3.06. The Administrative Agent and the Lenders hereby agree 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 the immediately preceding sentence. The additional Term Loans made under the Term Loan Tranche subject to the increases shall be made by the applicable Lenders participating therein pursuant to the procedures set forth in Sections 2.01 and 2.02 and on the date of the making of such new Term Loans, and notwithstanding anything to the contrary set forth in Sections 2.01 and 2.02, such new Loans shall be added to (and form part of) each Borrowing of outstanding Term Loans under such Term Loan Tranche on a *pro rata* basis (based on the relative sizes of the various outstanding Borrowings), so that each Lender under such Term Loan Tranche will participate proportionately in each then outstanding Borrowing of Term Loans under the Term Loan Tranche.

(f) (i) Any New Revolving Facility and New Term Facility shall rank *pari passu* in right of payment with the other Facilities, not be Guaranteed by any Person that is not a Borrower or Guarantor under each of the other Facilities, and be unsecured or secured either on a *pari passu* basis with the other Facilities or on a "junior" basis to the other Facilities, in each case over the same (or less) Collateral that secures the Facilities (and in the case of any such junior secured New Revolving Facility or New Term Facility, such New Revolving Facility or New Term Facility shall be subject to intercreditor arrangements that are reasonably satisfactory to the Incremental Arranger and, if such Incremental Arranger is not the Administrative Agent, the Administrative Agent), (ii) the New Term Facility or New Revolving Facility, as applicable, shall, for purposes of prepayments, be treated substantially the same as (and in any event no more favorably than) the Term Facility or Revolving Credit Facility, as the case may be, unless the Borrowers otherwise elect (but in any event no more favorably than the existing Term Loans or Revolving Credit Loans, as applicable), and (iii) with respect to any Dollar-denominated, floating rate New Term Facility that is *pari passu* in right of payments and secured on a *pari passu* basis with Initial Term Loans and is incurred on or prior to the date that is 12 months after the Closing Date and under the Ratio-Based Incremental Facility, the All-in Yield payable by the Borrowers applicable to such New Term Facility shall be determined by the Borrowers and the Lenders providing such New Term Facility and shall not be more than 75 basis points higher than the corresponding All-in Yield payable by the Borrowers for the Initial Term Loans, unless theAll-in Yield with respect to the Initial Term Loans is increased to the amount necessary so that the difference between the All-in Yield with respect to such New Term Facility and the corresponding All-in Yield on the Initial Term Loans is equal to 75 basis points;provided that this clause (iii) shall not apply to any New Term Facility that (A) is in an aggregate principal amount (together with any other such New Term Facility) equal to or less than $100,000,000, (B) has a final maturity later than one year after the Latest Maturity Date of the then outstanding Term Loans or (C) is incurred in connection with an acquisition or Investment permitted by the terms of this Agreement.

(g) To the extent any New Revolving Facility or New Term Facility shall be denominated in an Alternative Currency, this Agreement and the other Loan Documents shall be amended to the extent necessary or appropriate to provide for the administrative and operational provisions applicable to such Alternative Currency, in each case as are reasonably satisfactory to the Administrative Agent.

Section 2.15 New Incremental Notes.

(a) The Borrowers may from time to time after the Closing Date incur one or more series of senior secured, senior unsecured, senior subordinated, subordinated notes or Extendable Bridge Loans (which notes and/or Extendable Bridge Loans, if secured, are secured by the Collateral on a *pari passu* basis with the Liens securing the Obligations or on a "junior" basis to the Liens securing the Obligations) and guaranteed only by Loan Parties or entities who become Loan Parties (such notes and/or Extendable Bridge Loans, collectively, "New Incremental Notes") in an amount not to exceed the Incremental Amount (at the time of issuance); provided that no Event of Default would exist after giving Pro Forma Effect to any such request, subject to Section 1.02(i); provided, further, that any New Loan Commitment established pursuant to Section 2.14 and New Incremental Notes issued pursuant to this Section 2.15, (A) will count, first, to reduce the amount available under the Ratio-Based Incremental Facilities (to the extent compliant therewith), second, to reduce the amount available under the Prepayment-Based Incremental Facilities and, third, to reduce the maximum amount under the Cash-Capped Incremental Facilities, (B) New Incremental Notes pursuant to this Section 2.15 may be incurred under the Ratio-Based Incremental Facilities, the Cash-Capped Incremental Facilities and the Prepayment-Based Incremental Facilities, and proceeds from any such incurrence may be utilized in a single transaction, by first calculating the incurrence under the Ratio-Based Incremental

Facilities (without inclusion of any amounts utilized pursuant to the Cash-Capped Incremental Facility or the Prepayment-Based Incremental Facility) and then calculating the incurrence under the Prepayment-Based Incremental Facility (without inclusion of any amounts utilized pursuant to the Cash-Capped Incremental Facility) and then calculating the incurrence under the Cash-Capped Incremental Facility and (C) the Borrowers may redesignate all or any portion of New Incremental Notes originally designated as incurred under the Cash-Capped Incremental Facility or the Prepayment-Based Incremental Facility as having been incurred under the Ratio-Based Incremental Facility so long as, at the time of such redesignation, the Borrowers would be permitted to incur the aggregate principal amount of New Incremental Notes being so redesignated under the Ratio-Based Incremental Facility (which, for the avoidance of doubt, shall have the effect of increasing the Cash-Capped Incremental Facility or the Prepayment-Based Incremental Facility, as applicable, by the Dollar amount of such redesignated New Incremental Notes). The Parent Borrower may appoint any Person as arranger of such New Incremental Notes (such Person (who may be the Administrative Agent, if it so agreed), the "Incremental Notes Arranger").

(b) As a condition precedent to the issuance of any New Incremental Notes pursuant to this Section 2.15, (i) such New Incremental Notes shall not be guaranteed by any Person that is not a Loan Party or that does not become a Loan Party and shall not be secured by a lien on any assets of a Loan Party that is not part of the Collateral, (ii) to the extent secured by the Collateral, such New Incremental Notes shall be subject to intercreditor arrangements that are reasonably satisfactory to the Incremental Notes Arranger and, if such Incremental Notes Arranger is not the Administrative Agent, the Administrative Agent, (iii) such New Incremental Notes shall have a final maturity no earlier than the then Latest Maturity Date, provided, that Extendable Bridge Loans and Indebtedness Incurred pursuant to the Inside Maturity Date Exception may have a maturity date earlier than the Latest Maturity Date, (iv) the Weighted Average Life to Maturity of such New Incremental Notes shall not (A) be shorter than that of any then-existing Term Loan Tranche, or (B) to the extent unsecured, be subject to any amortization prior to the final maturity thereof, or be subject to any mandatory redemption or prepayment provisions or rights (except (x) customary assets sale, event of loss or similar event or change of control provisions and customary acceleration rights after an event of default or (y) so-called "AHYDO" payments); provided, that, with respect to Extendable Bridge Loans and Indebtedness Incurred pursuant to the Inside Maturity Date Exception, the Weighted Average Life to Maturity thereof may be shorter than the then longest remaining Weighted Average Life to Maturity of any then outstanding Term Loans, and (v) such New Incremental Notes shall not be subject to any mandatory redemption or prepayment provisions or rights (except to the extent any such mandatory redemption or prepayment is required to be applied pro rata to the Term Loans and other Indebtedness that is secured on a *pari passu* basis with the Obligations) (provided that a certificate of a Responsible Officer of the Parent Borrower delivered to the Incremental Notes Arranger in good faith at least three Business Days prior to the incurrence of such New Incremental Notes, together with a reasonably detailed description of the material terms and conditions of such New Incremental Notes or drafts of the documentation relating thereto, stating that the Parent Borrower has determined in good faith that such terms and conditions satisfy the requirement set forth in this clause (b), shall be conclusive evidence that such terms and conditions satisfy such requirement unless the Incremental Notes Arranger provides notice to the Parent Borrower of its objection during such three Business Day period (including a reasonable description of the basis upon which it objects)) and, for the avoidance of doubt, New Incremental Notes shall not benefit from any "most favored nation" pricing protection. Subject to the foregoing, the conditions precedent to each such increase shall be agreed to by the Lenders providing such increase and the Borrower.

(c) The Lenders hereby authorize the Incremental Notes Arranger (and the Lenders hereby authorize the Incremental Notes Arranger to execute and deliver such amendments) to enter into amendments to this Agreement and the other Loan Documents with the Borrowers as may be necessary in order to secure any New Incremental Notes with the Collateral and/or to make such technical amendments as may be necessary or appropriate in the reasonable opinion of the Incremental Notes Arranger and the Borrowers in connection with the issuance of such New Incremental Notes, in each case on terms consistent with this Section 2.15, including, for the avoidance of doubt, at the option of the Parent Borrower, any increase in the Applicable Rate relating to any existing Term Facility to bring such Applicable Rate in line with the New Term Facility to achieve fungibility with such existing Term Facility. If the Incremental Notes Arranger is not the Administrative Agent, the actions authorized to be taken by the Incremental Notes Arranger herein shall be done in consultation with the Administrative Agent and, with respect to applicable documentation (including amendments to this Agreement and the other Loan Documents), any comments to such documentation reasonably requested by the Administrative Agent shall be reflected therein.

Section 2.16 Cash Collateral.

(a) Upon the request of the Administrative Agent or the applicable L/C Issuer (i) if the applicable L/C Issuer has honored any full or partial drawing request under any Letter of Credit and such drawing has resulted in an L/C Borrowing or (ii) if, as of the Letter of Credit Expiration Date, any L/C Obligation for any reason remains outstanding, the Borrowers shall, in each case, promptly deliver to the Administrative Agent Cash Collateral in an amount sufficient to cover 103% of the then Outstanding Amount of all L/C Obligations. At any time that there shall exist a Defaulting Lender, promptly upon the request of the Administrative Agent or the applicable L/C Issuer, the Borrowers shall deliver to the Administrative Agent Cash Collateral in an amount sufficient to cover 103% of all Fronting Exposure of such Defaulting Lender after giving effect to Section 2.17(a)(iv) and any Cash Collateral provided by such Defaulting Lender.

(b) All Cash Collateral (other than credit support not constituting funds subject to deposit) shall be maintained in blocked, interest bearing deposit accounts at the Administrative Agent or the Collateral Agent (or other financial institution selected by any of them). The Borrowers, and to the extent provided by any Lender, such Lender, hereby grants to (and subjects to the control of) the Administrative Agent and the Collateral Agent, for the benefit of the Administrative Agent, the applicable L/C Issuer and the Lenders, and agrees to maintain, a first priority security interest in all such cash, deposit accounts and all balances therein, and all other property so provided as collateral pursuant hereto, and in all proceeds of the foregoing, all as security for the obligations to which such Cash Collateral may be applied pursuant to Section 2.16(c). If at any time the Administrative Agent determines that Cash Collateral is subject to any right or claim of any Person other than the Administrative Agent as herein provided or that the total amount of such Cash Collateral is less than the applicable Fronting Exposure and other obligations secured thereby, the Borrowers and the relevant Defaulting Lender shall, promptly upon demand by the Administrative Agent, pay or provide to the Administrative Agent additional Cash Collateral in an amount sufficient to eliminate such deficiency.

(c) Notwithstanding anything to the contrary contained in this Agreement, Cash Collateral provided under any of this Section 2.16 or Sections 2.03, 2.05, 2.06, 2.17, 8.02 or 8.04 in respect of Letters of Credit shall be held and applied to the satisfaction of the specific L/C Obligations, obligations to fund participations therein (including, as to Cash Collateral provided by a Defaulting Lender, any interest accrued on such obligation) and other obligations for which the Cash Collateral was so provided prior to any other application of such property as may be provided for herein.

(d) Cash Collateral (or the appropriate portion thereof) provided to reduce Fronting Exposure or other obligations shall be released promptly following (i) the elimination of the applicable Fronting Exposure (after giving effect to such release) or other obligations giving rise thereto (including by the termination of Defaulting Lender status of the applicable Lender (or, as appropriate, its assignee following compliance with Section 10.07(b)(viii))) or (ii) the Administrative Agent's good faith determination that there exists excess Cash Collateral; provided, however, (x) that Cash Collateral furnished by or on behalf of a Loan Party shall not be released during the continuance of a Default under Sections 8.01(a), (f) or (g) or an Event of Default (and following application as provided in this Section 2.16 may be otherwise applied in accordance with Section 8.04) and (y) the Person providing Cash Collateral and the applicable L/C Issuer may agree that Cash Collateral shall not be released but instead held to support future anticipated Fronting Exposure or other obligations.

Section 2.17 Defaulting Lenders.

(a) Notwithstanding anything to the contrary contained in this Agreement, if any Lender becomes a Defaulting Lender, then, until such time as that Lender is no longer a Defaulting Lender, to the extent permitted by applicable Law:

(i) That Defaulting Lender's right to approve or disapprove any amendment, waiver or consent with respect to this Agreement shall be restricted as set forth in Section 10.01.

(ii) Any payment of principal, interest, fees or other amounts received by the Administrative Agent for the account of that Defaulting Lender (whether voluntary or mandatory, at maturity, pursuant to Article VIII or otherwise, and including any amounts made available to the Administrative Agent by that Defaulting Lender pursuant to Section 10.09), shall be applied at such time or times as may be determined by the Administrative Agent as follows: first, to the payment of any amounts owing by that Defaulting Lender to the Administrative Agent hereunder;second, to the payment on a *pro rata* basis of any amounts

owing by that Defaulting Lender to the L/C Issuers hereunder; third, if so reasonably determined by the Administrative Agent or reasonably requested by the any L/C Issuer, to be held as Cash Collateral for future funding obligations of that Defaulting Lender of any participation in any Letter of Credit; fourth, as the Parent Borrower may request (so long as no Default or Event of Default exists), to the funding of any Loan in respect of which that Defaulting Lender has failed to fund its portion thereof as required by this Agreement, as determined by the Administrative Agent; fifth, if so determined by the Administrative Agent and the Parent Borrower, to be held in a non-interest bearing deposit account and released in order to satisfy obligations of that Defaulting Lender to fund Loans under this Agreement; sixth, to the payment of any amounts owing to the Lenders or any L/C Issuer as a result of any non-appealable judgment of a court of competent jurisdiction obtained by any Lender or any L/C Issuer against that Defaulting Lender as a result of that Defaulting Lender's breach of its obligations under this Agreement; seventh, so long as no Default or Event of Default pursuant to Sections 8.01(a), (f) or (g) exists, to the payment of any amounts owing to the Borrowers as a result of any non-appealable judgment of a court of competent jurisdiction obtained by the Borrowers against that Defaulting Lender as a result of that Defaulting Lender's breach of its obligations under this Agreement; and eighth, to that 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 Loans or L/C Borrowings in respect of which that Defaulting Lender has not fully funded its appropriate share and (y) such Loans or L/C Borrowings were made 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 L/C Borrowings owed to, all non-Defaulting Lenders on a *pro rata* basis prior to being applied to the payment of any Loans of, or L/C Borrowings owed to, that Defaulting Lender. Any payments, prepayments or other amounts paid or payable to a Defaulting Lender that are applied (or held) to pay amounts owed by a Defaulting Lender or to post Cash Collateral pursuant to this Section 2.17(a)(ii) shall be deemed paid to and redirected by that Defaulting Lender, and each Lender irrevocably consents hereto.

(iii) That Defaulting Lender (x) shall not be entitled to receive any commitment fee pursuant to Section 2.09(a) for any period during which that Lender is a Defaulting Lender (and the Borrowers shall not be required to pay any such fee that otherwise would have been required to have been paid to that Defaulting Lender) and (y) shall be limited in its right to receive Letter of Credit fees as provided in Section 2.03(h).

(iv) During any period in which there is a Defaulting Lender, for purposes of computing the amount of the obligation of eachnon-Defaulting Lender to acquire, refinance or fund participations in Letters of Credit pursuant to Section 2.03, the Pro Rata Share of each non-Defaulting Lender under a Revolving Tranche shall be determined without giving effect to the Commitment under such Revolving Tranche of that Defaulting Lender; provided that (i) each such reallocation shall be given effect unless an Event of Default exists; and (ii) the aggregate obligation of each non-Defaulting Lender under a Revolving Tranche to acquire, refinance or fund participations in Letters of Credit issued under such Revolving Tranche shall not exceed the positive difference, if any, of (1) the Commitment under such Revolving Tranche of that non-Defaulting Lender *minus* (2) the aggregate Outstanding Amount of the Loans under such Revolving Tranche of that Revolving Credit Lender.

(b) If the Parent Borrower, the Administrative Agent and each L/C Issuer agree in writing in their sole discretion that a Defaulting Lender should no longer be deemed to be a Defaulting Lender, the Administrative Agent will so notify the parties hereto, whereupon as of the effective date specified in such notice and subject to any conditions set forth therein (which may include arrangements with respect to any Cash Collateral), that Lender will, to the extent applicable, purchase that portion of outstanding Loans of the other Lenders or take such other actions as the Administrative Agent may reasonably determine to be necessary to cause the Loans and funded and unfunded participations in Letters of Credit to be held on a *pro rata* basis by the Lenders in accordance with their ratable shares (without giving effect to the application of Section 2.17(a)(iv)) in respect of that Lender, whereupon that Lender will cease to be a Defaulting Lender; provided that no adjustments will be made retroactively with respect to fees accrued or payments made by or on behalf of the Borrowers while that Lender was a Defaulting Lender; and provided, further, that 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 that Lender having been a Defaulting Lender.

(c) If (i) a Bankruptcy Event or a Bail-In Action with respect to a Lender Parent shall occur following the date hereof and for so long as such event shall continue or (ii) any L/C Issuer has a good faith belief that any Lender has defaulted in fulfilling its obligations under one or more other agreements in which such Lender commits to extend credit, no L/C Issuer shall be required to issue, amend or increase any Letter of Credit, unless the L/C Issuer Banks shall have entered into arrangements with the Borrowers or such Lender, satisfactory to such L/C Issuer to defease any risk to it in respect of such Lender hereunder. In the event that each of the Administrative Agent, the Borrowers and each L/C Issuer agrees that a Defaulting Lender has adequately remedied all matters that caused such Lender to be a Defaulting Lender, then the L/C Obligations of the Lenders shall be readjusted to reflect the inclusion of such Lender's Commitment and on such date such Lender shall purchase at par such of the Loans of the other Lenders as the Administrative Agent shall determine may be necessary in order for such Lender to hold such Loans in accordance with its Pro Rata Share.

Section 2.18 Specified Refinancing Debt.

(a) The Borrowers may, from time to time after the Closing Date, add one or more new term loan facilities and new revolving credit facilities to the Facilities ("Specified Refinancing Debt"; and the commitments in respect of such new term facilities, the "Specified Refinancing Term Commitment" and the commitments in respect of such new revolving credit facilities, the "Specified Refinancing Revolving Credit Commitment") pursuant to procedures reasonably specified by any Person appointed by the Parent Borrower, after consultation with the Administrative Agent, as agent under such Specified Refinancing Debt (such Person (who may be the Administrative Agent, if it so agrees), the "Specified Refinancing Agent") and reasonably acceptable to the Parent Borrower, to refinance (i) all or any portion of any Term Loan Tranches then outstanding under this Agreement and (ii) all or any portion of any Revolving Tranches then in effect under this Agreement, in each case pursuant to a Refinancing Amendment; provided that such Specified Refinancing Debt: (i) will rank *pari passu* in right of payment as the other Loans and Commitments hereunder; (ii) will not have obligors other than the Loan Parties or entities who shall have become Loan Parties (it being understood that the roles of such obligors as Borrower or guarantors with respect to such obligations may be interchanged); (iii) will be (x) unsecured or (y) secured by the Collateral on a *pari passu* basis with the Liens securing the Obligations or on a "junior" basis to the Liens securing the Obligations (in each case pursuant to intercreditor arrangements reasonably satisfactory to the Specified Refinancing Agent and, if the Specified Refinancing Agent is not the Administrative Agent, the Administrative Agent); (iv) will have such pricing and optional prepayment terms as may be agreed by the Parent Borrower and the applicable Lenders thereof; (v) (x) to the extent constituting revolving credit facilities, will not have a maturity date (or have mandatory commitment reductions or amortization) that is prior to the scheduled Maturity Date of the Revolving Tranche being refinanced and (y) to the extent constituting term loan facilities, will have a maturity date that is not prior to the date that is the scheduled Maturity Date of, and will have a Weighted Average Life to Maturity that is not shorter than the Weighted Average Life to Maturity of, the Term Loans being refinanced; provided, that Extendable Bridge Loans and Specified Refinancing Debt incurred pursuant to the Inside Maturity Date Exception may have a maturity date earlier than the Latest Maturity Date of all then outstanding Term Loans and, with respect to Extendable Bridge Loans and Specified Refinancing Debt incurred pursuant to the Inside Maturity Date Exception, the Weighted Average Life to Maturity thereof may be shorter than the then longest remaining Weighted Average Life to Maturity of any then outstanding Term Loans; (vi) any Specified Refinancing Term Loans shall share ratably in any prepayments of Term Loans pursuant to Section 2.05 (or otherwise provide for more favorable prepayment treatment for the then outstanding Term Loan Tranches than the Specified Refinancing Term Loans); (vii) each Revolving Credit Borrowing (including any deemed Revolving Credit Borrowings made pursuant to Section 2.03) and participations in Letters of Credit pursuant to Section 2.03 shall be allocated *pro rata* among the Revolving Tranches; (viii) subject to clauses (iv) and (v) above, will have terms and conditions (other than pricing and optional prepayment and redemption terms) that are as agreed between the Borrowers and the Lenders providing such Specified Refinancing Debt; provided that the negative covenants and events of default will (x) be not materially more favorable, taken as a whole, to such Lenders than the terms of the existing Revolving Facility or Term Facilities, as applicable, unless (A) the Lenders under the existing Revolving Facility or Term Facilities, as applicable, also receive the benefits of such more favorable terms (and to the extent the existing Lenders under the existing Facilities are to receive the benefit of such terms, such terms shall be incorporated into the Loan Documents for the benefit of all existing Lenders without further amendment requirements) or (B) any such provisions apply only after the maturity date of the initial Revolving Facility or (y) are reasonably acceptable to the Administrative Agent and (ix) the Net Cash Proceeds of such Specified Refinancing Debt shall be applied, substantially concurrently with the incurrence thereof, to the pro rata prepayment of outstanding Loans being so refinanced (and, in the case of Revolving Credit Loans, a corresponding amount of Revolving Credit Commitments

shall be permanently reduced), in each case pursuant to Section 2.05 and 2.06, as applicable, and the payment of fees, expenses and premiums, if any, payable in connection therewith; provided, however, that such Specified Refinancing Debt (x) may provide for any additional or different financial or other covenants or other provisions that are agreed among the Borrowers and the Lenders thereof and applicable only during periods after the then Latest Maturity Date in effect and (y) shall not have a principal or commitment amount (or accreted value) greater than the Loans being refinanced (*plus* an amount equal to accrued interest, fees, discounts, premiums and expenses). Any Lender approached to provide all or a portion of any Specified Refinancing Debt may elect or decline, in its sole discretion, to provide such Specified Refinancing Debt. To achieve the full amount of a requested issuance of Specified Refinancing Debt, and subject to the approval of the Administrative Agent (and each L/C Issuer in the case of Specified Refinancing Revolving Credit Commitments), the Borrowers may also invite additional Eligible Assignees to become Lenders in respect of such Specified Refinancing Debt pursuant to a joinder agreement to this Agreement in form and substance reasonably satisfactory to the Specified Refinancing Agent.

(b) The effectiveness of any Refinancing Amendment shall be subject to conditions as are mutually agreed with the participating Lenders providing such Specified Refinancing Debt and to the extent reasonably requested by the Specified Refinancing Agent, receipt by the Specified Refinancing Agent of legal opinions, board resolutions, officers' certificates and/or reaffirmation agreements with respect to the Borrowers and the Guarantors, including any supplements or amendments to the Collateral Documents providing for such Specified Refinancing Debt to be secured thereby, consistent with those delivered on the Closing Date under Section 4.01 or delivered from time to time pursuant to Section 6.12, 6.14 and/or Section 6.16 (other than changes to such legal opinions resulting from a change in Law, change in fact or change to counsel's form of opinion reasonably satisfactory to the Specified Refinancing Agent). The Lenders hereby authorize the Specified Refinancing Agent to enter into amendments to this Agreement and the other Loan Documents with the Borrowers as may be necessary in order to establish new Tranches of Specified Refinancing Debt and to make 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 Tranches, in each case on terms consistent with and/or to effect the provisions of this Section 2.18.

(c) Each class of Specified Refinancing Debt incurred under this Section 2.18 shall be in an aggregate principal amount that is (x) not less $3,500,000 and (y) an integral multiple of $1,000,000 in excess thereof. Any Refinancing Amendment may provide for the issuance of Letters of Credit for the account of the Borrowers in respect of a Revolving Tranche pursuant to any revolving credit facility established thereby, in each case on terms substantially equivalent to the terms applicable to Letters of Credit under the Revolving Credit Commitments.

(d) The Specified Refinancing Agent shall promptly notify each Lender as to the effectiveness of each Refinancing Amendment. Each of the parties hereto hereby agrees that, upon the effectiveness of any Refinancing Amendment, this Agreement shall be deemed amended to the extent (but only to the extent) necessary to reflect the existence and terms of the Specified Refinancing Debt incurred pursuant thereto (including the addition of such Specified Refinancing Debt as separate "Facilities" hereunder and treated in a manner consistent with the Facilities being refinanced, including for purposes of prepayments and voting). Any Refinancing Amendment may, without the consent of any Person other than the Borrowers, the Specified Refinancing Agent and the Lenders providing such Specified Refinancing Debt, effect such amendments to this Agreement and the other Loan Documents as may be necessary or appropriate, in the reasonable opinion of the Specified Refinancing Agent and the Parent Borrower, to effect the provisions of or consistent with this Section 2.18. In addition, if so provided in the relevant Refinancing Amendment and with the consent of each L/C Issuer, participations in Letters of Credit expiring on or after the scheduled Maturity Date in respect of a Revolving Tranche shall be reallocated from Lenders holding Revolving Credit Commitments to Lenders holding extended revolving commitments in accordance with the terms of such Refinancing Amendment; provided, however, that such participation interests shall, upon receipt thereof by the relevant Lenders holding extended revolving commitments, be deemed to be participation interests in respect of such extended revolving commitments and the terms of such participation interests (including the commission applicable thereto) shall be adjusted accordingly. If the Specified Refinancing Agent is not the Administrative Agent, the actions authorized to be taken by the Specified Refinancing Agent herein shall be done in consultation with the Administrative Agent and, with respect to the preparation of any documentation necessary or appropriate to carry out the provisions of this Section 2.18 (including amendments to this Agreement and the other Loan Documents), any comments to such documentation reasonably requested by the Administrative Agent shall be reflected therein.

Section 2.19 Permitted Debt Exchanges.

(a) Notwithstanding anything to the contrary contained in this Agreement, pursuant to one or more offers (each, a "Permitted Debt Exchange Offer") made from time to time by the Parent Borrower, the Borrowers may from time to time following the Closing Date consummate one or more exchanges of Term Loans for Permitted Debt Exchange Notes (each such exchange a "Permitted Debt Exchange"), so long as the following conditions are satisfied: (i) no Event of Default shall have occurred and be continuing at the time the final offering document in respect of a Permitted Debt Exchange Offer is delivered to the relevant Lenders, (ii) the aggregate principal amount (calculated on the face amount thereof) of Term Loans exchanged shall equal no more than the aggregate principal amount (calculated on the face amount thereof) of Permitted Debt Exchange Notes issued in exchange for such Term Loans; provided that the aggregate principal amount of the Permitted Debt Exchange Notes may include accrued interest and premium (if any) under the Term Loans exchanged and underwriting discounts, fees, commissions and expenses in connection with the issuance of such Permitted Debt Exchange Notes, (iii) the aggregate principal amount (calculated on the face amount thereof) of all Term Loans exchanged by the Borrowers pursuant to any Permitted Debt Exchange shall automatically be cancelled and retired by the Borrowers on the date of the settlement thereof (and, if requested by the Administrative Agent, any applicable exchanging Lender shall execute and deliver to the Administrative Agent an Assignment and Assumption, or such other form as may be reasonably requested by the Administrative Agent, in respect thereof pursuant to which the respective Lender assigns its interest in the Term Loans being exchanged pursuant to the Permitted Debt Exchange to the Borrowers for immediate cancellation), (iv) if the aggregate principal amount of all Term Loans (calculated on the face amount thereof) tendered by Lenders in respect of the relevant Permitted Debt Exchange Offer (with no Lender being permitted to tender a principal amount of Term Loans which exceeds the principal amount thereof actually held by it) shall exceed the maximum aggregate principal amount of such Term Loans offered to be exchanged by the Borrowers pursuant to such Permitted Debt Exchange Offer, then the Borrowers shall exchange Term Loans subject to such Permitted Debt Exchange Offer tendered by such Lenders ratably up to such maximum amount based on the respective principal amounts so tendered, (v) all documentation in respect of such Permitted Debt Exchange shall be consistent with the foregoing, and all written communications generally directed to the Lenders in connection therewith shall be in form and substance consistent with the foregoing and made in consultation with the Parent Borrower and the Exchange Agent and (vi) any applicable Minimum Tender Condition (as defined below) shall be satisfied.

(b) With respect to all Permitted Debt Exchanges effected by the Borrowers pursuant to this Section 2.19, (i) such Permitted Debt Exchanges (and the cancellation of the exchanged Term Loans in connection therewith) shall not constitute voluntary or mandatory payments or prepayments for purposes of Section 2.05(a) or (b), and (ii) such Permitted Debt Exchange Offer shall be made for not less than $3,500,000 in aggregate principal amount of Term Loans; provided that subject to the foregoing clause (ii) the Parent Borrower may at its election specify as a condition (a "Minimum Tender Condition") to consummating any such Permitted Debt Exchange that a minimum amount (to be determined and specified in the relevant Permitted Debt Exchange Offer in the Parent Borrower's discretion) of Term Loans of any or all applicable classes be tendered.

(c) In connection with each Permitted Debt Exchange, the Parent Borrower and the Exchange Agent shall mutually agree to such procedures as may be necessary or advisable to accomplish the purposes of this Section 2.19 and without conflict with Section 2.19(d); provided that the terms of any Permitted Debt Exchange Offer shall provide that the date by which the relevant Lenders are required to indicate their election to participate in such Permitted Debt Exchange shall be not less than a reasonable period (in the discretion of the Parent Borrower and the Exchange Agent) of time following the date on which the Permitted Debt Exchange Offer is made.

(d) The Borrowers shall be responsible for compliance with, and hereby agrees to comply with, all applicable securities and other laws and regulations in connection with each Permitted Debt Exchange, it being understood and agreed that (x) none of the Exchange Agent, the Administrative Agent nor any Lender assumes any responsibility in connection with the Borrowers' compliance with such laws and regulations in connection with any Permitted Debt Exchange and (y) each Lender shall be solely responsible for its compliance with any applicable "insider trading" laws and regulations to which such Lender may be subject under the Securities Exchange Act of 1934, as amended, and/or other applicable securities laws and regulations.

(e) If the Exchange Agent is not the Administrative Agent, the actions authorized to be taken by the Exchange Agent herein shall be done in consultation with the Administrative Agent.

Section 2.20 Co-Borrowers.

(a) Each Borrower accepts joint and several liability hereunder in consideration of the financial accommodation to be provided by the Administrative Agent, the Lenders and the L/C Issuers under this Agreement and the other Loan Documents, for the mutual benefit, directly and indirectly, of each Borrower and in consideration of the undertakings of each Borrower to accept joint and several liability for the obligations of each Borrower.

(b) Each Borrower shall be jointly and severally liable for the Obligations, regardless of which Borrower actually receives the Loans hereunder or the amount of the Obligations received or the manner in which the Administrative Agent or any Lender accounts for the Obligations on its books and records. Each Borrower's obligations with respect to Loans made to it, and each Borrower's obligations arising as a result of the joint and several liability of such Borrower hereunder, with respect to Loans or L/C Obligations made to and other Obligations owing by the Borrowers hereunder, shall be separate and distinct obligations, but all such obligations shall be primary obligations of each Borrower.

(c) Each Borrower's obligations arising as a result of the joint and several liability of such Borrower hereunder with respect to Loans made to, Letters of Credit issued on behalf of, and other Obligations owing by the Borrowers hereunder shall, to the fullest extent permitted by law, be unconditional irrespective of (A) the validity or enforceability, avoidance or subordination of the obligations of any other Borrower or of any promissory note or other document evidencing all or any part of the obligations of any other Borrower, (B) the absence of any attempt to collect the Obligations from any other Borrower, any other guarantor, or any other security therefor, or the absence of any other action to enforce the same, (C) the waiver, consent, extension, forbearance or granting of any indulgence by the Administrative Agent or any Lender with respect to any provision of any instrument evidencing the obligations of any other Borrower, or any part thereof, or any other agreement now or hereafter executed by any other Borrower and delivered to the Administrative Agent or any Lender, (D) the failure by the Administrative Agent or any Lender to take any steps to perfect and maintain its security interest in, or to preserve its rights to, any security or collateral for the obligations of any other Borrower, (E) the Administrative Agent's or any Lender's election, in any proceeding instituted under the Bankruptcy Code, of the application of Section 1111(b)(2) of the Bankruptcy Code of the United States, (F) any borrowing or grant of a security interest by any other Borrower, as Debtor In Possession under Section 364 of the Bankruptcy Code of the United States, (G) the disallowance of all or any portion of the Administrative Agent's or any Lender's claim(s) for the repayment of the obligations of any other Borrower under Section 502 of the Bankruptcy Code of the United States, or (H) any other circumstances which might constitute a legal or equitable discharge or defense of a guarantor or of any other Borrower. With respect to each Borrower's obligations arising as a result of the joint and several liability of such Borrower hereunder with respect to Loans made to the Borrowers hereunder, such Borrower waives, until the Obligations shall have been paid in full and this Agreement and the other Loan Documents shall have been terminated, any right to enforce any right of subrogation or any remedy which the Administrative Agent or any Lender now has or may hereafter have against such Borrower, any endorser or any guarantor of all or any part of the Obligations, and any benefit of, and any right to participate in, any security or collateral given to the Administrative Agent or any Lender to secure payment of the Obligations or any other liability of any Borrower to the Administrative Agent or any Lender.

(d) Upon the occurrence and during the continuation of any Event of Default, the Administrative Agent and the Lenders may proceed directly and at once, without notice, against any Borrower to collect and recover the full amount, or any portion of the Obligations, without first proceeding against any other Borrower or any other Person, or against any security or collateral for the Obligations. Each Borrower consents and agrees that the Administrative Agent and the Lenders shall be under no obligation to marshal any assets in favor of any Borrower or against or in payment of any or all of the Obligations.

(e) Each Borrower hereby irrevocably appoints the Parent Borrower as the borrowing agent andattorney-in-fact for the Borrowers, which appointment shall remain in full force and effect unless and until the Administrative Agent shall have received prior written notice signed by all of the Borrowers that such appointment has been revoked and that another Borrower has been appointed in the place of the Parent Borrower. Each Borrower hereby irrevocably appoints and authorizes the Parent Borrower (i) to provide to the Administrative Agent and receive from the Administrative Agent all notices with respect to Loans obtained for the benefit of any Borrower and all other notices and instructions under this Agreement and the other Loan Documents and (ii) to take such action as the Parent Borrower deems appropriate on its behalf to obtain Loans and to exercise such other powers as are reasonably incidental thereto to carry out the purposes of this Agreement. It is understood that the handling of the Collateral of the Borrowers in a combined fashion, as more fully set forth herein and in the Collateral Documents, is done solely as

an accommodation to the Borrowers in order to utilize the collective borrowing powers of the Borrowers in the most efficient and economical manner and at their request, and that neither the Agents nor the Lenders shall incur liability to the Borrowers as a result hereof. Each of the Borrowers expects to derive benefit, directly or indirectly, from the handling of the Collateral in a combined fashion since the successful operation of each Borrower is dependent on the continued successful performance of the integrated group.

(f) In any action or proceeding involving any state corporate limited partnership or limited liability company law, or any applicable state, federal or foreign bankruptcy, insolvency, reorganization or other Law affecting the rights of creditors generally, if the obligations of any Borrower hereunder would otherwise be held or determined to be void, voidable, invalid or unenforceable, or subordinated to the claims of any other creditors, on account of the amount of its liability hereunder, then, notwithstanding any other provision to the contrary, the amount of such liability shall, without any further action by such Borrower, any Loan Party or any other Person, be automatically limited and reduced to the highest amount that is valid and enforceable and not subordinated to the claims of other creditors as determined in such action or proceeding.

(g) After the Closing Date, the Parent Borrower may, at any time and from time to time, designate any Subsidiary that is a Domestic Subsidiary as a Borrower by delivery to the Administrative Agent of a Borrower Joinder Agreement executed by such Subsidiary and the Parent Borrower, together with any documentation and other information with respect to such additional Borrower required by regulatory authorities under applicable "know your customer" and anti-money laundering rules and regulations, including, without limitation, the PATRIOT Act requested by the Administrative Agent (and to the extent not theretofore delivered on the Closing Date or otherwise), and upon such delivery and satisfaction, such Subsidiary shall for all purposes of this Agreement and the other Loan Documents be a Borrower and a party to this Agreement. As soon as practicable upon receipt of a Borrower Joinder Agreement, the Administrative Agent shall furnish a copy thereof to each Lender.

ARTICLE III.
Taxes, Increased Costs Protection and Illegality

Section 3.01 Taxes.

(a) All payments by or on account of any obligation of the Borrowers or any other Loan Party hereunder or under any other Loan Document shall be made without deduction or withholding for any Taxes, except as required by applicable Law. If any applicable Law (as determined in the good faith discretion of an applicable Withholding Agent) requires the deduction or withholding of any Tax from or in respect of any such payment, then the applicable Withholding Agent shall be entitled to make such deduction or withholding and shall timely pay the full amount deducted or withheld to the relevant Governmental Authority in accordance with applicable Law and, if such Tax is an Indemnified Tax, the sum payable by the Borrowers or other applicable Loan Party shall be increased as necessary so that after all such deductions or withholdings for Indemnified Taxes have been made (including such deductions and withholdings for Indemnified Taxes applicable to additional sums payable under this Section 3.01) the applicable Recipient receives an amount equal to the sum it would have received had no such deduction or withholding for Indemnified Taxes been made.

(b) In addition but without duplication, the Loan Parties shall timely pay to the relevant Governmental Authority in accordance with applicable Law, or at the option of the Administrative Agent timely reimburse it for the payment of, any Other Taxes.

(c) Without duplication of amounts paid pursuant to Section 3.01, the Loan Parties shall jointly and severally indemnify each Recipient, within 30 days after written demand therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under this Section 3.01) payable or paid by such Recipient or required to be withheld or deducted from a payment to such Recipient and any reasonable out-of-pocket expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. The relevant Recipient shall notify the Parent Borrower of the imposition of any Indemnified Tax reasonably promptly after becoming aware of the imposition of such Tax. A certificate as to the amount of such payment or liability delivered to the Parent Borrower by a Lender (with a copy to the Administrative Agent), or by the Administrative Agent on its own behalf or on behalf of a Lender, shall be conclusive absent manifest error.

(d) Within 30 days after any payment of Taxes by any Loan Party to a Governmental Authority pursuant to this Section 3.01, such Loan Party 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 reasonably satisfactory to the Administrative Agent.

(e) If any Recipient determines, in its sole discretion exercised in good faith, that it has received a refund of any Indemnified Taxes as to which it has been indemnified pursuant to this Section 3.01 (including by the payment of additional amounts pursuant to this Section 3.01), it shall pay to the indemnifying party an amount equal to such refund (but only to the extent of indemnity payments made under this Section 3.01 with respect to the Indemnified Taxes giving rise to such refund), net of all out-of-pocket expenses (including Taxes) of such indemnified party and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund). Such indemnifying party, upon the request of such indemnified party, shall promptly repay to such indemnified party the amount paid over pursuant to this clause (e) (*plus* any penalties, interest or other charges imposed by the relevant Governmental Authority) in the event that such indemnified party is required to repay such refund to such Governmental Authority. Notwithstanding anything to the contrary in this clause (e), in no event will the indemnified party be required to pay any amount to an indemnifying party pursuant to this clause (e) the payment of which would place the indemnified party in a less favorable net after-Tax position than the indemnified party would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This clause (e) shall not be construed to require any indemnified party to make available its Tax returns (or any other information relating to its Taxes that it deems confidential) to the indemnifying party or any other Person.

(f) Each Lender agrees that, upon the occurrence of any event giving rise to the operation of Section 3.01(a) or (c) or Section 3.05 with respect to such Lender it will, if requested by the Parent Borrower, use commercially reasonable efforts (subject to such Lender's overall internal policies of general application and legal and regulatory restrictions) to avoid or reduce to the greatest extent possible any indemnification or additional amounts being due under this Section 3.01 or Section 3.05, including to designate another Lending Office for any Loan or Letter of Credit affected by such event; provided that such efforts are made on terms that, in the reasonable judgment of such Lender, cause such Lender and its Lending Office(s) to suffer no material economic, legal or regulatory disadvantage; and provided, further, that nothing in this Section 3.01(f) shall affect or postpone any of the Obligations of any of the Borrowers or the rights of such Lender pursuant to Sections 3.01(a) and (c) and Section 3.05. The Borrowers hereby agree to pay all reasonable costs and expenses incurred by any Lender as a result of a request by the Parent Borrower under this Section 3.01(f).

(g) (i) Any Lender that is entitled to an exemption from or reduction of withholding Tax with respect to any payments 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 reasonably requested by the Parent Borrower or the Administrative Agent as will 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 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. Notwithstanding anything to the contrary in the preceding two sentences, the completion, execution and submission of such documentation (other than such documentation set forth in Sections 3.01(g)(ii)(A), (ii)(B) and (ii)(D) below) shall not be required if in the Lender's reasonable judgment such completion, execution or submission would subject such Lender to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of such Lender.

(ii) Without limiting the generality of the foregoing,

(A) any Lender that is a U.S. Person shall deliver to the Parent Borrower and the Administrative Agent (in such number of copies as shall be requested by the recipient) 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) executed copies of IRS Form W-9 (or any successor form) certifying that such Lender is exempt from U.S. federal backup withholding;

(B) any Foreign Lender shall deliver to the Parent Borrower and the Administrative Agent (in such number of copies as shall be requested by the recipient) 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:

(a) in the case of a Foreign Lender claiming the benefits of an income tax treaty to which the United States is a party, (x) with respect to payments of interest under any Loan Document, executed copies of IRS Form W-8BEN or IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "interest" article of such tax treaty and (y) with respect to any other applicable payments under any Loan Document, IRS Form W-8BEN or IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "business profits" or "other income" article of such tax treaty;

(b) executed copies of IRS Form W-8ECI (or any successor form);

(c) in the case of a Foreign Lender claiming the benefits of the exemption for portfolio interest under Section 871(h) or Section 881(c) of the Code, (x) a certificate substantially in the form of Exhibit K-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 any Borrower within the meaning of Section 871(h)(3)(B) of the Code, a "controlled foreign corporation" related to any Borrower, as described in Section 881(c)(3)(C), of the Code and that no payments in connection with any Loan Document are effectively connected with such Lender's conduct of a U.S. trade or business (a "U.S. Tax Compliance Certificate") and (y) executed copies of IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable (or any successor form); or

(d) to the extent a Foreign Lender is not the beneficial owner (*e.g.*, where the Foreign Lender is a partnership or a participating Lender), executed copies of IRS Form W-8IMY, accompanied by IRS Form W-8ECI, IRS Form W-8BEN, IRS Form W-8BEN-E, a certificate substantially in the form of Exhibit K-2 or Exhibit K-3, IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable; provided that if the 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 shall provide a certificate substantially in the form of Exhibit K-4 on behalf of each such direct and indirect partner;

(C) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to the Parent Borrower or the Administrative Agent (in such number of copies as shall be requested by the recipient) 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), executed copies of any other form prescribed by applicable 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 Law to permit the Parent Borrower or the Administrative Agent to determine the withholding or deduction required to be made;

(D) if a payment made to a Recipient under any Loan Document would be subject to Tax imposed by FATCA if such Lender or the Administrative Agent 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 Recipient shall deliver to the Parent Borrower and the Administrative Agent at the time or times prescribed by Law and at such time or times reasonably requested by the Parent Borrower or the Administrative Agent such documentation prescribed by applicable Law (including as prescribed by Section 1471(b)(3)(C)(i) of the Code) and such additional documentation reasonably requested by the Parent Borrower or the Administrative Agent as may be necessary for the relevant Borrower and the Administrative Agent to comply with their obligations under FATCA and to determine whether such Recipient has complied with such Recipient's obligations under FATCA or to determine the amount 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; and

(E) the Administrative Agent, and any successor or supplemental Administrative Agent, shall deliver to the Parent Borrower (in such number of copies as shall be requested by the recipient) on or prior to the date on which the Administrative Agent becomes the administrative agent hereunder or under any other Loan Document (and from time to time thereafter upon the reasonable request of the Parent Borrower) executed copies of either (i) IRS Form W-9 (or any successor form) or (ii) a U.S. branch withholding certificate on IRS FormW-8IMY (or any successor form) evidencing its agreement with the Borrowers to be treated as a U.S. person (with respect to amounts received on account of any Lender) and IRS Form W-8ECI (with respect to amounts received on its own account), with the effect that, in either case, the Borrowers will be entitled to make payments hereunder to the Administrative Agent without withholding or deduction on account of U.S. federal withholding tax.

Each Recipient agrees that if any documentation it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall promptly update and deliver such form or certification to the Parent Borrower and the Administrative Agent or promptly notify the Parent Borrower and the Administrative Agent in writing of its legal ineligibility to do so. Notwithstanding any other provision of this Section 3.01, a Lender shall not be required to deliver any documentation that such Lender is not legally eligible to deliver.

Each Lender hereby authorizes the Administrative Agent to deliver to the Loan Parties and to any successor Administrative Agent any documentation provided by such Lender to the Administrative Agent pursuant to Section 3.01(g).

(h) Each Lender shall severally indemnify the Administrative Agent, within 10 days after demand therefor, for (i) any Indemnified Taxes attributable to such Lender (but only to the extent that any Loan Party has not already indemnified the Administrative Agent for such Indemnified 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 10.07(m) relating to the maintenance of a Participant Register and (iii) any Excluded Taxes 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 by the relevant Governmental Authority. 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 setoff 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 the Lender from any other source against any amount due to the Administrative Agent under this paragraph (h).

(i) The agreements in this Section 3.01 shall survive the resignation and/or replacement of the Administrative Agent, any assignment of rights by, or the replacement of, a Lender, the termination of the Commitments and the repayment, satisfaction or discharge of all other Obligations.

(j) For the avoidance of doubt, the term "Lender" shall, for purposes of this Section 3.01, include any L/C Issuer, and the term "applicable law" includes FATCA.

Section 3.02 [Reserved].

Section 3.03 Illegality. If any Lender reasonably determines that any Law has made it unlawful, or that any Governmental Authority has asserted that it is unlawful, for any 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 Adjusted 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 in the applicable interbank market, then, on notice thereof by such Lender to the Parent Borrower through the Administrative Agent, (i) any obligation of such Lender to make or continue Eurocurrency Rate Loans or to convert Base Rate Loans to Eurocurrency Rate Loans shall be suspended and (ii) if such notice asserts the illegality of such Lender making or maintaining Base Rate Loans, the interest rate on which is determined by reference to the Adjusted Eurocurrency Rate component of the Base Rate, the interest rate on which Base Rate 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 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. Upon receipt of such notice, (x) the Borrowers shall,

upon demand from such Lender (with a copy to the Administrative Agent), prepay or (A) if applicable and such Lender's Eurocurrency Rate Loans are denominated in Dollars, convert all of such Lender's Eurocurrency Rate Loans to Base Rate Loans (the interest rate on which Base Rate Loans of such Lender shall, if necessary to avoid such illegality, be determined by the Administrative Agent without reference to the Adjusted Eurocurrency Rate component of the Base Rate) or (B) if applicable and such Lender's Eurocurrency Rate Loans are denominated in an Alternative Currency, the interest rate with respect to such Eurocurrency Rate Loans shall be determined by an alternative rate mutually acceptable to the Parent Borrower and the applicable Revolving Credit Lenders, in each case, either on the last day of the Interest Period therefor, if such Lender may lawfully continue to maintain such Eurocurrency Rate Loans to such day, or promptly after such demand, if such Lender may not lawfully continue to maintain such Eurocurrency Rate Loans. Upon any such prepayment or conversion, the Borrowers shall also pay accrued interest on the amount so prepaid or converted and all amounts due, if any, in connection with such prepayment or conversion under Section 3.06. Each Lender agrees to designate a different Lending Office if such designation will avoid the need for such notice and will not, in the good faith judgment of such Lender, otherwise be materially disadvantageous to such Lender.

Section 3.04 Inability to Determine Rates.

(a) If the Administrative Agent reasonably determines that (i) for any reason, adequate and reasonable means do not exist for determining the Eurocurrency Rate for any requested Interest Period and currency with respect to a proposed Eurocurrency Rate Loan, or (ii) is informed by the Required Lenders that the Eurocurrency Rate for any requested Interest Period and currency with respect to a proposed Eurocurrency Rate Loan does not adequately and fairly reflect the cost to such Lenders of funding such Loan, or (iii) that deposits are not being offered to banks in the relevant interbank market for the applicable amount, currency and the Interest Period of such Eurocurrency Rate Loan, the Administrative Agent will promptly so notify the Parent Borrower and each Lender. Thereafter, (x) the obligation of the Lenders to make or maintain Eurocurrency Rate Loans of such currency shall be suspended and (y) in the event of a determination described in the preceding sentence with respect to the Eurocurrency Rate component of the Base Rate, the utilization of the Eurocurrency Rate component in determining the Base Rate shall be suspended, in each case until the Administrative Agent (upon the instruction of the Required Lenders) revokes such notice. Upon receipt of such notice, the Parent Borrower may revoke any pending request for a Borrowing of, conversion to or continuation of Eurocurrency Rate Loans of such currency or, failing that, will be deemed to have converted such request into a request for a Borrowing of Base Rate Loans in the amount specified therein (or, in the case of a pending request for a Revolving Credit Loan denominated in an Alternative Currency, the Parent Borrower, the Administrative Agent and the applicable Revolving Credit Lenders may establish a mutually acceptable alternative rate).

(b) Notwithstanding anything to the contrary herein or in any other Loan Document, upon the occurrence of a Benchmark Transition Event or an Early Opt-in Election, as applicable, the Administrative Agent and the Parent Borrower may amend this Agreement to replace the Benchmark with a Benchmark Replacement. Any such amendment with respect to a Benchmark Transition Event will become effective at 5:00 p.m. on the fifth (5th) Business Day after the Administrative Agent has posted such proposed amendment to all Lenders and the Parent Borrower so long as the Administrative Agent has not received, by such time, written notice of objection to such amendment from Lenders comprising the Required Lenders; *provided* that, to the extent the Benchmark is replaced with a SOFR-Based Rate, Lenders shall only be entitled to object to the Benchmark Replacement Adjustments with respect thereto. Any such amendment with respect to an Early Opt-in Election will become effective at 5:00 p.m. on the fifth (5th) Business Day after the Administrative Agent has posted such proposed amendment to all Lenders and the Parent Borrower so long as the Administrative Agent has not received, by such time, written notice of objection to such amendment from Lenders comprising the Required Lenders. No replacement of the Benchmark with a Benchmark Replacement pursuant to this Section 3.04 will occur prior to the applicable Benchmark Transition Start Date.

(c) In connection with the implementation of a Benchmark Replacement, the Administrative Agent will have the right to make Benchmark Replacement Conforming Changes from time to time and, notwithstanding anything to the contrary herein or in any other Loan Document, any amendments implementing such Benchmark Replacement Conforming Changes will become effective without any further action or consent of any other party to this Agreement.

(d) The Administrative Agent will promptly notify the Parent Borrower and the Lenders of (i) any occurrence of a Benchmark Transition Event or an Early Opt-in Election, as applicable, and its related Benchmark Replacement Date and Benchmark Transition Start Date, (ii) the implementation of any Benchmark Replacement, (iii) the effectiveness of any Benchmark Replacement Conforming Changes and (iv) the commencement or conclusion of any Benchmark Unavailability Period. Any determination, decision or election that may be made by the Administrative Agent or Lenders pursuant to this Section 3.04, including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action, will be conclusive and binding absent manifest error and may be made in its or their sole discretion and without consent from any other party hereto, except, in each case, as expressly required pursuant to this Section 3.04.

(e) Upon the Parent Borrower's receipt of notice of the commencement of a Benchmark Unavailability Period, the Parent Borrower may revoke any request for a Eurocurrency Rate Borrowing of, conversion to or continuation of Eurocurrency Rate Loans to be made, converted or continued during any Benchmark Unavailability Period and, failing that, the Parent Borrower will be deemed to have converted any such request into a request for a Borrowing of or conversion to Base Rate Loans. During any Benchmark Unavailability Period, the component of Base Rate based upon Adjusted Eurocurrency Rate will not be used in any determination of Base Rate.

Section 3.05 Increased Cost and Reduced Return; Capital Adequacy and Liquidity Requirements.

(a) If any Lender reasonably determines that as a result of the introduction of or any change in or in the interpretation of any Law, in each case after the date hereof, or such Lender's compliance therewith, there shall be any material increase in the cost to such Lender of agreeing to make or making, funding or maintaining any Loan the interest on which is determined by reference to the Eurocurrency Rate or (as the case may be) issuing or participating in Letters of Credit, or a material reduction in the amount received or receivable by such Lender in connection with any of the foregoing (including Taxes on or in respect of its loans, letters of credit, commitments, or other obligations, or its deposits, reserves, other liabilities or capital attributable thereto, but excluding for purposes of this Section 3.05(a) any such increased costs or reduction in amount resulting from (i) Indemnified Taxes indemnifiable under Section 3.01 and (ii) Excluded Taxes), then within 15 days after demand of such Lender setting forth in reasonable detail such increased costs (with a copy of such demand to the Administrative Agent given in accordance with Section 3.06), the Borrowers shall pay to such Lender such additional amounts as will compensate such Lender for such increased cost or reduction.

(b) If any Lender reasonably determines that the introduction of any Law regarding capital adequacy and liquidity requirements or any change therein or in the interpretation thereof, in each case after the date hereof, or compliance by such Lender (or its Lending Office) therewith, has the effect of materially reducing the rate of return on the capital of such Lender or any corporation controlling such Lender as a consequence of such Lender's obligations hereunder (taking into consideration its policies with respect to capital adequacy and liquidity and such Lender's desired return on capital), then within 15 days after demand of such Lender setting forth in reasonable detail the charge and the calculation of such reduced rate of return (with a copy of such demand to the Administrative Agent given in accordance with Section 3.06), the Borrowers shall pay to such Lender such additional amounts as will compensate such Lender for such reduction.

(c) The Borrowers shall pay to each Lender, (i) as long as such Lender shall be required to maintain reserves or liquidity with respect to liabilities or assets consisting of or including Eurocurrency Rate funds or deposits, additional interest on the unpaid principal amount of each Eurocurrency Rate Loan equal to the actual costs of such reserves or liquidity allocated to such Loan by such Lender (as determined by such Lender in good faith, which determination shall be conclusive in the absence of manifest error), and (ii) as long as such Lender shall be required to comply with any liquidity requirement, reserve ratio requirement or analogous requirement of any other central banking or financial regulatory authority imposed in respect of the maintenance of the Commitments or the funding of the Eurocurrency Rate Loans, such additional costs (expressed as a percentage per annum and rounded upwards, if necessary, to the nearest five decimal places) equal to the actual costs allocated to such Commitment or Loan by such Lender (as determined by such Lender in good faith, which determination shall be conclusive absent manifest error) which in each case shall be due and payable on each date on which interest is payable on such Loan; provided the Parent Borrower shall have received at least 15 days' prior written notice (with a copy to the Administrative Agent) of such additional interest or cost from such Lender. If a Lender fails to give written notice fifteen days prior to the relevant Interest Payment Date, such additional interest or cost shall be due and payable 15 days from receipt of such written notice.

(d) For purposes of this Section 3.05, (i) the Dodd-Frank Wall Street Reform and Consumer Protection Act and all requests, rules, regulations, guidelines or directives thereunder or issued in connection therewith and (ii) all requests, rules, guidelines, requirements and directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority) or the United States or foreign regulatory authorities (other than foreign regulatory authorities in Switzerland), in each case pursuant to Basel III, shall, in each case, be deemed to have gone into effect after the date hereof, regardless of the date enacted, adopted or issued.

Section 3.06 Funding Losses. Upon written demand of any Lender (with a copy to the Administrative Agent) from time to time, setting forth in reasonable detail the basis for calculating such compensation, the Borrowers shall promptly compensate such Lender for and hold such Lender harmless from any loss, cost or expense incurred by it as a result of:

(a) any continuation, conversion, payment or prepayment of any Eurocurrency Rate Loan on a day other than the last day of the Interest Period for such Loan (whether voluntary, mandatory, automatic, by reason of acceleration, or otherwise);

(b) any failure by the Borrowers (for a reason other than the failure of such Lender to make a Loan or pursuant to a conditional notice) to prepay, borrow, continue or convert any Eurocurrency Rate Loan on the date or in the amount notified by the Parent Borrower;

(c) any failure by the Borrowers to make payment of any Loan or drawing under any Letter of Credit (or interest due thereon) denominated in an Alternative Currency on its scheduled due date or any payment of any Loan or drawing under any Letter of Credit (or interest due thereon) in a different currency from such Loan or Letter of Credit drawing; or

(d) any mandatory assignment of such Lender's Eurocurrency Rate Loans pursuant to Section 3.08 on a day other than the last day of the Interest Period for such Loans,

including any loss or expense arising from the liquidation or reemployment of funds obtained by it to maintain such Loan or from fees payable to terminate the deposits from which such funds were obtained (but excluding anticipated profits). The Borrowers shall also pay any customary administrative fees charged by such Lender in connection with the foregoing.

Section 3.07 Matters Applicable to All Requests for Compensation.

(a) A certificate of any Agent or any Lender claiming compensation under this Article III and setting forth in reasonable detail a calculation of the additional amount or amounts to be paid to it hereunder shall be conclusive in the absence of manifest error. In determining such amount, such Agent or such Lender may use any reasonable averaging and attribution methods. With respect to any Lender's claim for compensation under Section 3.03, 3.04 or 3.05, the Loan Parties shall not be required to compensate such Lender for any amount incurred more than 180 days prior to the date that such Lender notifies the Parent Borrower of the event that gives rise to such claim; provided that, if the circumstance giving rise to such claim is retroactive, then such 180-day period referred to above shall be extended to include the period of retroactive effect thereof.

(b) If any Lender requests compensation under Section 3.05, or the Borrowers are required to pay any additional amount to any Lender, any L/C Issuer, or any Governmental Authority for the account of any Lender or any L/C Issuer pursuant to Section 3.01, or if any Lender gives a notice pursuant to Section 3.03, then such Lender or the L/C Issuer, as applicable, will, if requested by the Parent Borrower and at the Borrowers' expense, use commercially reasonable efforts to designate another Lending Office for any Loan or Letter of Credit affected by such event; provided that such efforts (i) would eliminate or reduce amounts payable pursuant to Section 3.01 or 3.04, as applicable, in the future and (ii) would not, in the judgment of such Lender or such L/C Issuer, as applicable, be

inconsistent with the internal policies of, or otherwise be disadvantageous in any material legal, economic or regulatory respect to such Lender or its Lending Office or such L/C Issuer. The provisions of this clause (b) shall not affect or postpone any Obligations of the Borrowers or rights of such Lender pursuant to Section 3.05.

(c) If any Lender requests compensation by the Borrowers under Section 3.05, the Parent Borrower may, by notice to such Lender (with a copy to the Administrative Agent), suspend the obligation of such Lender to make or continue from one Interest Period to another Eurocurrency Rate Loans, or to convert Base Rate Loans into Eurocurrency Rate Loans, until the event or condition giving rise to such request ceases to be in effect (in which case the provisions of Section 3.07(e) shall be applicable); provided that such suspension shall not affect the right of such Lender to receive the compensation so requested.

(d) If the obligation of any Lender to make or continue from one Interest Period to another any Eurocurrency Rate Loan, or to convert Base Rate Loans into Eurocurrency Rate Loans shall be suspended pursuant to Section 3.07(c) hereof, such Lender's Eurocurrency Rate Loans shall be automatically converted into Base Rate Loans on the last day(s) of the then current Interest Period(s) for such Eurocurrency Rate Loans (or, in the case of an immediate conversion required by Section 3.03, on such earlier date as required by Law) and, unless and until such Lender gives notice as provided below that the circumstances specified in Section 3.03, 3.04 or 3.05 hereof that gave rise to such conversion no longer exist:

(i) to the extent that such Lender's Eurocurrency Rate Loans have been so converted, all payments and prepayments of principal that would otherwise be applied to such Lender's Eurocurrency Rate Loans shall be applied instead to its Base Rate Loans; and

(ii) all Loans that would otherwise be made or continued from one Interest Period to another by such Lender as Eurocurrency Rate Loans shall be made or continued instead as Base Rate Loans, and all Base Rate Loans of such Lender that would otherwise be converted into Eurocurrency Rate Loans shall remain as Base Rate Loans.

(e) If any Lender gives notice to the Parent Borrower (with a copy to the Administrative Agent) that the circumstances specified in Section 3.03, 3.04 or 3.05 hereof that gave rise to the conversion of such Lender's Eurocurrency Rate Loans pursuant to this Section 3.07 no longer exist (which such Lender agrees to do promptly upon such circumstances ceasing to exist) at a time when Eurocurrency Rate Loans made by other Lenders are outstanding, such Lender's Base Rate Loans shall be automatically converted, on the first day(s) of the next succeeding Interest Period(s) for such outstanding Eurocurrency Rate Loans, to the extent necessary so that, after giving effect thereto, all Loans held by the Lenders holding Eurocurrency Rate Loans and by such Lender are held pro rata (as to principal amounts, interest rate basis, and Interest Periods) in accordance with their respective Commitments.

(f) A Lender shall not be entitled to any compensation pursuant to the foregoing sections to the extent such Lender is not imposing such charges or requesting such compensation from borrowers (similarly situated to the Borrowers hereunder) under comparable syndicated credit facilities.

Section 3.08 Replacement of Lenders under Certain Circumstances.

(a) If at any time (i) the Borrowers become obligated to pay additional amounts or indemnity payments described in Section 3.01 or 3.05 (other than with respect to Other Taxes) as a result of any condition described in such Sections or any Lender ceases to make Eurocurrency Rate Loans as a result of any condition described in Section 3.03 or 3.04, (ii) any Lender becomes a Defaulting Lender or (iii) any Lender becomes a Non-Consenting Lender (as defined below in this Section 3.08) (collectively, a "Replaceable Lender"), then the Parent Borrower may, on written notice from the Parent Borrower to the Administrative Agent and such Lender, either (i) replace such Lender by causing such Lender to (and such Lender shall be obligated to) assign pursuant to Section 10.07(b) (with the assignment fee to be paid by the Borrowers in such instance unless waived by the Administrative Agent) all of its rights and obligations under this Agreement (or, in the case of a Non-Consenting Lender, all of its rights and obligations under this Agreement with respect to the Facility or Facilities for which its consent is required) to one or more Eligible Assignees; provided that neither the Administrative Agent nor any Lender shall have any obligation to the Borrowers to find a replacement Lender or other such Person or (ii) so long as no Event of Default shall have occurred and be continuing, terminate the Commitment of such Lender or L/C Issuer, as the case may be, and (1) in

the case of a Lender (other than an L/C Issuer), repay all Obligations of the Borrowers owing (and the amount of all accrued interest and fees in respect thereof) to such Lender relating to the Loans and participations held by such Lender as of such termination date and (2) in the case of an L/C Issuer, repay all obligations of the Borrowers owing to such L/C Issuer relating to the Loans and participations held by such L/C Issuer as of such termination date and cancel or backstop on terms satisfactory to such L/C Issuer any Letters of Credit issued by it; provided that (i) in the case of any such replacement of, or termination of Commitments with respect to a Non-Consenting Lender such replacement or termination shall be sufficient (together with all other consenting Lenders including any other replacement Lender) to cause the adoption of the applicable modification, waiver or amendment of the Loan Documents and (ii) in the case of any such replacement as a result of the Borrowers having become obligated to pay amounts described in Section 3.01 or 3.05, such replacement would eliminate or reduce payments pursuant to Section 3.01 or 3.05, as applicable, in the future. Any Lender being replaced pursuant to this Section 3.08(a) (i) need not be a party to an Assignment and Assumption in order for such assignment to be effective and shall be deemed to have consented to and be bound by the terms thereof; provided that, following the effectiveness of any such assignment, the other parties to such assignment agree to execute and deliver such documents necessary to evidence such assignment as reasonably requested by the applicable Lender, provided that any such documents shall be without recourse to or warranty by the parties thereto and (ii) shall deliver any Notes evidencing such Loans to the Borrowers (for return to the Borrower) or the Administrative Agent. Pursuant to such Assignment and Assumption, (A) the assignee Lender shall acquire all or a portion, as the case may be, of the assigning Lender's Commitment and outstanding Loans and participations in L/C Obligations, (B) all Obligations relating to the Loans and participations (and the amount of all accrued interest, fees and premiums in respect thereof) so assigned shall be paid in full by the assignee Lender to such assigning Lender concurrently with such assignment and assumption and (C) upon such payment and, if so requested by the assignee Lender, the assigning Lender shall deliver to the assignee Lender the applicable Note or Notes executed by the Borrower, the assignee Lender shall become a Lender hereunder and the assigning Lender shall cease to constitute a Lender hereunder with respect to such assigned Loans, Commitments and participations, except with respect to indemnification provisions under this Agreement, which shall survive as to such assigning Lender. In connection with any such replacement, if any such Replaceable Lender does not execute and deliver to the Administrative Agent a duly executed Assignment and Assumption reflecting such replacement within two Business Days of the date on which the assignee Lender executes and delivers such Assignment and Assumption to such Replaceable Lender, then such Replaceable Lender shall be deemed to have executed and delivered such Assignment and Assumption without any action on the part of the Replaceable Lender. In connection with the replacement of any Lender pursuant to this Section 3.08(a), the Borrowers shall pay to such Lender such amounts as may be required pursuant to Section 3.06.

(b) Notwithstanding anything to the contrary contained above, (i) any Lender that acts as an L/C Issuer may not be replaced hereunder at any time that it has any Letter of Credit outstanding hereunder unless arrangements satisfactory to such L/C Issuer (including the furnishing of a back-up standby letter of credit in form and substance, and issued by an issuer reasonably satisfactory to such L/C Issuer or the depositing of Cash Collateral into a cash collateral account in amounts and pursuant to arrangements consistent with the requirements of Section 2.16) have been made with respect to such outstanding Letter of Credit and (ii) the Lender that acts as the Administrative Agent may not be replaced hereunder except in accordance with the terms of Section 9.09.

(c) In the event that (i) the Parent Borrower or the Administrative Agent has requested the Lenders to consent to a waiver of any provisions of the Loan Documents or to agree to any amendment or other modification thereto, (ii) the waiver, amendment or modification in question requires the agreement of all affected Lenders in accordance with the terms of Section 10.01 or all the Lenders with respect to all of the Loans or a certain class of the Loans and (iii) the requisite consent for such waiver, amendment or modification has been (or will be) obtained, then any Lender who does not agree to such waiver, amendment or modification, in each case, shall be deemed a "Non-Consenting Lender"; provided, that the term "Non-Consenting Lender" shall also include any Lender that rejects (or is deemed to reject) (x) a loan modification offer under Section 10.01, which loan modification has been accepted by at least the Majority Lenders of the respective Tranche of Loans whose Loans and/or Commitments are to be extended pursuant to such loan modification and (y) any Lender that does not elect to become a lender in respect of any Specified Refinancing Debt pursuant to Section 2.18. For the avoidance of doubt, if any applicable Lender shall be deemed a Non-Consenting Lender and is required to assign all or any portion of its Initial Term Loans or its Initial Term Loans are prepaid by the Borrowers, pursuant to Section 3.08(a) on or prior to the date that is 6 months after the Closing Date in connection with any such waiver, amendment or modification constituting a Repricing Event, the Borrowers shall pay such Non-Consenting Lender a fee equal to 1.00% of the principal amount of the Initial Term Loans so assigned or prepaid.

(d) Survival. All of the Loan Parties' obligations under this Article III shall survive termination of the Aggregate Commitments and repayment of all other Obligations hereunder, any assignment by or replacement of a Lender and any resignation or removal of the Administrative Agent.

ARTICLE IV.
Conditions Precedent to Credit Extensions

Section 4.01 Conditions to the Initial Credit Extension on the Closing Date The obligation of each Lender to make its initial Credit Extension hereunder on the Closing Date is subject to satisfaction or due waiver in accordance with Section 10.01 of each of the following conditions precedent, except as otherwise agreed between the Parent Borrower and the Administrative Agent:

(a) The Administrative Agent shall have received all of the following, each of which shall be originals or facsimiles or "pdf" files (followed promptly by originals) unless otherwise specified, each properly executed by a Responsible Officer of the signing Loan Party, each dated as of the Closing Date (or, in the case of certificates of governmental officials, as of a recent date before the Closing Date), each in form and substance reasonably satisfactory to the Administrative Agent, and each accompanied by their respective required schedules and other attachments (and set forth thereon shall be all required information with respect to Holdings and its Subsidiaries, giving effect to the Transactions):

(i) executed counterparts of (A) this Agreement from Holdings and the Borrowers, (B) the Holdings Guaranty from Holdings, (C) the Subsidiary Guaranty from each Subsidiary Guarantor and (D) the Intercompany Subordination Agreement;

(ii) a customary perfection certificate, duly executed by the Loan Parties;

(iii) the Security Agreement, duly executed by Holdings, the Borrowers and each Subsidiary Guarantor, together with (subject to the last paragraph of this Section 4.01):

(1) certificates, if any, representing the Pledged Interests in each Borrower and each wholly owned Domestic Subsidiary other than Immaterial Subsidiaries, accompanied by undated stock powers executed in blank (or stock transfer forms, as applicable) and instruments evidencing the Pledged Debt indorsed in blank (or instrument of transfer, as applicable) shall have been delivered to the Collateral Agent following pay-off of the Existing Credit Agreements,

(2) copies of proper financing statements, filed or duly prepared for filing under the Uniform Commercial Code in all United States jurisdictions that the Administrative Agent may deem reasonably necessary in order to perfect and protect the Liens on assets of Holdings, each Borrower and each Subsidiary Guarantor created under the Security Agreement, covering the Collateral described in the Security Agreement, and

(3) evidence that all other actions, recordings and filings of or with respect to the Security Agreement that the Administrative Agent may deem reasonably necessary or desirable in order to perfect and protect the Liens created thereby (subject to the Perfection Exceptions) shall have been taken, completed or otherwise provided for in a manner reasonably satisfactory to the Administrative Agent (including receipt of duly executed payoff letters, customary lien searches and UCC-3 termination statements);

(iv) an Intellectual Property Security Agreement, duly executed by each Loan Party that owns intellectual property that is required to be pledged in accordance with the Security Agreement;

(v) a Note executed by the Borrowers in favor of each Lender requesting a Note reasonably in advance of the Closing Date;

(vi) a Committed Loan Notice and a Letter of Credit Application, if applicable, in each case relating to the initial Credit Extension;

(vii) a solvency certificate executed by the chief financial officer or similar officer, director or authorized signatory of the Parent Borrower (after giving effect to the Transactions) substantially in the form attached hereto as Exhibit I;

(viii) such documents and certifications (including Organization Documents and, if applicable, good standing certificates) as the Administrative Agent may reasonably require to evidence (A) the identity, authority and capacity of each Responsible Officer of the Loan Parties acting as such in connection with this Agreement and the other Loan Documents and (B) that Holdings, each Borrower and each Subsidiary Guarantor is duly organized or formed, and that each of them is validly existing and, to the extent applicable, in good standing, except to the extent that failure to be so qualified would not reasonably be expected to have a Material Adverse Effect; and

(ix) an opinion of Kirkland & Ellis LLP, special New York and California counsel to Holdings, the Borrowers and the Subsidiary Guarantors, addressed to each Secured Party, in form and substance reasonably satisfactory to the Administrative Agent.

(b) The Arrangers and the Administrative Agent shall have received (i) audited consolidated balance sheets and the related consolidated statements of income and cash flows of the Parent Borrower as of and for the fiscal year ended December 31, 2019 and (ii) unaudited condensed consolidated balance sheets and the related consolidated statements of income of the Parent Borrower as of the end of and for the six month period ended June 30, 2020 and as of and for any fiscal quarter (other than the fourth fiscal quarter) ended at least 45 days prior to the Closing Date.

(c) [reserved.]

(d) (i) Holdings and the Borrowers shall have provided the documentation and other information reasonably requested in writing at least ten days prior to the Closing Date by the Arrangers as they reasonably determine is required by regulatory authorities under applicable "know your customer" and anti-money-laundering rules and regulations, including, without limitation, the PATRIOT Act, in each case at least three business days prior to the Closing Date (or such shorter period as the Administrative Agent shall otherwise agree) and (ii) to the extent any Borrower qualifies as a "legal entity customer" under the Beneficial Ownership Regulation, at least five days prior to the Closing Date, any Lender that has requested, in a written notice to the Parent Borrower at least 2 days prior to the Closing Date (or such shorter period as the Administrative Agent shall otherwise agree), a Beneficial Ownership Certification in relation to the Borrowers shall have received such Beneficial Ownership Certification (provided that, upon the execution and delivery by such Lender of its signature page to this Agreement, the condition set forth in this clause (ii) shall be deemed to be satisfied).

(e) (i) the Refinancing shall have been, or shall concurrently with the initial funding of the Facilities be, consummated.

(ii) All fees required to be paid on the Closing Date pursuant to this Agreement, the Fee Letter and any other arrangements with the Administrative Agent or the Arrangers and reasonable out-of-pocket expenses required to be paid on the Closing Date pursuant to any other written agreement with the Arrangers, to the extent invoiced at least three Business Days prior to the Closing Date (or such later date as the Parent Borrower may reasonably agree) shall have been paid (which amounts may be offset against the proceeds of the Initial Term Loans at the Parent Borrower's election).

Without limiting the generality of the provisions of Section 9.03, for purposes of determining compliance with the conditions specified in this Section 4.01, each Lender as of the Closing Date 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 a Lender unless the Administrative Agent shall have received written notice from such Lender prior to the Closing Date specifying its objection thereto.

Section 4.02 Conditions to All Credit Extensions. The obligation of each Lender to honor any Request for Credit Extension (other than on the Closing Date, other than a Committed Loan Notice requesting only a conversion of Loans to the other Type, or a continuation of Eurocurrency Rate Loans) is subject to the following conditions precedent:

(a) Subject to the provisions in Section 1.02(i), the representations and warranties of the Borrowers and each other Loan Party contained in Article V or any other Loan Document shall be true and correct in all material respects (and in all respects if any such representation or warranty is already qualified by materiality) on and as of the date of such Credit Extension, except to the extent that such representations and warranties specifically refer to an earlier date, in which case they shall be true and correct in all material respects (and in all respects if any such representation or warranty is already qualified by materiality) as of such earlier date.

(b) Subject to the provisions in Section 1.02(i), no Default or Event of Default shall exist, or would result from such proposed Credit Extension or from the application of the proceeds therefrom.

(c) The Administrative Agent and, if applicable, the applicable L/C Issuer shall have received a Request for Credit Extension in accordance with the requirements hereof.

Each Request for Credit Extension (other than a Committed Loan Notice requesting only a conversion of Loans to the other Type or a continuation of Eurocurrency Rate Loans) submitted by the Parent Borrower shall be deemed to be a representation and warranty that the conditions specified in Sections 4.02(a) and (b) have been satisfied (unless waived) on and as of the date of the applicable Credit Extension.

ARTICLE V.
Representations and Warranties

Each of Holdings (with respect to Sections 5.01, 5.02, 5.03, 5.04, 5.08, 5.12, 5.13, 5.14, 5.18, 5.19 and 5.20) and the Borrowers represent and warrant to the Administrative Agent, Collateral Agent and the Lenders that:

Section 5.01 Existence, Qualification and Power; Compliance with Laws. Each Loan Party and each of the Restricted Subsidiaries (subject to in the case of clause (c), to Section 5.03) (a) is a Person duly organized, formed or incorporated, validly existing and in good standing (to the extent such concept is applicable in the relevant jurisdiction) under the Laws of the jurisdiction of its incorporation or organization, (b) has all requisite power and authority to (i) own or lease its assets and carry on its business and (ii) execute, deliver and perform its obligations under the Loan Documents to which it is a party, (c) is duly qualified and is authorized to do business and in good standing (to the extent such concept is applicable in the relevant jurisdiction) under the Laws of each jurisdiction where its ownership, lease or operation of properties or the conduct of its business requires such qualification and (d) has all requisite governmental licenses, authorizations, consents and approvals to operate its business as currently conducted; except in each case referred to in clause (a) (other than with respect to the Borrowers), (b)(i), (b)(ii) (other than with respect to the Borrowers), (c) and (d), to the extent that any failure to be so or to have such would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

Section 5.02 Authorization; No Contravention. The execution, delivery and performance by each Loan Party of each Loan Document to which such Person is or is to be a party, are within such Loan Party's corporate or other powers, have been duly authorized by all necessary corporate or other organizational action and do not (a) contravene the terms of any of such Person's Organization Documents or (b) violate any Law; except to the extent that such violation under clause (b) would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

Section 5.03 Governmental Authorization; Other Consents. No approval, consent, exemption, authorization or other action by, or notice to, or filing with, any Governmental Authority or any other Person is necessary or required in connection with (a) the execution, delivery, performance by, or enforcement against, any Loan Party of this Agreement or any other Loan Document, or for the consummation of the Transactions, (b) the grant by any Loan Party of the Liens granted by it pursuant to the Collateral Documents or (c) the perfection or maintenance of the Liens created under the Collateral Documents, except for (w) filings and registrations necessary to perfect the Liens on the Collateral granted by the Loan Parties consisting of UCC financing statements, filings in the United States Patent and Trademark Office and the United States Copyright Office, as applicable, and Mortgages, and, (x) the approvals, consents, exemptions, authorizations, actions, notices and filings which have been duly obtained, taken, given or made and are in full force and effect, (y) those approvals, consents, exemptions, authorizations or other actions, notices or filings set out in the Collateral Documents and (z) those approvals, consents, exemptions, authorizations or other actions, notices or filings, the failure of which to obtain or make would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

Section 5.04 Binding Effect. This Agreement and each other Loan Document has been duly executed and delivered by each Loan Party (subject, in each case, to Section 5.03) that is party thereto. This Agreement and each other Loan Document constitutes a legal, valid and binding obligation of such Loan Party, enforceable against each Loan Party that is party thereto in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium or other laws affecting creditors' rights generally and subject to general principles of equity, regardless of whether considered in a proceeding in equity or at law.

Section 5.05 Financial Statements; No Material Adverse Effect.

(a) The audited consolidated financial statements of the Parent Borrower (or of any Parent Holding Company or Subsidiary of a Parent Holding Company allowed to be delivered pursuant to the terms hereof) and its Subsidiaries most recently delivered pursuant to Section 4.01(b)(i) or 6.01(a), as applicable, fairly present in all material respects the consolidated financial condition of the Parent Borrower (or of any Parent Holding Company or Subsidiary of a Parent Holding Company allowed to be delivered pursuant to the terms hereof) and its Subsidiaries as of the dates thereof and their results of operations for the period covered thereby in accordance with GAAP consistently applied throughout the period covered thereby, except as otherwise expressly noted therein.

(b) The unaudited consolidated financial statements of the Parent Borrower (or of any Parent Holding Company or Subsidiary of a Parent Holding Company allowed to be delivered pursuant to the terms hereof) and its Subsidiaries most recently delivered pursuant to Section 4.01(b)(ii) or 6.01(b), as applicable, (i) were prepared in accordance with GAAP and consistently applied throughout the period covered thereby, except as otherwise expressly noted therein, and (ii) fairly present in all material respects the consolidated financial condition of the Parent Borrower (or of any Parent Holding Company or Subsidiary of a Parent Holding Company allowed to be delivered pursuant to the terms hereof) and its Subsidiaries as of the date thereof and their results of operations for the period covered thereby, subject to the absence of footnotes and to normal and recurring year-end audit adjustments.

(c) Since December 31, 2019, there has been no event or circumstance, either individually or in the aggregate, that has had or would reasonably be expected to have a Material Adverse Effect.

(d) The consolidated forecasted balance sheets, statements of income and statements of cash flows of the Parent Borrower (or of any Parent Holding Company allowed to be delivered pursuant to the terms hereof) and its Subsidiaries most recently delivered pursuant to Section 6.01(c) were prepared in good faith on the basis of the assumptions stated therein, which assumptions were reasonable in light of the conditions existing at the time of delivery of such forecasts; it being understood that no assurance can be given that any particular projections will be realized, actual results may vary from such forecasts and that such variations may be material.

Section 5.06 Litigation. There are no actions, suits, proceedings, claims or disputes pending or, to the knowledge of the Borrowers, threatened in writing, at law, in equity, in arbitration or before any Governmental Authority, against the Borrowers or any Restricted Subsidiary, or against any of their properties or revenues that would reasonably be expected to have a Material Adverse Effect.

Section 5.07 Use of Proceeds. The Borrowers (a) will only use the proceeds of the Initial Term Loans to finance the Transactions and pay Transaction Costs (including paying any fees, commissions and expenses associated therewith); (b) will use the proceeds of the Revolving Credit Loans made after the Closing Date to finance

the working capital needs of the Parent Borrower and the Restricted Subsidiaries and for general corporate purposes of the Parent Borrower and the Restricted Subsidiaries (including Restricted Payments, acquisitions and other Investments permitted hereunder); and (c) will use the Letters of Credit issued and the proceeds of all other Borrowings made after the Closing Date to finance the working capital needs of the Parent Borrower and the Restricted Subsidiaries, for general corporate purposes of the Parent Borrower and the Restricted Subsidiaries (including Restricted Payments, acquisitions and other Investments permitted hereunder).

Section 5.08 Ownership of Real Property; Liens.

(a) Each Loan Party and each of the Restricted Subsidiaries has fee simple or other comparable, valid title to, or valid leasehold interests in, all real property necessary in the ordinary conduct of its business, free and clear of all Liens except for minor defects in title that do not materially interfere with its ability to conduct its business or to utilize such assets for their intended purposes and Liens permitted by Section 7.02, except where the failure to have such title or interests would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect on the use or operation of any Material Real Property or any real property necessary for the ordinary conduct of the Borrower's business, taken as a whole.

(b) Set forth on Schedule 5.08(b) hereto is a complete and accurate list, in all material respects, of all Material Real Property owned by any Loan Party as of the Closing Date, showing as of the Closing Date, the street address (to the extent available), county or other relevant jurisdiction, state and record owner; and as of the Closing Date, no Loan Party owns any Material Real Property except as listed on Schedule 5.08(b).

Section 5.09 Environmental Compliance. Except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect:

(a) The Borrowers and the Restricted Subsidiaries and their respective operations and properties, are in compliance with all Environmental Laws and Environmental Permits and none of the Borrowers or the Restricted Subsidiaries are subject to any Environmental Liability.

(b) (i) None of the properties currently or formerly owned or operated by the Borrowers or any Restricted Subsidiary is listed or, to the knowledge of the Parent Borrower, proposed for listing on the NPL or on the CERCLIS or any analogous foreign, state or local list, (ii) there is no asbestos or asbestos-containing material on any property currently owned or operated by the Borrowers or any of the Restricted Subsidiaries requiring investigation, remediation, mitigation, removal, or assessment, or other response, remedial or corrective action, pursuant to any Environmental Law and (iii) Hazardous Materials have not been Released and there exists no threat of Release of Hazardous Materials on any property currently or, to the knowledge of the Parent Borrower, formerly owned or operated by the Borrowers or any of the Restricted Subsidiaries, except for such Releases or threats of Releases that were in compliance with, or would not reasonably be expected to give rise to liability of the Borrowers or any Restricted Subsidiary under Environmental Laws.

(c) None of the Borrowers or any of the Restricted Subsidiaries is undertaking either individually or together with other potentially responsible parties, any investigation, remediation, mitigation, removal, assessment or remedial, response or corrective action relating to any actual or threatened release, discharge or disposal of Hazardous Materials at any site, location or operation, either voluntarily or pursuant to the order of any Governmental Authority or the requirements of any Environmental Law.

(d) All Hazardous Materials generated, used, treated, handled or stored at, or transported to or from, any property currently or, to the knowledge of the Parent Borrower, formerly owned or operated by the Borrowers or any of the Restricted Subsidiaries have been disposed of in a manner not reasonably expected to result in liability to the Borrowers or any of the Restricted Subsidiaries.

(e) None of the Borrowers or any of the Restricted Subsidiaries has received a notice of or is subject to any claim, action, proceeding or suit alleging liability pursuant to any Environmental Law.

Section 5.10 Taxes. Each Borrower and each of the Restricted Subsidiaries has filed or have caused to be filed all Tax returns and reports required to be filed, and has paid all Taxes (including in its capacity as a withholding agent) levied or imposed upon it or its properties, income or assets otherwise due and payable, except those (a) that are being contested in good faith by appropriate proceedings diligently conducted and for which adequate reserves have been provided in accordance with GAAP or (b) with respect to which the failure to make such filing or payment would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

Section 5.11 Employee Benefits Plans.

(a) Except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect, (i) each Plan is in compliance with the applicable provisions of ERISA, the Code and other applicable federal and state laws and (ii) each Plan that is intended to be a qualified plan under Section 401(a) of the Code may rely upon an opinion letter for a prototype plan or has received a favorable determination letter from the IRS to the effect that the form of such Plan is qualified under Section 401(a) of the Code and the trust related thereto has been determined by the IRS to be exempt from federal income tax under Section 501(a) of the Code, or an application for such a letter will be submitted to the IRS within the applicable required time period with respect thereto or is currently being processed by the IRS, and to the knowledge of any Loan Party, nothing has occurred that would prevent, or cause the loss of, such tax-qualified status.

(b) Except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect, (i) each Foreign Plan is in compliance with all requirements of Law applicable thereto and the respective requirements of the governing documents for such plan and (ii) with respect to each Foreign Plan, none of the Borrowers or any of the Restricted Subsidiaries or any of their respective directors, officers, employees or agents has engaged in a transaction that could reasonably be expected to subject the Borrowers or any Restricted Subsidiary, directly or indirectly, to any tax or civil penalty.

(c) There are no pending or, to the knowledge of any Loan Party, threatened claims, actions or lawsuits, or action by any Governmental Authority, with respect to any Plan that would reasonably be expected to have a Material Adverse Effect. There has been no "prohibited transaction" within the meaning of Section 4975 of the Code or Sections 406 or 407 of ERISA (and not otherwise exempt under Section 408 of ERISA) with respect to any Plan that would reasonably be expected to result in a Material Adverse Effect.

(d) (i) No ERISA Event has occurred and neither any Loan Party nor, to the knowledge of any Loan Party, any ERISA Affiliate is aware of any fact, event or circumstance that could reasonably be expected to constitute or result in an ERISA Event with respect to any Plan, Multiemployer Plan or Foreign Plan, (ii) each Loan Party and each ERISA Affiliate has met all applicable requirements under the Pension Funding Rules in respect of each Plan, and no waiver of the minimum funding standards under such Pension Funding Rules has been applied for or obtained, (iii) there exists no Unfunded Pension Liability, (iv) as of the most recent valuation date for any Plan, the present value of all accrued benefits under such Plan (based on the actuarial assumptions used to fund such Plan) did not exceed the value of the assets of such Plan allocable to such accrued benefits, (v) neither any Loan Party nor, to the knowledge of any Loan Party, any ERISA Affiliate knows of any facts or circumstances that could reasonably be expected to cause the funding target attainment percentage (as defined in Section 430(d)(2) of the Code) for any Plan, if applicable, to drop below 80% as of the most recent valuation date, (vi) neither any Loan Party nor any ERISA Affiliate has incurred any liability to the PBGC other than for the payment of premiums, and there are no premium payments which have become due that are unpaid, (vii) neither any Loan Party nor any ERISA Affiliate has engaged in a transaction that could reasonably be expected to be subject to Sections 4069 or 4212(c) of ERISA and (viii) no Plan has been terminated by the plan administrator thereof or by the PBGC and no event or circumstance has occurred or exists that could reasonably be expected to cause the PBGC to institute proceedings under Title IV of ERISA to terminate any Plan or Multiemployer Plan, except with respect to each of the foregoing clauses (i) through (viii) of this Section 5.11(d), as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect.

(e) (i) With respect to each Foreign Plan, reserves have been established in the financial statements furnished to Lenders in respect of any unfunded liabilities in accordance with applicable Law and, where required, in accordance with ordinary accounting practices in the jurisdiction in which such Foreign Plan is maintained and (ii) except as disclosed or reflected in such financial statements, there are no aggregate unfunded liabilities with respect

to Foreign Plans and the present value of the aggregate accumulated benefit liabilities of all Foreign Plans did not, as of the last annual valuation date applicable thereto, exceed the assets of all such Foreign Plans, except with respect to each of the foregoing clauses (i) and (ii) of this Section 5.11(e), as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect.

Section 5.12 Subsidiaries; Capital Stock. As of the Closing Date, there are no Restricted Subsidiaries other than those specifically disclosed in Schedule 5.12, and all of the outstanding Capital Stock in such Restricted Subsidiaries that are owned by a Loan Party have been validly issued, are fully paid and non-assessable (other than for those Restricted Subsidiaries that are limited liability companies and limited partnerships and to the extent such concepts are not applicable in the relevant jurisdiction) and are owned free and clear of all Liens except (i) those created under the Collateral Documents and (ii) any nonconsensual Lien that is permitted under Section 7.02.

Section 5.13 Margin Regulations; Investment Company Act.

(a) Each of the Loan Parties is not engaged and will not engage, principally or as one of its important activities, in the business of purchasing or carrying Margin Stock, or extending credit for the purpose of purchasing or carrying Margin Stock and no proceeds of any Borrowings or drawings under any Letter of Credit will be used to purchase or carry any Margin Stock or to extend credit to others for the purpose of purchasing or carrying any Margin Stock. Neither the making of any Credit Extension hereunder nor the use of proceeds thereof will violate any regulations of the FRB, including the provisions of Regulations T, U or X of the FRB.

(b) None of the Loan Parties is or is required to be registered as an "investment company" under the Investment Company Act of 1940, as amended.

Section 5.14 Disclosure. (a) As of the Closing Date, no report, financial statement, certificate or other written information furnished by or on behalf of any Loan Party (other than projected financial information, pro forma financial information and information of a general economic or industry nature) to any Agent or any Lender in connection with the transactions contemplated hereby and the negotiation of this Agreement or delivered hereunder or any other Loan Document (as modified or supplemented by other information so furnished), when taken as a whole, contains any material misstatement of fact or omits to state any material fact necessary to make the statements therein (when taken as a whole), in the light of the circumstances under which they were made, not materially misleading; provided that, with respect to projected and pro forma financial information, the Parent Borrower represents only that such information was prepared in good faith based upon assumptions believed to be reasonable at the time of preparation and delivery; it being understood that actual results may vary from such forecasts and that such variances may be material.

(b) As of the Closing Date, the information included in the Beneficial Ownership Certification is true and correct in all respects.

Section 5.15 Compliance with Laws. The Borrowers and each Restricted Subsidiary are in compliance in all material respects with the requirements of all Laws and all orders, writs, injunctions and decrees applicable to it or to its properties, except in such instances in which (a) such requirement of Law or order, writ, injunction or decree is being contested in good faith by appropriate proceedings diligently conducted or (b) the failure to comply therewith, either individually or in the aggregate, would not reasonably be expected to have a Material Adverse Effect.

Section 5.16 Intellectual Property. To the knowledge of the Borrowers, Borrowers and each Subsidiary Guarantor own, license or possess the right to use, all of the trademarks, service marks, trade names, copyrights, patents and other intellectual property rights arising under applicable Law (collectively, "IP Rights") that are necessary for the operation of its respective business, as currently conducted, except to the extent such failure to own, license or possess, either individually or in the aggregate, would not reasonably be expected to have a Material Adverse Effect and provided that the foregoing shall not be deemed to constitute a representation that the Borrowers and the Subsidiary Guarantors do not infringe or violate the IP Rights held by any other Person. Set forth on Schedule 5.16 is a complete and accurate list of all material registrations or applications to register in the United States Patent and Trademark Office or the United States Copyright Office, as applicable, patents, trademarks, and copyrights owned, or in the case of registered copyrights, exclusively licensed by the Borrowers or Subsidiary Guarantors as of the Closing Date. To the knowledge of the Borrowers, the conduct of the business of the Borrowers or Subsidiary Guarantors as

currently conducted does not infringe upon or violate any IP Rights held by any other Person, except for such infringements and violations which, individually or in the aggregate, would not reasonably be expected to have a Material Adverse Effect. No claim or litigation regarding any of the foregoing is pending or, to the knowledge of the Borrowers, threatened in writing, which, either individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect.

Section 5.17 Solvency. On the Closing Date, after giving effect to the Transactions, the Borrowers and their Subsidiaries, on a consolidated basis, are Solvent.

Section 5.18 Perfection, Etc. Subject to Section 5.03, each Collateral Document delivered pursuant to this Agreement will, upon execution and delivery thereof, be effective to create in favor of the Collateral Agent for the benefit of the Secured Parties, legal, valid and enforceable Liens on, and security interests in the Collateral described therein to the extent intended to be created thereby, except as to enforcement, as may be limited by applicable domestic bankruptcy, insolvency, fraudulent conveyance, reorganization (by way of voluntary arrangement, schemes of arrangements or otherwise), moratorium and other similar laws relating to or affecting creditors' rights generally, general equitable principles (whether considered in a proceeding in equity or at law) and (a) when financing statements are filed in the offices of the Secretary of State of each Loan Party's jurisdiction of organization or formation and applicable documents are filed and recorded as applicable in the United States Copyright Office or the United States Patent and Trademark Office and (b) upon the taking of possession or control by the Collateral Agent of such Collateral with respect to which a security interest may be perfected only by possession or control (which possession or control shall be given to the Collateral Agent to the extent possession or control by the Collateral Agent is required by the applicable Collateral Document) the Liens created by the Collateral Documents shall constitute fully perfected first priority Liens so far as possible under relevant law on, and security interests in (to the extent intended to be created thereby and required to be perfected under the Loan Documents), all right, title and interest of the grantors in such Collateral in each case free and clear of any Liens other than Liens permitted hereunder.

Section 5.19 Sanctions; OFAC.

(a) Sanctions Laws and Regulations. Each of Holdings, the Borrowers and each of their respective Subsidiaries is (i) in compliance, in all material respects, with applicable Sanctions Laws and Regulations and (ii) in compliance, in all material respects, with applicable anti-money laundering laws and regulations. No Borrowing or Letter of Credit, or use of proceeds, will violate or result in the violation of any Sanctions Laws and Regulations applicable to any party hereto.

(b) OFAC. None of (I) Holdings, the Borrowers or any other Loan Party and (II) the Subsidiaries that are not Loan Parties or, to the knowledge of Holdings and the Borrowers, any director, manager, officer, agent or employee of Holdings, the Borrowers or any of their respective Subsidiaries, in each case, (i) is a person whose property or interest in property is blocked or subject to blocking pursuant to Section 1 of the Executive Order, (ii) in any material respect, engages in any dealings or transactions prohibited by Section 2 of the Executive Order, or is otherwise associated with any such person in any manner that violates Section 2 of the Executive Order, (iii) is a person on the list of "Specially Designated Nationals and Blocked Persons" or otherwise targeted by limitations or prohibitions under any other OFAC regulation or executive order or (iv) is otherwise the subject or target of any Sanctions Laws and Regulations. The Borrowers will not directly or knowingly indirectly use the proceeds of the Loans or otherwise make available such proceeds to any Person, for the purpose of financing the activities of any Person, or in any country or territory, that is the subject or target of any Sanctions Laws and Regulations in violation of Sanctions Laws and Regulations, or in any other manner that would result in a material violation of any Sanctions Laws and Regulations by any Person, unless specifically or generally licensed by OFAC.

Section 5.20 Anti-Corruption Laws. No part of the proceeds of any Loan will be used for any improper payments, directly or, to the Borrowers' knowledge, indirectly, to any governmental official or employee, political party, official of a political party, candidate for political office, or anyone else acting in an official capacity, or any other party (if applicable) in order to obtain, retain or direct business or obtain any improper advantage, in violation of the United States Foreign Corrupt Practices Act of 1977, as amended, the United Kingdom Bribery Act of 2010, as amended and any similar laws, rules or regulations issued, administered or enforced by any Governmental Authority having jurisdiction over the Borrowers (collectively, the "Anti-Corruption Laws"). The Borrowers have implemented and maintain in effect policies and procedures designed to reasonably ensure compliance by the Borrowers, their

Subsidiaries and their respective directors, officer, employees and agents with Anti-Corruption Laws, and the Borrowers, their Subsidiaries and their respective officers and employees and, to the knowledge of the Borrowers, their respective directors and agents, are in compliance in all material respects with Anti-Corruption Laws.

ARTICLE VI.
Affirmative Covenants

So long as any Lender shall have any Commitment hereunder, any Loan or other Obligation (other than contingent indemnification obligations as to which no claim has been asserted and obligations and liabilities under Secured Cash Management Agreements and Secured Hedge Agreements) hereunder shall remain unpaid or unsatisfied, or any Letter of Credit shall remain outstanding (other than Letters of Credit which have been Cash Collateralized) (A) the Parent Borrower shall, and shall (except in the case of the covenants set forth in Sections 6.01, 6.02 and 6.03) cause each Subsidiary to and (B) with respect to Section 6.14, Holdings shall:

Section 6.01 Financial Statements. Deliver to the Administrative Agent for further distribution to each Lender:

(a) within 120 days after the end of each fiscal year of the Parent Borrower, beginning with the fiscal year ended December 31, 2020, a consolidated balance sheet of the Parent Borrower and its Subsidiaries as at the end of such fiscal year, and the related consolidated statements of income or operations, shareholders' equity and cash flows for such fiscal year, setting forth in each case in comparative form the figures for the previous fiscal year, all in reasonable detail and prepared in accordance with GAAP, audited and accompanied by a report and opinion of any independent certified public accountant of nationally recognized standing, which report and opinion shall be prepared in accordance with generally accepted auditing standards and shall not be subject to any "going concern" or like qualification, exception or explanatory paragraph or any qualification, exception or explanatory paragraph as to the scope of such audit (other than any such exception, qualification or explanatory paragraph that is primarily relating to or resulting from (i) an upcoming maturity date under the Facilities or other Indebtedness that is scheduled to occur within one year from the time such report and opinion are delivered, (ii) any potential or actual inability to satisfy a financial maintenance covenant, including the Financial Covenant or (iii) the activities, operations, financial results, assets or liabilities of any Unrestricted Subsidiary), together with a customary management's discussion and analysis of financial information;

(b) within 60 days after the end of each of the first three fiscal quarters of each fiscal year of the Parent Borrower (commencing with the fiscal quarter ended September 30, 2020), a consolidated balance sheet of the Parent Borrower and its Subsidiaries as at the end of such fiscal quarter, and the related consolidated statements of income or operations, shareholders' equity and cash flows for such fiscal quarter and for the portion of the fiscal year then ended, setting forth in each case, in comparative form the figures for the corresponding fiscal quarter of the previous fiscal year and the corresponding portion of the previous fiscal year, all in reasonable detail and certified by a Responsible Officer of the Parent Borrower as fairly presenting in all material respects the financial condition, results of operations, shareholders' equity and cash flows of the Parent Borrower and its Subsidiaries in accordance with GAAP, subject only to normal year-end audit adjustments and the absence of footnotes, together with a customary management's discussion and analysis of financial information;

(c) within 120 days after the end of each fiscal year, beginning with the fiscal year ended December 31, 2020, to be distributed only to each Lender that has selected the "Private Side Information" or similar designation, reasonably detailed segment-level forecasts along with written assumptions prepared by management of the Parent Borrower (including projected consolidated balance sheets, income statements, and cash flow statements of the Parent Borrower and its Subsidiaries) on a quarterly basis for the fiscal year following such fiscal year then ended, which forecasts shall be prepared in good faith on the basis of assumptions believed to be reasonable at the time of preparation thereof; provided that delivery of such forecasts pursuant to this Section 6.01(c) shall only be required hereunder prior to an initial public offering of the Capital Stock of the Parent Borrower, Holdings or any Parent Holding Company; and

(d) concurrently with the delivery of any financial statements pursuant to Sections 6.01(a) and (b) above, the related consolidating financial statements reflecting the adjustments necessary to eliminate the accounts of Unrestricted Subsidiaries (if any) from such consolidated financial statements.

Notwithstanding the foregoing, (A) the obligations in clauses (a), (b) and (c) of this Section 6.01 may be satisfied by furnishing, at the option of the Parent Borrower, the applicable financial statements or, as applicable, forecasts of (I) any successor of the Parent Borrower, or (II) Holdings or any Parent Holding Company; provided that to the extent such information relates to Holdings or a Parent Holding Company, such information is accompanied by consolidating information that explains in reasonable detail the differences between the information relating to Holdings or any Parent Holding Company, on the one hand, and the information relating to the Parent Borrower and the Restricted Subsidiaries on a standalone basis, on the other hand, and (B) (i) in the event that the Parent Borrower or Holdings (or any Parent Holding Company allowed to be delivered pursuant to the terms hereof) delivers to the Administrative Agent an Annual Report on Form 10-K for any fiscal year (or similar filing in the applicable jurisdiction), as filed with the SEC or in such form as would have been suitable for filing with the SEC, within the time frames set forth in clause (a) above, such Form 10-K shall satisfy all requirements of clause (a) of this Section 6.01 with respect to such fiscal year to the extent that it contains the information and report and opinion required by such clause (a) and such report and opinion does not contain any "going concern" or like qualification, exception or explanatory paragraph or any qualification, exception or explanatory paragraph as to the scope of audit (other than any such qualification, exception or explanatory paragraph expressly permitted to be contained therein under clause (a) of this Section 6.01) and (ii) in the event that the Parent Borrower (or any Parent Holding Company allowed to be delivered pursuant to the terms hereof) delivers to the Administrative Agent a Quarterly Report on Form 10-Q for any fiscal quarter (or similar filing in the applicable jurisdiction), as filed with the SEC or in such form as would have been suitable for filing with the SEC, within the time frames set forth in clause (b) above, such Form 10-Q shall satisfy all requirements of clause (b) of this Section with respect to such fiscal quarter to the extent that it contains the information required by such clause (b); in each case to the extent that information contained in such Form 10-K or Form 10-Q (or similar filings in the applicable jurisdiction) satisfies the requirements of clauses (a) or (b) of this Section 6.01, as the case may be.

Section 6.02 Certificates; Other Information. Deliver to the Administrative Agent:

(a) no later than five days after the delivery of (i) the financial statements referred to in Section 6.01(a) or (ii) an Annual Report on Form 10-K (delivered pursuant to the last paragraph of Section 6.01), but only to the extent permitted by accounting industry policies generally followed by independent certified public accountants, a certificate of the independent certified public accountants certifying such financial statements and stating that in making the examination necessary therefor no knowledge was obtained of any Event of Default arising from a breach of the Financial Covenant (to the extent then applicable) or, if any such Event of Default shall exist, stating the nature and status of such event;

(b) no later than five days after the delivery of (i) the financial statements referred to in Sections 6.01(a) and (b) or (ii) an Annual Report on Form 10-K or a Quarterly Report on Form 10-Q (in either case, delivered pursuant to the last paragraph of Section 6.01), a duly completed Compliance Certificate signed by a Responsible Officer of the Parent Borrower (which delivery may, unless the Administrative Agent or a Lender requests executed originals, be by electronic communication including fax or email and shall be deemed to be an original authentic counterpart thereof for all purposes);

(c) promptly after the same are available, copies of all annual, regular, periodic and special reports and registration statements which Holdings or the Parent Borrower may file or be required to file, copies of any report, filing or communication with the SEC under Section 13 or 15(d) of the Exchange Act, or with any Governmental Authority that may be substituted therefor, or with any national securities exchange, and in any case not otherwise required to be delivered to the Administrative Agent pursuant hereto;

(d) promptly after the furnishing thereof, copies of any notices received by any Loan Party (other than in the ordinary course of business) and copies of any statement or report furnished to any holder of debt securities or loans of any Loan Party or of any of its Subsidiaries (other than any immaterial correspondence in the ordinary course of business or any regularly required quarterly or annual certificates), in each case pursuant to the terms of any Junior Financing in a principal amount greater than the Threshold Amount and not otherwise required to be furnished to the Lenders pursuant to any other clause of this Section 6.02;

(e) promptly after the receipt thereof by any Loan Party or any of its Subsidiaries, copies of each notice or other correspondence received from the SEC (or comparable agency in any applicable non-U.S. jurisdiction) concerning any material investigation or other material inquiry by such agency regarding financial or other operational results of any Loan Party or any of its Subsidiaries;

(f) promptly after the assertion or occurrence thereof, notice of any action arising under any Environmental Law against or of any noncompliance by any Loan Party or any of its Subsidiaries with any Environmental Law or Environmental Permit, in each case that would reasonably be expected to have a Material Adverse Effect;

(g) together with the delivery of each Compliance Certificate pursuant to Section 6.02(b), a report supplementing Schedule 5.12 hereto to the extent necessary so that the related representation and warranty would be true and correct if made as of the date of such Compliance Certificate; and

(h) promptly, such additional information regarding the business, legal, financial or corporate affairs of any Loan Party or any Restricted Subsidiary thereof as the Administrative Agent or any Lender through the Administrative Agent may from time to time reasonably request.

Documents required to be delivered pursuant to Section 6.01(a), (b), (c) or (d) or Section 6.02(c) or (d) (or to the extent any such documents are included in materials otherwise filed with the SEC) may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date on which such documents are posted on the Parent Borrower's (or any Parent Holding Company or Subsidiary of a Parent Holding Company allowed to be delivered pursuant to the terms hereof) behalf on the Approved Electronic Platform or another relevant Internet or intranet 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); provided that: (i) upon written request by the Administrative Agent, the Parent Borrower shall deliver paper copies of such documents to the Administrative Agent for further distribution to each Lender until a written request to cease delivering paper copies is given by the Administrative Agent or such Lender and (ii) the Parent Borrower shall notify (which may be by facsimile or electronic mail) the Administrative Agent of the posting of any such documents described in this paragraph and provide to the Administrative Agent by electronic mail electronic versions (i.e., soft copies) of such documents to the extent requested by the Administrative Agent. The Administrative Agent shall have no obligation to request the delivery of or to maintain or deliver to Lenders paper copies of the documents referred to above, and in any event shall have no responsibility to monitor compliance by the Parent Borrower with any such request for delivery, and each Lender shall be solely responsible for timely accessing posted documents or requesting delivery of paper copies of such documents from the Administrative Agent and maintaining its copies of such documents.

The Parent Borrower hereby acknowledges that (a) the Administrative Agent and/or the Arrangers will make available to the Lenders and the L/C Issuers materials and/or information provided by or on behalf of the Parent Borrower hereunder (collectively, "Borrower Materials") by posting the Borrower Materials on IntraLinks/IntraAgency, Syndtrak or another similar electronic system (the "Platform") and (b) certain of the Lenders (each, a "Public Lender") may have personnel who do not wish to receive material non-public information (within the meaning of United States federal and state securities laws) with respect to Holdings or its Affiliates, or the respective securities of any of the foregoing, and who may be engaged in investment and other market-related activities with respect to such Persons' securities. The Parent Borrower hereby agrees that it will use commercially reasonable efforts to identify that portion of the Borrower Materials that may be distributed to the Public Lenders and that (w) all such Borrower Materials shall be clearly and conspicuously marked "PUBLIC SIDE" or "PUBLIC" which, at a minimum, shall mean that the word "PUBLIC SIDE" or "PUBLIC" shall appear prominently on the first page thereof; (x) by marking Borrower Materials "PUBLIC SIDE" or "PUBLIC", the Parent Borrower shall be deemed to have authorized the Administrative Agent, the Arrangers, the L/C Issuers and the Lenders to treat such Borrower Materials as not containing any material non-public information (although it may be sensitive and proprietary) with respect to Holdings or its Affiliates, or their respective securities for purposes of United States federal and state securities laws (provided, however, that to the extent such Borrower Materials constitute Information, they shall be treated as set forth in Section 10.08); (y) all Borrower Materials marked "PUBLIC SIDE" or "PUBLIC" are permitted to be made available through

a portion of the Platform designated "Public Side Information" and (z) any Borrower Materials that are not marked "PUBLIC SIDE" or "PUBLIC" shall be deemed to contain material non-public information (within the meaning of United States federal and state securities laws) and shall not be suitable for posting on a portion of the Platform designated "Public Side Information." Notwithstanding anything herein to the contrary, financial statements delivered pursuant to Sections 6.01(a) and (b) and Compliance Certificates delivered pursuant to Section 6.02(b) shall be deemed to be suitable for posting on a portion of the Platform designated "Public Side Information."

Section 6.03 Notices. Promptly, after a Responsible Officer of any Borrower or any Guarantor has obtained knowledge thereof, notify the Administrative Agent:

(a) of the occurrence of any Default or Event of Default (it being understood that any delivery of a notice of an Event of Default shall automatically cure any Default or Event of Default then existing with respect to any failure to deliver such notice except in the case of a Default for which the Borrower or Guarantor failed to promptly give notice to the Administrative Agent and the Lenders of such Default and a Responsible Officer of the Borrower or any Guarantor had actual knowledge of such failure to promptly give such notice), including any Default or Event of Default resulting from a failure to give notice or any inaccuracy of any representation or warranty under the Loan Document (except pursuant to Section 4.02(b)) or any breach of an affirmative or negative covenant as a result of taking any action at a time any Default or Event of Default has occurred and is continuing due to such failure to give notice;

(b) of the institution of any material litigation not previously disclosed by the Parent Borrower to the Administrative Agent, or any material development in any material litigation that is reasonably likely to be adversely determined, and would, in either case, if adversely determined be reasonably expected to have a Material Adverse Effect;

(c) of the occurrence of any ERISA Event, where there is any reasonable likelihood of the imposition of liability on any Loan Party as a result thereof that would be reasonably expected to have a Material Adverse Effect;

(d) of the occurrence of any Foreign Benefit Event, where there is any reasonable likelihood of the imposition of liability on any Loan Party as a result thereof that would be reasonably expected to have a Material Adverse Effect; and

(e) of any change to the corporate credit ratings or corporate family ratings of the Borrower from Moody's or S&P that would impact the Applicable Rate.

Each notice pursuant to this Section 6.03 shall be accompanied by a statement of a Responsible Officer of the Parent Borrower setting forth details of the occurrence referred to therein and stating what action the Parent Borrower has taken and proposes to take with respect thereto.

Section 6.04 Payment of Taxes. Pay, discharge or otherwise satisfy as the same shall become due and payable, all Taxes (including in its capacity as withholding agent) imposed upon it or its income, profits, properties or other assets, unless the same are being contested in good faith by appropriate proceedings diligently conducted and adequate reserves in accordance with GAAP are being maintained by such Borrower or such Restricted Subsidiary; except to the extent the failure to pay, discharge or satisfy the same would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

Section 6.05 Preservation of Existence, Etc. (a) Preserve, renew and maintain in full force and effect its legal existence under the Laws of the jurisdiction of its organization except in a transaction permitted by Section 7.03 or 7.04, (b) take all reasonable action to maintain all rights, privileges (including its good standing, if such concept is applicable in its jurisdiction of organization), permits, licenses and franchises necessary or desirable in the normal conduct of its business, except to the extent that failure to do so would not reasonably be expected to have a Material Adverse Effect or as otherwise permitted hereunder, and (c) use commercially reasonable efforts to preserve or renew all of its registered IP Rights, except to the extent that failure to do so would not reasonably be expected to have a Material Adverse Effect or except as otherwise permitted hereunder, provided that nothing in this Section 6.05 shall require the preservation, renewal or maintenance of, or prevent the abandonment by the Borrowers or any Restricted Subsidiary of, any registered IP Rights that the Borrowers or such Restricted Subsidiary reasonably determine are not useful to their or its business or no longer commercially desirable.

Section 6.06 Maintenance of Properties. Except if the failure to do so would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect, maintain, preserve and protect all of its tangible properties and equipment that are necessary in the operation of its business in good working order, repair and condition, ordinary wear and tear excepted and casualty or condemnation excepted.

Section 6.07 Maintenance of Insurance.

(a) Use commercially reasonable efforts to maintain in full force and effect, with insurance companies that the Parent Borrower believes (in the good faith judgment of the management of the Parent Borrower) are financially sound and responsible at the time the relevant coverage is placed or renewed, insurance in at least such amounts (after giving effect to any self-insurance which the Parent Borrower believes (in the good faith judgment of management of the Parent Borrower) is reasonable and prudent in light of the size and nature of its business) and against at least such risks (and with such risk retentions) as are usually insured against in the same general area by companies engaged in businesses similar to those engaged by the Borrowers and the Restricted Subsidiaries. Subject to Section 6.16, the Parent Borrower shall use commercially reasonable efforts to ensure that at all times the Collateral Agent, for the benefit of the Secured Parties, shall be named as an additional insured with respect to liability policies (other than directors and officers policies and workers compensation) maintained by Holdings, the Borrowers and each Subsidiary Guarantor and the Collateral Agent, for the benefit of the Secured Parties, shall be named as loss payee and mortgagee with respect to the property insurance maintained by Holdings, the Borrowers and each Subsidiary Guarantor; provided that, unless an Event of Default shall have occurred and be continuing, (A) all proceeds from insurance policies shall be paid to the applicable Borrower or applicable Subsidiary Guarantor, (B) to the extent the Collateral Agent receives any proceeds, the Collateral Agent shall turn over to the Parent Borrower any amounts received by it as an additional insured or loss payee under any property insurance maintained by the Borrowers and their Subsidiaries, and (C) the Collateral Agent agrees that the Borrowers and/or their applicable Subsidiaries shall have the sole right to adjust or settle any claims under such insurance.

(b) Without limiting the foregoing, (i) maintain, if available, fully paid flood hazard insurance on all improved real property that is located in a special flood hazard area and that constitutes Mortgaged Property, on such terms and in such amounts as required by the Flood Insurance Laws, (ii) furnish to the Collateral Agent promptly upon written request evidence of the renewal (and payment of renewal premiums therefor) of all such policies prior to the expiration or lapse thereof, and (iii) furnish to the Collateral Agent prompt written notice of any redesignation of any such improved real property into or out of a special flood hazard area.

Section 6.08 Compliance with Laws. Comply with the requirements of all applicable Laws (including, without limitation, ERISA, the PATRIOT Act, Sanctions Laws and Regulations and Environmental Laws) and all orders, writs, injunctions and decrees of any Governmental Authority applicable to it or to its business or property, except if the failure to comply therewith, either individually or in the aggregate, would not reasonably be expected to have a Material Adverse Effect.

Section 6.09 Books and Records. Maintain proper books of record and account, in a manner to allow financial statements to be prepared in all material respects in conformity with GAAP consistently applied in respect of all financial transactions and matters involving the assets and business of the Borrowers or, if applicable, Holdings or such Subsidiary, as the case may be (it being understood and agreed that Foreign Subsidiaries may maintain individual books and records in conformity with generally accepted accounting principles that are applicable in their respective jurisdiction of organization).

Section 6.10 Inspection Rights. Permit representatives of the Administrative Agent and, during the continuance of any Event of Default, of each Lender to visit and inspect any of its properties (subject to the rights of lessees or sublessees thereof and subject to any restrictions or limitations in the applicable lease, sublease or other written occupancy arrangement pursuant to which such Borrower or such Restricted Subsidiary is a party), to examine its corporate, financial and operating records, and make copies thereof or abstracts therefrom, and to discuss its affairs, finances and accounts with its directors, managers, officers, and independent public accountants (subject to such

accountants' customary policies and procedures), all at the reasonable expense of the Parent Borrower and at such reasonable times during normal business hours and as often as may be reasonably desired, upon reasonable advance written notice to the Parent Borrower; provided that, excluding any such visits and inspections during the continuation of an Event of Default, (i) only the Administrative Agent on behalf of the Lenders may exercise rights under this Section 6.10, (ii) the Administrative Agent shall not exercise such rights more often than one time during any calendar year and (iii) such exercise shall be at the Parent Borrower's expense; provided further, that when an Event of Default is continuing the Administrative Agent (or any of their respective representatives) may do any of the foregoing at the expense of the Parent Borrower at any time and from time to time during normal business hours and upon reasonable advance written notice. The Administrative Agent and the Lenders shall give the Parent Borrower the opportunity to participate in any discussions with the Parent Borrower's accountants. Notwithstanding anything to the contrary in this Section 6.10, none of the Borrowers nor any Restricted Subsidiary will be required to disclose or permit the inspection or discussion of, any document, information or other matter (i) that constitutes non-financial trade secrets or non-financial proprietary information, (ii) in respect of which disclosure to the Administrative Agent or any Lender (or their respective representatives or contractors) is prohibited by Law or any binding agreement or (iii) that is subject to attorney client or similar privilege or constitutes attorney work product.

Section 6.11 Use of Proceeds. The Borrowers will use the Letters of Credit and the proceeds of the Loans only as provided in Sections 5.07, 5.13(a), 5.19 and 5.20.

Section 6.12 Covenant to Guarantee Obligations and Give Security.

(a) Upon the formation or acquisition of any new wholly owned Domestic Subsidiaries by any Loan Party (provided that each of (i) any Subsidiary Redesignation resulting in an Unrestricted Subsidiary becoming a Restricted Subsidiary and (ii) any Excluded Subsidiary ceasing to be an Excluded Subsidiary (including following the designation (or redesignation) of a Restricted Subsidiary as a Discretionary Guarantor or the designation (or redesignation) of an Unrestricted Subsidiary as a Restricted Subsidiary (other than an Excluded Subsidiary)) but remaining a Restricted Subsidiary (including a Controlled Foreign Subsidiary ceasing to be a Controlled Foreign Subsidiary or a FSHCO ceasing to be a FSHCO) shall be deemed to constitute the acquisition of a Restricted Subsidiary for all purposes of this Section 6.12), and upon the acquisition of any property (other than Excluded Property and real property that is not Material Real Property and other than foreign intellectual property and U.S. intellectual property that is not registered with, or that is not the subject of an application for registration with, the United States Patent and Trademark Office or United States Copyright Office) by any Loan Party, which property, in the reasonable judgment of the Administrative Agent, is not already subject to a perfected Lien in favor of the Collateral Agent for the benefit of the Secured Parties (and where such a perfected Lien would be required in accordance with the terms of the Collateral Documents or other Loan Documents), the Parent Borrower shall, at the Parent Borrower's expense:

(i) in connection with such formation or acquisition of a Domestic Subsidiary, within 90 days after such formation or acquisition or such longer period as the Collateral Agent may agree in its reasonable discretion, (A) cause each such Subsidiary that is not an Excluded Subsidiary to duly execute and deliver to the Collateral Agent a guaranty or guaranty supplement, in form and substance reasonably satisfactory to the Collateral Agent, guaranteeing the Obligations and a joinder or supplement to the applicable Collateral Documents and (B) (if not already so delivered) deliver certificates (or the foreign equivalent thereof, as applicable) representing the Pledged Interests of each such Subsidiary (if any) held by the applicable Loan Party accompanied by undated stock powers or other appropriate instruments of transfer executed in blank and instruments evidencing the Pledged Debt owing by such Subsidiary to any Loan Party indorsed in blank to the Collateral Agent, together with, if requested by the Collateral Agent, supplements to the Security Agreement; provided that any Excluded Property shall not be required to be pledged as Collateral,

(ii) within 90 days after such formation or acquisition of any such property or any request therefor by the Collateral Agent (or such longer period, as the Collateral Agent may agree in its reasonable discretion) duly execute and deliver, and cause each such Subsidiary that is not an Excluded Subsidiary to duly execute and deliver, to the Collateral Agent one or more Mortgages (and other documentation and instruments referred to in Section 6.14) (with respect to Material Real Properties only), Security Agreement Supplements, Intellectual Property Security Agreement Supplements, as specified by and in form and substance reasonably satisfactory to the Collateral Agent (consistent, to the extent applicable, with the

Security Agreement, the Intellectual Property Security Agreement, the Mortgages and the other Collateral Documents (and Section 6.14)), securing payment of all the Obligations (provided that to the extent any property to be subject to a Mortgage is located in a jurisdiction which imposes mortgage recording taxes, intangibles tax, documentary tax or similar recording fees or taxes, the relevant Mortgage shall not secure an amount in excess of the Fair Market Value of such property subject thereto and shall not secure the Obligations in respect of Letters of Credit or the Revolving Credit Facility in those states that impose a mortgage tax on paydowns or re-advances applicable thereto) of the applicable Loan Party or such Subsidiary, as the case may be, under the Loan Documents and establishing Liens on all such properties or property; provided that such properties or property shall not be required to be pledged as Collateral, and no Security Agreement Supplements, Intellectual Property Security Agreement Supplements shall be required to be delivered in respect thereof, to the extent that any such properties or property constitute Excluded Property,

(iii) within 90 days after such request, formation or acquisition, or such longer period, as the Collateral Agent may agree in its reasonable discretion, take, and cause such Subsidiary that is not an Excluded Subsidiary and each applicable Loan Party to take, whatever action (including the recording of Mortgages (with respect to Material Real Properties only), the filing of UCC financing statements, the giving of notices and delivery of stock and membership interest certificates or foreign equivalents representing the applicable Capital Stock) as may be necessary or advisable in the reasonable opinion of the Collateral Agent to vest in the Collateral Agent (or in any representative of the Collateral Agent designated by it), subject to Section 5.03, valid and subsisting Liens on the properties purported to be subject to the Mortgages, Security Agreement Supplements, Intellectual Property Security Agreement Supplements, supplements to other Collateral Documents and security agreements delivered pursuant to this Section 6.12, in each case to the extent required under the Loan Documents and subject to the Perfection Exceptions, enforceable against all third parties in accordance with their terms,

(iv) within 90 days after the request of the Collateral Agent, or such longer period as the Collateral Agent may agree in its reasonable discretion, deliver to the Collateral Agent, Organization Documents, resolutions and a signed copy of one or more customary opinions, addressed to the Collateral Agent and the other Secured Parties, of counsel for the Loan Parties (or the Collateral Agent, as applicable) reasonably acceptable to the Collateral Agent as to such matters as the Collateral Agent may reasonably request (limited, in the case of any opinions of local counsel to Loan Parties constituting material Subsidiary Guarantors in jurisdictions in which any Mortgaged Property is located, to opinions relating to Material Real Property (and any other Mortgaged Properties located in the same jurisdiction as any such Material Real Property)),

(v) within 90 days after the request of the Collateral Agent, or such longer period as the Collateral Agent may agree in its reasonable discretion, deliver to the Collateral Agent with respect to each Material Real Property that is the subject of such request and subject to a Mortgage, title reports in scope, form and substance reasonably satisfactory to the Collateral Agent (but only to the extent such reports exist and are in the possession of the relevant Loan Party or can reasonably be obtained), fully paid American Land Title Association Lender's title insurance policies or the equivalent or other form available in the applicable jurisdiction in form and substance, with endorsements as provided in Section 6.14 and in amounts, reasonably acceptable to the Collateral Agent (not to exceed the Fair Market Value of the Material Real Properties covered thereby and subject to any tie-in coverage available) but only to the extent such Material Real Property is located in the United States, and

(vi) at any time and from time to time, promptly execute and deliver any and all further instruments and documents and take all such other action as the Collateral Agent in its reasonable judgment may deem necessary or desirable in obtaining the full benefits of, or in perfecting and preserving the Liens of, such guaranties, Mortgages, Security Agreement Supplements, Intellectual Property Security Agreement Supplements, Collateral Documents and security agreements.

(b) the Parent Borrower may designate (or redesignate) any Restricted Subsidiary that is a Domestic Subsidiary and an Excluded Subsidiary as a Discretionary Guarantor and may designate (or redesignate) any Discretionary Guarantor as an Excluded Subsidiary; provided that, in the case of any designation (or redesignation)

of any Restricted Subsidiary that is an Excluded Subsidiary as a Discretionary Guarantor, the Administrative Agent shall have received, at least two (2) Business Days prior to such Restricted Subsidiary becoming a Guarantor, all documentation and other information in respect of such Restricted Subsidiary required under applicable "know your customer" and anti-money laundering rules and regulations (including the Patriot Act); provided, further, that, in the case of any designation (or redesignation) of any Discretionary Guarantor as an Excluded Subsidiary, (i) such designation (or redesignation) shall constitute an Investment by the Parent Borrower or the relevant Restricted Subsidiary, as applicable, therein at the date of designation (or redesignation) in an amount equal to the Fair Market Value of the Investments held by the Parent Borrower or such Restricted Subsidiary in such Discretionary Guarantor immediately prior to such designation (or redesignation) and such Investments shall otherwise be permitted hereunder and (ii) any Indebtedness or Liens of such Restricted Subsidiary (after giving effect to such designation (or redesignation)) shall be deemed to be incurred by such Restricted Subsidiary at the time of such designation (or redesignation) and such incurrence shall otherwise be permitted hereunder.

Section 6.13 Compliance with Environmental Laws. Except, in each case, to the extent that the failure to do so would not reasonably be expected to have a Material Adverse Effect: (a) comply, and take commercially reasonable efforts to cause all lessees operating or occupying its properties to comply with all Environmental Laws and Environmental Permits; (b) obtain, maintain and renew all applicable Environmental Permits necessary for its operations and properties; and (c) to the extent required under Environmental Laws, conduct any investigation, mitigation, study, sampling and testing, and undertake any cleanup, removal or remedial, corrective or other action necessary to respond to and remove and clean up all Hazardous Materials from any of its properties, in accordance with the requirements of Environmental Laws.

Section 6.14 Further Assurances.

(a) Promptly upon request by the Administrative Agent, or the Collateral Agent or any Lender through the Administrative Agent, and subject to the limitations described in Section 6.12, (i) correct any material defect or error that may be discovered in any Loan Document or other document or instrument relating to any Collateral or in the execution, acknowledgment, filing or recordation thereof and (ii) do, execute, acknowledge, deliver, record, re-record, file, re-file, register and re-register any and all such further acts, deeds, certificates, assurances and other instruments as the Administrative Agent, or the Collateral Agent or any Lender through the Administrative Agent, may reasonably require from time to time in order to grant, preserve, protect and continue the validity, perfection and priority of the security interests created or intended to be created by the Collateral Documents. Notwithstanding anything to the contrary herein, neither the Borrowers nor any Loan Party (except for any Foreign Subsidiary that is a Loan Party) shall be required to make any filings or take any other actions to perfect the Lien on and security interest in any intellectual property except for filings in the United States Patent and Trademark Office, and the United States Copyright Office, as applicable, and filings of UCC-1 financing statements in the applicable jurisdiction.

(b) By the date that is 120 days after the Closing Date, as such time period may be extended in the Collateral Agent's reasonable discretion, the Borrowers shall, and shall cause each Restricted Subsidiary to, deliver to the Collateral Agent:

(i) a Mortgage with respect to each Mortgaged Property, together with evidence each such Mortgage has been duly executed, acknowledged and delivered by a duly authorized officer of each party thereto on or before such date in a form suitable for filing and recording in all appropriate local filing or recording offices that the Collateral Agent may deem reasonably necessary or desirable in order to create a valid and subsisting perfected Lien on the property described therein in favor of the Collateral Agent for the benefit of the Secured Parties, subject only to Permitted Liens, and that all filing and recording taxes and fees have been paid or otherwise provided for in a manner reasonably satisfactory to the Collateral Agent; provided that to the extent any property to be subject to a Mortgage is located in a jurisdiction that imposes mortgage recording taxes, intangibles tax, documentary tax or similar recording fees or taxes, the relevant Mortgage shall not secure an amount in excess of the Fair Market Value of such property subject thereto and shall not secure the Obligations in respect of Letters of Credit or the Revolving Credit Facility in those states that impose a mortgage tax on paydowns or re-advances applicable thereto;

(ii) fully paid American Land Title Association or equivalent Lender's title insurance policies or marked up unconditional binder for such insurance (the "Mortgage Policies") in form and substance reasonably requested by Collateral Agent, with endorsements reasonably requested by Collateral Agent, in amounts reasonably acceptable to the Collateral Agent (not to exceed the Fair Market Value of the Material Real Properties covered thereby and subject to any tie-in coverage available), issued, coinsured and reinsured by title insurers reasonably acceptable to the Collateral Agent in connection with any Material Real Property located in the United States;

(iii) American Land Title Association/American Congress on Surveying and Mapping form surveys, for which all necessary fees (where applicable) have been paid, certified to the Collateral Agent and the issuer of the Mortgage Policies in a manner reasonably satisfactory to the Collateral Agent by a land surveyor duly registered and licensed in the States in which the property described in such surveys is located and reasonably acceptable to the Collateral Agent and sufficient for the title company to remove the general survey exception and issue survey related endorsements for the Mortgage Policies; provided that new or updated surveys will not be required if an existing survey, ExpressMap or other similar documentation is available and survey coverage is available for the Mortgage Policies without the need for such new or updated surveys and provided, further, this foregoing requirement shall only be in connection with any Material Real Property located in the United States;

(iv) in each case with respect to any Material Real Property (and any other Mortgaged Properties located in the same state as any such Material Real Property), customary opinions of local counsel to the Loan Parties in jurisdictions in which the Mortgaged Property is located, with respect to the enforceability and perfection of the Mortgages and, if applicable any related fixture filings, in form and substance reasonably satisfactory to the Collateral Agent;

(v) customary opinions of counsel to the Loan Parties in the states in which the Loan Parties party to the Mortgages are organized or formed, with respect to the valid existence, corporate power and authority of such Loan Parties in the granting of the Mortgages, in form and substance reasonably satisfactory to the Administrative Agent;

(vi) with respect to each improved Mortgaged Property, a "Life-of Loan" Federal Emergency Management Agency Standard Flood Hazard Determination and, to the extent such Mortgaged Property is located in a special flood hazard area, a notice about special flood hazard area status and flood disaster assistance, duly executed by the Borrowers and each Loan party relating thereto and evidence of flood insurance required by Section 6.07 hereof;

(vii) evidence that all other actions reasonably requested by the Administrative Agent, that are necessary in order to create valid and subsisting Liens on the property described in the Mortgage, have been taken; and

(viii) evidence that all documented and invoiced fees, costs and expenses have been paid in connection with the preparation, execution, filing and recordation of the Mortgages, including reasonable attorneys' fees, filing and recording fees, title insurance company coordination fees, documentary stamp, mortgage and intangible taxes and title search charges and other charges incurred in connection with the recordation of the Mortgages and the other matters described in this Section 6.14 and as otherwise required to be paid in connection therewith under Section 10.04.

Section 6.15 Maintenance of Ratings. Use commercially reasonable efforts to obtain and maintain (but not obtain or maintain a specific rating) (i) a public corporate family rating of the Parent Borrower and a rating of the Facilities, in each case from Moody's, and (ii) a public corporate credit rating of the Parent Borrower and a rating of the Facilities, in each case from S&P (it being understood and agreed that "commercially reasonable efforts" shall in any event include the payment by the Parent Borrower of customary rating agency fees and cooperation with information and data requests by Moody's and S&P in connection with their ratings process).

Section 6.16 Post-Closing Undertakings. Within the time periods specified on Schedule 6.16 hereto (as each may be extended by the Administrative Agent in its reasonable discretion), provide such Collateral Documents and complete such undertakings as are set forth on Schedule 6.16 hereto.

Section 6.17 No Change in Line of Business. Continue to engage in substantially similar lines of business as those lines of business conducted by the Borrowers and the Restricted Subsidiaries on the date hereof including any business reasonably related, complementary, synergistic or ancillary thereto or reasonable extensions thereof.

Section 6.18 Transactions with Affiliates.

(a) The Parent Borrower will not, and will not permit any of its Restricted Subsidiaries to, make any payment to, or sell, lease, transfer or otherwise dispose of any of its properties or assets to, or purchase any property or assets from, or enter into or make or amend any transaction or series of transactions, contract, agreement, understanding, loan, advance or guarantee with, or for the benefit of, any Affiliate of the Parent Borrower involving aggregate consideration in excess of $13,500,000 (each of the foregoing, an "Affiliate Transaction"), unless such Affiliate Transaction is on terms that are not materially less favorable to the Parent Borrower or the relevant Restricted Subsidiary than those that could have been obtained in a comparable transaction by the Parent Borrower or such Subsidiary with an unrelated Person on an arm's length basis (as determined in good faith by the board of directors or equivalent governing body of the Parent Borrower or such Restricted Subsidiary or any duly appointed committee thereof).

(b) The provisions of Section 6.18(a) shall not apply to the following:

(1) (a) transactions between or among the Loan Parties (other than Holdings) and/or any of its Restricted Subsidiaries (or an entity that becomes a Restricted Subsidiary as a result of such transaction) and (b) any merger, amalgamation or consolidation of the Parent Borrower and Holdings or any Parent Holding Company; provided that such parent entity shall have no material liabilities and no material assets (other than cash, Cash Equivalents and the Capital Stock of the Parent Borrower) and such merger, amalgamation or consolidation is otherwise in compliance with the terms of this Agreement and effected for a bona fide business purpose;

(2) (a) Restricted Payments permitted by Section 7.05 and (b) Permitted Investments (other than Permitted Investments under clause (13) of the definition thereof);

(3) transactions in which the Parent Borrower or any Restricted Subsidiary, as the case may be, delivers to the Administrative Agent a letter from an Independent Financial Advisor stating that such transaction is fair to the Parent Borrower or such Restricted Subsidiary from a financial point of view or meets the requirements of Section 6.18(a)(i) or makes a substantially equivalent statement;

(4) payments, loans, advances or guarantees (or cancellation of loans, advances or guarantees) to employees, officers, directors, managers, consultants or independent contractors for bona fide business purposes or in the ordinary course of business;

(5) any agreement or arrangement as in effect as of the Closing Date (other than the Management Agreement) or as thereafter amended, supplemented or replaced (so long as such amendment, supplement or replacement agreement is not materially disadvantageous (as determined in good faith by the senior management of the Board of Directors of the Parent Borrower or any direct or indirect parent of the Parent Borrower) to the Lenders when taken as a whole as compared to the original agreement or arrangement as in effect on the Closing Date) or any transaction or payments contemplated thereby;

(6) the Management Agreement or any transaction or payments (including reimbursement ofout-of-pocket expenses or payments under any indemnity obligations) contemplated thereby;

(7) the existence of, or the performance by the Parent Borrower or any of its Restricted Subsidiaries of its obligations under the terms of, any stockholders or similar agreement (including any registration rights agreement or purchase agreement related thereto) to which it is a party as of the Closing Date or similar transactions, arrangements or agreements which it may enter into thereafter; provided, however, that the existence of, or the performance by the Parent Borrower or any of its Restricted Subsidiaries

of its obligations under, any future amendment to any such existing transaction, arrangement or agreement or under any similar transaction, arrangement or agreement entered into after the Closing Date shall only be permitted by this clause (7) to the extent that the terms of any such existing transaction, arrangement or agreement, together with all amendments thereto, taken as a whole, or new transaction, arrangement or agreement are not otherwise disadvantageous (as determined in good faith by the senior management of the Board of Directors of the Parent Borrower or any direct or indirect parent of the Parent Borrower) to the Lenders, in any material respect when taken as a whole as compared with the original transaction, arrangement or agreement as in effect on the Closing Date;

(8) transactions with customers, clients, suppliers or purchasers or sellers of goods or services, in each case, in the ordinary course of business and otherwise in compliance with the terms of this Agreement, which are fair to the Parent Borrower and its Restricted Subsidiaries or are on terms at least as favorable as might reasonably have been obtained at such time from an unaffiliated party (as determined in good faith by the senior management of the Board of Directors of the Parent Borrower or any direct or indirect parent of any Borrower);

(9) any transaction effected as part of a Qualified Receivables Financing;

(10) the sale, issuance or transfer of Equity Interests (other than Disqualified Stock) of the Parent Borrower;

(11) payments by the Parent Borrower or any of its Restricted Subsidiaries to the Sponsor made for any financial advisory, financing, underwriting or placement services or in respect of other investment banking activities, including, without limitation, in connection with acquisitions or divestitures, which payments are approved by a majority of the Board of Directors of the Parent Borrower, Holdings or any Parent Holding Company in good faith or a majority of the disinterested members of the Board of Directors of the Parent Borrower, Holdings or any Parent Holding Company in good faith;

(12) any contribution to the capital of the Parent Borrower (other than Disqualified Stock) or any investments by the Sponsor or a direct or indirect parent of the Parent Borrower in Equity Interests (other than Disqualified Stock) of the Parent Borrower (and payment of reasonable out-of-pocket expenses incurred by the Sponsor or a direct or indirect parent of the Parent Borrower in connection therewith);

(13) any transaction with a Person (other than an Unrestricted Subsidiary) that would constitute an Affiliate Transaction solely because the Parent Borrower or a Restricted Subsidiary owns an Equity Interest in or otherwise controls such Person; provided that no Affiliate of the Parent Borrower or any of its Subsidiaries (other than the Parent Borrower or a Restricted Subsidiary) shall have a beneficial interest or otherwise participate in such Person;

(14) transactions between the Parent Borrower or any of its Restricted Subsidiaries and any Person that would constitute an Affiliate Transaction solely because such Person is a director or such Person has a director which is also a director of the Parent Borrower or any direct or indirect parent of the Parent Borrower; provided, however, that such director abstains from voting as a director of the Parent Borrower or such direct or indirect parent of the Parent Borrower, as the case may be, on any matter involving such other Person;

(15) the entering into of any tax sharing agreement or arrangement and any payments pursuant thereto, in each case to the extent permitted by clause (13), (14)(a) or (14)(e) of the second paragraph under Section 7.05;

(16) transactions to effect the Transactions and payment of all transaction, underwriting, commitment and other fees and expenses related to the Transactions (including the Transaction Costs);

(17) pledges of Equity Interests in Unrestricted Subsidiaries;

(18) the issuances of securities or other payments, awards or grants in cash, securities or otherwise pursuant to, or the funding of, employment arrangements, equity purchase agreements, stock options and stock ownership plans or similar employee benefit plans approved by the Board of Directors of the Parent Borrower, Holdings or any Parent Holding Company or of a Restricted Subsidiary, as appropriate, in good faith;

(19) (i) any employment, consulting, service or termination agreement, or customary indemnification arrangements, entered into by the Parent Borrower or any of its Restricted Subsidiaries with current, former or future officers, directors, employees, managers, consultants and independent contractors of the Parent Borrower or any of its Restricted Subsidiaries (or of any direct or indirect parent of the Parent Borrower to the extent such agreements or arrangements are in respect of services performed for the Parent Borrower or any of the Restricted Subsidiaries), (ii) any subscription agreement or similar agreement pertaining to the repurchase of Equity Interests pursuant to put/call rights or similar rights with current, former or future officers, directors, employees, managers, consultants and independent contractors of the Parent Borrower or any of its Restricted Subsidiaries or of any direct or indirect parent of the Parent Borrower and (iii) any payment of compensation or other employee compensation, benefit plan or arrangement, any health, disability or similar insurance plan which covers officers, directors, employees, managers, consultants and independent contractors of the Parent Borrower or any of its Restricted Subsidiaries or any direct or indirect parent of the Parent Borrower (including amounts paid pursuant to any management equity plan or any other management or employee benefit plan or agreement or any stock subscription or shareholder agreement, stock option or similar plans and any successor plan thereto and any supplemental executive retirement benefit plans or arrangements), in each case in the ordinary course of business or as otherwise approved in good faith by the Board of Directors of Parent Borrower, Holdings or any Parent Holding Company or of a Restricted Subsidiary or a direct or indirect parent of the Parent Borrower, as appropriate;

(20) investments by Affiliates in Indebtedness or preferred Equity Interests of the Parent Borrower or any of its Subsidiaries, so long as non-Affiliates were also offered the opportunity to invest in such Indebtedness or preferred Equity Interests, and transactions with Affiliates solely in their capacity as holders of Indebtedness or preferred Equity Interests of the Parent Borrower or any of its Subsidiaries, so long as such transaction is with all holders of such class (and there are such non-Affiliate holders) and such Affiliates are treated no more favorably than all other holders of such class generally;

(21) the existence of, or the performance by the Parent Borrower or any of its Restricted Subsidiaries of their obligations under the terms of, any registration rights agreement to which they are a party or become a party in the future;

(22) investments by the Sponsor or a direct or indirect parent of the Parent Borrower in securities of the Parent Borrower or any Restricted Subsidiary (and payment of reasonable out-of-pocket expenses incurred by the Sponsor or a direct or indirect parent of the Parent Borrower in connection therewith);

(23) transactions with joint ventures for the purchase or sale of goods, equipment and services entered into in the ordinary course of business;

(24) any lease entered into between the Parent Borrower or any Restricted Subsidiary, as lessee, and any Affiliate of the Parent Borrower, as lessor, in the ordinary course of business;

(25) (i) intellectual property licenses in the ordinary course of business and (ii) intercompany intellectual property licenses and research and development agreements in the ordinary course of business;

(26) transactions pursuant to, and complying with, Section 7.01, Section 7.02 or Section 7.03;

(27) intercompany transactions undertaken in good faith for the purpose of improving the tax efficiency of the Parent Borrower and its Restricted Subsidiaries and not for the purpose of circumventing any covenant set forth herein;

(28) the existence and performance of agreements and transactions with any Unrestricted Subsidiary that were entered into prior to the designation of a Restricted Subsidiary as such Unrestricted Subsidiary to the extent that the transaction was permitted at the time that it was entered into with such Restricted Subsidiary and transactions entered into by an Unrestricted Subsidiary with an Affiliate prior to the redesignation of any such Unrestricted Subsidiary as a Restricted Subsidiary; provided that such transaction was not entered into in contemplation of such designation or redesignation, as applicable;

(29) Affiliate repurchases of the Loans or Commitments to the extent permitted hereunder and the holding of such Loans or Commitments and the payments and other transactions contemplated herein in respect thereof or

(30) transactions set forth on Schedule 6.18.

Section 6.19 Lender Conference Calls. After the date of delivery of the annual and quarterly financial information required pursuant to Section 6.01(a) and (b), the Parent Borrower will hold and participate in quarterly conference calls or teleconferences at a time selected by the Parent Borrower and reasonably acceptable to the Administrative Agent, with all of the Lenders that choose to participate, to review the financial results of the previous fiscal year of the Parent Borrower and its Subsidiaries; provided that if the Parent Borrower or any direct or indirect parent thereof holds a conference call open to the public or holders of any of its securities to discuss the financial position and results of operations of the Parent Borrower and its Restricted Subsidiaries or any direct or indirect parent thereof for the most recently ended fiscal quarter or fiscal year, as applicable, for which financial statements have been so delivered, such conference call will be deemed to satisfy the requirements of this Section 6.19 so long as the Lenders are provided customary access to such conference call.

ARTICLE VII.
Negative Covenants

So long as any Lender shall have any Commitment hereunder, any Loan or other Obligation (other than contingent indemnification obligations as to which no claim has been asserted and obligations and liabilities under Secured Cash Management Agreements and Secured Hedge Agreements) hereunder shall remain unpaid or unsatisfied, or any Letter of Credit shall remain outstanding (other than Letters of Credit which have been Cash Collateralized), (A) except with respect to Section 7.09, the Borrowers shall not, nor shall they permit any other Restricted Subsidiary to and (B) with respect to Section 7.09, Holdings shall not:

Section 7.01 Indebtedness. Incur any Indebtedness (including Acquired Indebtedness) or issue any shares of Disqualified Stock, and the Parent Borrower will not permit any of its Subsidiaries to issue any shares of Preferred Stock; provided, however, that the Parent Borrower and any Restricted Subsidiary may incur Indebtedness (including Acquired Indebtedness) or issue shares of Disqualified Stock and any Subsidiary may issue shares of Preferred Stock, in each case if (1) in the case of Indebtedness, Disqualified Stock or Preferred Stock that is secured by the Collateral on a *pari passu* basis with the Lien securing the Obligations, the Consolidated First Lien Net Leverage Ratio for the Parent Borrower and its Restricted Subsidiaries calculated on a Pro Forma Basis (including pro forma application of the proceeds therefrom, but excluding the cash proceeds therefrom in calculating such Consolidated First Lien Net Leverage Ratio) as of the date on which such additional Indebtedness is Incurred or such Disqualified Stock or Preferred Stock is issued would be no greater than (x) 5.25 to 1.00 or (y) if incurred in connection with a permitted acquisition or other permitted Investment, the Consolidated First Lien Net Leverage Ratio does not increase immediately after giving effect to such permitted acquisition or other permitted Investment, and/or (2) in the case of Indebtedness, Disqualified Stock or Preferred Stock that is secured by the Collateral on a junior lien basis to the Lien securing the Obligations, the Consolidated Senior Secured Net Leverage Ratio for the Parent Borrower and its Restricted Subsidiaries (including pro forma application of the proceeds therefrom, but excluding the cash proceeds therefrom in calculating such Consolidated Senior Secured Net Leverage Ratio) as of the date on which such additional Indebtedness is Incurred or such Disqualified Stock or Preferred Stock is issued would be no greater than (x) 5.25 to 1.00 or (y) if incurred in connection with a permitted acquisition or other permitted Investment, the Consolidated Senior Secured Net Leverage Ratio does not increase immediately after giving effect to such permitted acquisition or other permitted Investment and/or (3) in the case of unsecured Indebtedness, Indebtedness secured by non-Collateral, Disqualified Stock or Preferred Stock, (I) the Consolidated Total Net Leverage Ratio for the Parent Borrower and its Restricted Subsidiaries calculated on a Pro Forma Basis (including pro forma application of the proceeds therefrom,

but excluding the cash proceeds therefrom in calculating such Consolidated Total Net Leverage Ratio) as of the date on which such additional Indebtedness is Incurred or such Disqualified Stock or Preferred Stock is issued would be no greater than (x) 5.25 to 1.00 or (y) if incurred in connection with a permitted acquisition or other permitted Investment, the Consolidated Total Net Leverage Ratio does not increase immediately after giving effect to such permitted acquisition or other permitted Investment or (II) the Cash Interest Coverage Ratio would (x) be no less than 2.00 to 1.00 or (y) if incurred in connection with a permitted acquisition or other permitted Investment, the Cash Interest Coverage Ratio does not decrease immediately after giving effect to such permitted acquisition or other permitted Investment (collectively, "Ratio Debt"); provided, further, that the Ratio Debt satisfies the Permitted Other Debt Conditions; provided, further, that the aggregate amount of Indebtedness (including Acquired Indebtedness) that may be Incurred and Disqualified Stock or Preferred Stock that may be issued pursuant to the foregoing by Restricted Subsidiaries that are not Loan Parties shall not exceed the greater of (x) $40,000,000 and (y) 40% of Consolidated EBITDA, at any one time outstanding, on a Pro Forma Basis (including pro forma application of the proceeds therefrom).

The foregoing limitations will not apply to (collectively, "Permitted Debt"):

(a) (x) Indebtedness arising under the Loan Documents including any refinancing thereof in accordance with Section 2.18, (y) Indebtedness of the Loan Parties evidenced by Refinancing Notes and any Permitted Refinancing thereof (or successive Permitted Refinancings thereof) and (z) Indebtedness of the Loan Parties evidenced by New Incremental Notes and any Permitted Refinancing thereof (or successive Permitted Refinancings thereof);

(b) [Reserved];

(c) Indebtedness of the Borrowers and their Restricted Subsidiaries (other than Indebtedness described in clause (a) or (b) above) that is existing on the Closing Date and listed on Schedule 7.01;

(d) Indebtedness (including, without limitation, Capitalized Lease Obligations and mortgage financings as purchase money obligations) Incurred by the Borrowers or any of their Restricted Subsidiaries, Disqualified Stock issued by the Borrowers or any of their Restricted Subsidiaries and Preferred Stock issued by any Restricted Subsidiaries to finance all or any part of the purchase, lease, construction, installation, repair or improvement of property (real or personal), plant or equipment or other fixed or capital assets (whether through the direct purchase of assets or the Equity Interests of any Person owning such assets) and Indebtedness arising from the conversion of the obligations of the Borrowers or any Restricted Subsidiary under or pursuant to any "synthetic lease" transactions to on-balance sheet Indebtedness of such Borrower or such Restricted Subsidiary, in an aggregate principal amount or liquidation preference, including all Indebtedness Incurred and Disqualified Stock or Preferred Stock issued to renew, refund, refinance, replace, defease or discharge any Indebtedness Incurred or Disqualified Stock or Preferred Stock issued pursuant to this clause (d), not to exceed the greater of (x) $33,000,000 and (y) 33% of Consolidated EBITDA, at any one time outstanding, *plus*, in the case of any refinancing of any Indebtedness permitted under this clause (d) or any portion thereof, the aggregate amount of fees, underwriting discounts, accrued and unpaid interest, premiums and other costs and expenses incurred in connection with such refinancing; provided that Capitalized Lease Obligations Incurred by the Borrowers or any Restricted Subsidiary pursuant to this clause (d) in connection with a Sale/Leaseback Transaction shall not be subject to the foregoing limitation so long as the proceeds of such Sale/Leaseback Transaction are used by such Borrower or such Restricted Subsidiary to permanently repay outstanding Loans under this Agreement or other Pari Passu Indebtedness;

(e) Indebtedness Incurred by the Borrowers or any of their Restricted Subsidiaries constituting reimbursement obligations with respect to letters of credit or bank guarantees or similar instruments issued in the ordinary course of business, including, without limitation, (i) letters of credit or performance or surety bonds in respect of workers' compensation claims, health, disability or other employee benefits (whether current or former) or property, casualty or liability insurance or self-insurance, or other Indebtedness with respect to reimbursement-type obligations regarding workers' compensation claims, health, disability or other employee benefits (whether current or former) or property, casualty or liability insurance and (ii) guarantees of Indebtedness Incurred by customers in connection with the purchase or other acquisition of equipment or supplies in the ordinary course of business;

(f) Indebtedness, Disqualified Stock or Preferred Stock arising from agreements of the Borrowers or their Restricted Subsidiaries providing for indemnification, earn-outs, adjustment of purchase or acquisition price or similar obligations, in each case, Incurred in connection with the Transactions or with the acquisition or disposition of any business, assets or a Subsidiary of a Borrower in accordance with this Agreement, other than guarantees of Indebtedness Incurred or Disqualified Stock or Preferred Stock issued by any Person acquiring all or any portion of such business, assets or Subsidiary for the purpose of financing such acquisition;

(g) Indebtedness or Disqualified Stock of a Borrower owing to a Restricted Subsidiary;provided that (x) such Indebtedness or Disqualified Stock owing to a Non-Loan Party shall be subordinated in right of payment to such Borrower's Obligations with respect to this Agreement pursuant to the Intercompany Subordination Agreement and (y) any subsequent issuance or transfer of any Capital Stock or any other event which results in any such Restricted Subsidiary ceasing to be a Restricted Subsidiary or any other subsequent transfer of any such Indebtedness or Disqualified Stock (except to a Borrower or another Restricted Subsidiary) shall be deemed, in each case, to be an Incurrence of such Indebtedness or issuance of a such Disqualified Stock not permitted by this clause (g);

(h) shares of Preferred Stock of a Restricted Subsidiary issued to a Borrower or another Restricted Subsidiary;provided that any subsequent issuance or transfer of any Capital Stock or any other event that results in any Restricted Subsidiary that holds such shares of Preferred Stock of another Restricted Subsidiary ceasing to be a Restricted Subsidiary or any other subsequent transfer of any such shares of Preferred Stock (except to a Borrower or another Restricted Subsidiary) shall be deemed, in each case, to be an issuance of shares of Preferred Stock not permitted by this clause (h);

(i) Indebtedness, Disqualified Stock or Preferred Stock of a Restricted Subsidiary or a Borrower owing to another Borrower or another Restricted Subsidiary; provided that (x) if a Borrower or a Loan Party Incurs such Indebtedness, Disqualified Stock or Preferred Stock owing to a Non-Loan Party, such Indebtedness, Disqualified Stock or Preferred Stock is subordinated in right of payment to such Borrower's Obligations or Guarantee of such Loan Party, as applicable, pursuant to the Intercompany Subordination Agreement and (y) any subsequent issuance or transfer of any Capital Stock or any other event that results in any Restricted Subsidiary lending such Indebtedness, Disqualified Stock or Preferred Stock ceasing to be a Restricted Subsidiary or any other subsequent transfer of any such Indebtedness, Disqualified Stock or Preferred Stock (except to a Borrower or another Restricted Subsidiary) shall be deemed, in each case, to be an Incurrence of such Indebtedness, Disqualified Stock or Preferred Stock not permitted by this clause (i);

(j) Swap Contracts and cash management services Incurred, other than for speculative purposes;

(k) obligations (including reimbursement obligations with respect to letters of credit or bank guarantees or similar instruments) in respect of customs, self-insurance, performance, bid, appeal and surety bonds and completion guarantees and similar obligations provided by any Borrower or any Restricted Subsidiary;

(l) Indebtedness or Disqualified Stock of any Borrower or any of their Restricted Subsidiaries and Preferred Stock of any of their Restricted Subsidiaries in an aggregate principal amount or liquidation preference that, when aggregated with the principal amount or liquidation preference of all other Indebtedness, Disqualified Stock and Preferred Stock then outstanding and Incurred pursuant to this clause (l), does not exceed the greater of (x) $40,000,000 and (y) 40% of Consolidated EBITDA, at any one time outstanding, *plus*, in the case of any refinancing of any Indebtedness, Disqualified Stock or Preferred Stock permitted under this clause (l) or any portion thereof, the aggregate amount of fees, underwriting discounts, accrued and unpaid interest, original issue discount, premiums (including tender premiums), defeasance costs and other costs and expenses incurred in connection with such refinancing (it being understood that any Indebtedness Incurred or Disqualified Stock or Preferred Stock issued pursuant to this clause (l) shall cease to be deemed Incurred, issued or outstanding pursuant to this clause (l) but shall be deemed Incurred or issued and outstanding as Ratio Debt from and after the first date on which such Borrower or such Restricted Subsidiary, as the case may be, could have Incurred such Indebtedness or issued such Disqualified Stock or Preferred Stock as Ratio Debt (to the extent such Borrower or such Restricted Subsidiary is able to Incur any Liens related thereto as Permitted Liens after such reclassification));

(m) any guarantee by a Borrower or a Restricted Subsidiary of Indebtedness or other obligations of any Borrower or any of their Restricted Subsidiaries so long as the incurrence of such Indebtedness or other obligations by such Borrower or such Restricted Subsidiary is permitted under the terms of this Agreement;

(n) the Incurrence by any Borrower or any of their Restricted Subsidiaries of Indebtedness or the incurrence of Disqualified Stock or Preferred Stock that serves to refund, refinance, replace, redeem, repurchase, retire or defease, and is in an aggregate principal amount (or if issued with original issue discount an aggregate issue price) that is equal to or less than, Indebtedness incurred or Disqualified Stock or Preferred Stock issued as Ratio Debt or permitted under clause (c), this clause (n), clause (o) or clause (r) of this Section 7.01 or subclause (y) of clauses (d), (l), (t), (cc) or (dd) of this Section 7.01 (provided that any amounts incurred under this clause (n) as Refinancing Indebtedness of subclause (y) of these clauses shall reduce the amount available under such subclause (y) of such clauses so long as such Refinancing Indebtedness remains outstanding or any Indebtedness Incurred or Disqualified Stock or Preferred Stock issued to so refund, replace, refinance, redeem, repurchase, retire or defease such Indebtedness, Disqualified Stock or Preferred Stock remains outstanding), plus any additional Indebtedness Incurred or Disqualified Stock or Preferred Stock issued to pay unpaid accrued interest and the aggregate amount of original issue discount, premiums (including reasonable tender premiums), and underwriting discounts, defeasance costs and fees and expenses in connection therewith (subject to the following proviso, "Refinancing Indebtedness"); provided, however, that such Refinancing Indebtedness:

(1) has a Weighted Average Life to Maturity at the time such Refinancing Indebtedness is Incurred that is not less than the remaining Weighted Average Life to Maturity of the Indebtedness, Disqualified Stock or Preferred Stock being refunded, refinanced, replaced, redeemed, repurchased or retired (which, in the case of bridge loans, shall be determined by reference to the notes or loans into which such bridge loans are converted or for which such bridge loans are exchanged at maturity and will be subject to other customary offers to repurchase or mandatory prepayments upon a change of control, asset sale or event of loss and customary acceleration rights after an event of default);

(2) in the case of any revolving Indebtedness, has a Stated Maturity that is no earlier than the Stated Maturity of the Indebtedness being refunded, refinanced, replaced, redeemed, repurchased or retired (which, in the case of bridge loans, shall be determined by reference to the notes or loans into which such bridge loans are converted or for which such bridge loans are exchanged at maturity and will be subject to other customary offers to repurchase or mandatory prepayments upon a change of control, asset sale or event of loss and customary acceleration rights after an event of default);

(3) to the extent that such Refinancing Indebtedness refinances (i) Subordinated Indebtedness, such Refinancing Indebtedness is Subordinated Indebtedness or (ii) Disqualified Stock or Preferred Stock, such Refinancing Indebtedness is Disqualified Stock or Preferred Stock, respectively; and

(4) shall not include (x) Indebtedness, Disqualified Stock or Preferred Stock of aNon-Loan Party that refinances Indebtedness, Disqualified Stock or Preferred Stock of a Borrower or a Guarantor, or (y) Indebtedness or Disqualified Stock of a Borrower or Indebtedness, Disqualified Stock or Preferred Stock of a Restricted Subsidiary that refinances Indebtedness, Disqualified Stock or Preferred Stock of an Unrestricted Subsidiary;

provided that subclauses (1) and (2) will not apply to any refunding or refinancing of any secured Indebtedness;

(o) (1) Indebtedness, Disqualified Stock or Preferred Stock (i) of any Borrower or any Restricted Subsidiary Incurred or assumed in connection with an acquisition of any assets (including Capital Stock), business or Person after the Closing Date and (ii) of any Person that is acquired by any Borrower or any of its Restricted Subsidiaries or merged into or consolidated or amalgamated with any Borrower or any Restricted Subsidiary in accordance with the terms of this Agreement after the Closing Date and (2) Indebtedness Incurred or Disqualified Stock or Preferred Stock issued or, in each case, assumed in anticipation of, or in connection with, an acquisition of any assets, business or Person; provided, however, that after giving effect to such acquisition, merger, consolidation or amalgamation and the Incurrence of such Indebtedness, Disqualified Stock or Preferred Stock (including pro forma application of the proceeds therefrom, but excluding the cash proceeds therefrom in calculating such Consolidated Total Net Leverage Ratio), either:

(i) the Borrowers would be permitted to Incur at least $1.00 of additional Indebtedness as Ratio Debt; or

(ii) (a) the Consolidated Total Net Leverage Ratio of the Parent Borrower and its Restricted Subsidiaries is equal to or less than such ratio immediately prior to such acquisition, merger, consolidation or amalgamation or (b) with respect to unsecured Indebtedness, (1) the Cash Interest Coverage Ratio of the Parent Borrower and its Restricted Subsidiaries is at least 2.00 to 1.00 or (2) the Cash Interest Coverage Ratio of the Parent Borrower and its Restricted Subsidiaries is equal to or greater than such ratio immediately prior to such acquisition, merger, consolidation or amalgamation;

provided further, that the aggregate amount of Indebtedness Incurred and Disqualified Stock or Preferred Stock that may be issued pursuant to this clause (o) by Restricted Subsidiaries that are not Loan Parties shall not exceed the greater of (x) $40,000,000 and (y) 40% of Consolidated EBITDA, at any one time outstanding on a Pro Forma Basis (including pro forma application of the proceeds therefrom);

(p) Indebtedness arising from the honoring by a bank or other financial institution of a check, draft or similar instrument drawn against insufficient funds in the ordinary course of business;

(q) Indebtedness of any Borrower or any Restricted Subsidiary supported by a letter of credit or bank guarantee issued pursuant to any credit facility permitted hereunder, so long as such letter of credit has not been terminated and is in a principal amount not in excess of the stated amount of such letter of credit or bank guarantee;

(r) Contribution Indebtedness;

(s) Indebtedness, Disqualified Stock or Preferred Stock of any Borrower or any Restricted Subsidiary consisting of (x) the financing of insurance premiums or (y) take-or-pay obligations contained in supply arrangements, in each case, in the ordinary course of business;

(t) Indebtedness, Disqualified Stock or Preferred Stock of Non-Loan Parties in an aggregate principal amount not to exceed the greater of (x) $33,000,000 and (y) 33% of Consolidated EBITDA, at any one time outstanding, *plus,* in the case of any refinancing of any Indebtedness, Disqualified Stock or Preferred Stock permitted under this clause (t) or any portion thereof, the aggregate amount of accrued and unpaid interest, original issue discount, premiums (including tender premiums), and underwriting discounts, defeasance costs and fees and expenses Incurred in connection with such refinancing, outstanding at any one time (it being understood that any Indebtedness Incurred or Disqualified Stock or Preferred Stock issued pursuant to this clause (t) shall cease to be deemed Incurred, issued or outstanding pursuant to this clause (t) but shall be deemed Incurred or issued and outstanding as Ratio Debt from and after the first date on which such Borrower or such Restricted Subsidiary, as the case may be, could have Incurred such Indebtedness or issued such Disqualified Stock or Preferred Stock as Ratio Debt (to the extent such Borrower or such Restricted Subsidiary is able to Incur any Liens related thereto as Permitted Liens after such reclassification));

(u) Indebtedness, Disqualified Stock or Preferred Stock of a joint venture to a Borrower or a Restricted Subsidiary and to the other holders of Equity Interests or participants of such joint venture, so long as the percentage of the aggregate amount of such Indebtedness, Disqualified Stock or Preferred Stock of such joint venture owed to such holders of its Equity Interests or participants of such joint venture does not exceed the percentage of the aggregate outstanding amount of the Equity Interests of such joint venture held by such holders or such participant's participation in such joint venture;

(v) Indebtedness Incurred or Disqualified Stock or Preferred Stock issued by a Receivables Subsidiary in a Qualified Receivables Factoring or Qualified Receivables Financing that is not recourse to any Borrower or any Restricted Subsidiary other than (x) a Receivables Subsidiary (except for Standard Securitization Undertakings) or (y) a Person described in the definition of "Factoring Transaction";

(w) Indebtedness owed on a short-term basis to banks and other financial institutions incurred in the ordinary course of business of the Borrowers and the Restricted Subsidiaries with such banks or financial institutions that arises in connection with ordinary banking arrangements, including cash management, cash pooling arrangements and related activities to manage cash balances of the Borrowers and their Subsidiaries and joint ventures including treasury, depository, overdraft, credit, purchasing or debit card, electronic funds transfer and other cash management arrangements and Indebtedness in respect of netting services, overdraft protection, credit card programs, automatic clearinghouse arrangements and similar arrangements;

(x) Indebtedness, Disqualified Stock or Preferred Stock consisting of Indebtedness, Disqualified Stock or Preferred Stock issued by any Borrower or any Restricted Subsidiary to future, current or former officers, directors, managers, employees, consultants and independent contractors thereof or any direct or indirect parent thereof, their respective estates, heirs, family members, spouses or former spouses, in each case to finance the purchase or redemption of Equity Interests of the Parent Borrower or any direct or indirect parent of the Borrowers to the extent permitted under Section 7.05;

(y) customer deposits and advance payments received in the ordinary course of business from customers for goods purchased in the ordinary course of business;

(z) Indebtedness Incurred by a Borrower or a Restricted Subsidiary in connection with bankers' acceptances, discounted bills of exchange, warehouse receipts or similar facilities or the discounting or factoring of receivables for credit management purposes, in each case incurred or undertaken in the ordinary course of business;

(aa) Indebtedness in an amount not to exceed unutilized amounts pursuant to clause (11) of Section 7.05 ~~p~~provided that any such usage under this clause (1) shall reduce the amount available under Section 7.05(11));

(bb) (i) guarantees Incurred in the ordinary course of business in respect of obligations to suppliers, customers, franchisees, lessors, licensees, sub-licensees and distribution partners and (ii) Indebtedness Incurred by a Borrower or a Restricted Subsidiary as a result of leases entered into by such Borrower or such Restricted Subsidiary or any Permitted Parent in the ordinary course of business;

(cc) the Incurrence by any Borrower or any Restricted Subsidiary of Indebtedness Incurred or Disqualified Stock or Preferred Stock issued on behalf, or representing guarantees of Indebtedness incurred or Disqualified Stock or Preferred Stock issued by, joint ventures; provided that the aggregate principal amount or liquidation preference, as applicable, of Indebtedness incurred or guaranteed or Disqualified Stock or Preferred Stock issued or guaranteed pursuant to this clause (cc) does not at any one time outstanding exceed the greater of (x) $16,000,000 and (y) 16% of Consolidated EBITDA at any one time outstanding, *plus*, in the case of any refinancing of any Indebtedness, Disqualified Stock or Preferred Stock permitted under this clause (cc) or any portion thereof, the aggregate amount of fees, underwriting discounts, accrued and unpaid interest, premiums and other costs and expenses incurred in connection with such refinancing (it being understood that any Indebtedness Incurred or Disqualified Stock or Preferred Stock issued pursuant to this clause (cc) shall cease to be deemed Incurred, issued or outstanding pursuant to this clause (cc) but shall

be deemed Incurred or issued and outstanding as Ratio Debt from and after the first date on which such Borrower or such Restricted Subsidiary, as the case may be, could have Incurred such Indebtedness or issued such Disqualified Stock or Preferred Stock as Ratio Debt (to the extent such Borrower or such Restricted Subsidiary is able to Incur any Liens related thereto as Permitted Liens after such reclassification));

(dd) Indebtedness, Disqualified Stock or Preferred Stock of a Borrower or a Restricted Subsidiary incurred to finance or assumed in connection with an acquisition of any assets (including Capital Stock), business or Person in an aggregate principal amount or liquidation preference that does not exceed the greater of (x) $33,000,000 and (y) 33% of Consolidated EBITDA, at any one time outstanding, *plus*, in the case of any refinancing of any Indebtedness, Disqualified Stock or Preferred Stock permitted under this clause (dd) or any portion thereof, the aggregate amount of fees, underwriting discounts, accrued and unpaid interest, premiums and other costs and expenses incurred in connection with such refinancing (it being understood that any Indebtedness Incurred or Disqualified Stock or Preferred Stock issued pursuant to this clause (dd) shall cease to be deemed Incurred, issued or outstanding pursuant to this clause (dd) but shall be deemed Incurred or issued and outstanding as Ratio Debt from and after the first date on which such Borrower or such Restricted Subsidiary, as the case may be, could have Incurred such Indebtedness or issued such Disqualified Stock or Preferred Stock as Ratio Debt (to the extent such Borrower or such Restricted Subsidiary is able to Incur any Liens related thereto as Permitted Liens after such reclassification));

(ee) Indebtedness, Disqualified Stock or Preferred Stock consisting of obligations of any Borrower or any Restricted Subsidiary under deferred compensation or other similar arrangements incurred by such Person in connection with the Transactions or any Permitted Investment;

(ff) unfunded pension fund and other employee benefit plan obligations and liabilities to the extent that they are permitted to remain unfunded under applicable law; and

(gg) Indebtedness Incurred in connection with a Qualified Receivables Factoring or Qualified Receivables Financing, in each case, which constitutes Standard Securitization Undertakings.

For purposes of determining compliance with this Section 7.01, in the event that an item of Indebtedness, Disqualified Stock or Preferred Stock (or any portion thereof) meets the criteria of more than one of the categories of Permitted Debt or is entitled to be incurred or issued as Ratio Debt, the Parent Borrower shall, in its sole discretion, at the time of incurrence or issuance, divide, classify or reclassify, or at any later time divide, classify or reclassify, such item of Indebtedness, Disqualified Stock or Preferred Stock (or any portion thereof) in any manner that complies with this Section 7.01; provided that all Indebtedness under this Agreement incurred on the Closing Date shall be deemed to have been Incurred pursuant to Section 7.01(a), and the Parent Borrower shall not be permitted to reclassify all or any portion of Indebtedness Incurred on the Closing Date pursuant to Section 7.01(a). Accrual of interest (including payment-in-kind) or dividends, the accretion of accreted value, the accretion or amortization of original issue discount, the payment of interest or dividends in the form of additional Indebtedness with the same terms, the payment of dividends on Disqualified Stock or Preferred Stock in the form of additional shares of Disqualified Stock or Preferred Stock of the same class, the accretion of liquidation preference and increases in the amount of Indebtedness, Disqualified Stock or Preferred Stock outstanding solely as a result of fluctuations in the exchange rate of currencies will not be deemed to be an Incurrence of Indebtedness or issuance of Disqualified Stock or Preferred Stock for purposes of this Section 7.01 and any Lien permitted to be Incurred with respect to any Indebtedness relating to such amounts shall be permitted to secure such obligations. Guarantees of, or obligations in respect of letters of credit relating to, Indebtedness that are otherwise included in the determination of a particular amount of Indebtedness shall not be included in the determination of such amount of Indebtedness; provided that the Incurrence of the Indebtedness represented by such guarantee or letter of credit, as the case may be, was in compliance with this Section 7.01.

For purposes of determining compliance with any U.S. dollar-denominated restriction on the Incurrence of Indebtedness or the issuance of Disqualified Stock or Preferred Stock, the U.S. dollar-equivalent principal amount or liquidation preference, as applicable, of Indebtedness, Disqualified Stock or Preferred Stock denominated in a foreign currency shall be calculated based on the relevant currency exchange rate in effect on the date such Indebtedness was Incurred, in the case of term debt, or first committed or first Incurred (whichever yields the lower U.S. dollar-equivalent), in the case of revolving credit debt or such Disqualified Stock or Preferred Stock was issued; provided

that if such Indebtedness, Disqualified Stock or Preferred Stock is Incurred to refinance other Indebtedness, Disqualified Stock or Preferred Stock denominated in a foreign currency, and such refinancing would cause the applicable U.S. dollar-denominated restriction to be exceeded if calculated at the relevant currency exchange rate in effect on the date of such refinancing, such U.S. dollar-denominated restriction shall be deemed not to have been exceeded so long as the principal amount or liquidation preference, as applicable, of such Refinancing Indebtedness does not exceed the principal amount or liquidation preference, as applicable, of such Indebtedness, Disqualified Stock or Preferred Stock, as the case may be, being refinanced (plus unpaid accrued interest and the aggregate amount of premiums (including reasonable tender premiums) and underwriting discounts, defeasance costs and fees, discounts and expenses in connection therewith).

The principal amount or liquidation preference, as applicable, of any Indebtedness, Disqualified Stock or Preferred Stock, as the case may be, Incurred to refinance other Indebtedness, Disqualified Stock or Preferred Stock, if Incurred in a different currency from the Indebtedness, Disqualified Stock or Preferred Stock, as the case may be, being refinanced, shall be calculated based on the currency exchange rate applicable to the currencies in which such respective Indebtedness, Disqualified Stock or Preferred Stock is denominated that is in effect on the date of such refinancing.

Section 7.02 Limitations on Liens.

Permit the Borrowers or any Restricted Subsidiary to, create, incur, assume or suffer to exist any Lien upon any property or assets of any kind (real or personal, tangible or intangible) of the Borrowers or any Restricted Subsidiary, whether now owned or hereafter acquired (each, a "Subject Lien") that secures obligations under any Indebtedness on any asset or property of the Borrowers or any Restricted Subsidiary, except:

(a) in the case of Subject Liens on any Collateral, such Subject Lien is a Permitted Lien; and

(b) in the case of any other asset or property, any Subject Lien if (i) the Obligations are equally and ratably secured with (or on a senior basis to, in the case such Subject Lien secures any Junior Financing) the obligations secured by such Subject Lien or (ii) such Subject Lien is a Permitted Lien.

Any Lien created for the benefit of the Secured Parties pursuant to the preceding clause (b) shall provide by its terms that such Lien shall be automatically and unconditionally be released and discharged upon the release and discharge of the Subject Lien that gave rise to the obligation to so secure the Obligations.

Section 7.03 Fundamental Changes. Merge, dissolve, liquidate, amalgamate, consolidate with or into another Person, or Dispose of (whether in one transaction or in a series of transactions) all or substantially all of its assets (whether now owned or hereafter acquired) to or in favor of any Person, except that, (other than in the case of clause (e) below) so long as no Event of Default would result therefrom:

(a) any Restricted Subsidiary may merge, amalgamate or consolidate with (i) a Borrower (including a merger, the purpose of which is to reorganize such Borrower into a new jurisdiction in any State of the United States); provided that such Borrower shall be the continuing or surviving Person or the surviving Person shall expressly assume the obligations of such Borrower pursuant to documents reasonably acceptable to the Administrative Agent and such Borrower (or, if not such Borrower, the surviving Person) shall be a corporation or a limited liability company organized under the laws of the United States, any state thereof or the District of Columbia or (ii) any one or more other Restricted Subsidiaries; provided that (x) any Restricted Subsidiary that is not a Controlled Foreign Subsidiary or a FSHCO may not merge with any Restricted Subsidiary that is a Controlled Foreign Subsidiary or a FSHCO if such Controlled Foreign Subsidiary or such FSHCO shall be the continuing or surviving Person and (y) when any Guarantor is merging with another Restricted Subsidiary that is not a Loan Party (A) the Guarantor shall be the continuing or surviving Person, (B) to the extent constituting an Investment, such Investment must be a Permitted Investment or Indebtedness of a Restricted Subsidiary which is not a Loan Party in accordance with Section 7.01, respectively and (C) to the extent constituting a Disposition, such Disposition must be permitted hereunder;

(b) (i) any Restricted Subsidiary that is not a Loan Party may merge, amalgamate or consolidate with or into any other Restricted Subsidiary that is not a Loan Party and (ii) any Restricted Subsidiary (other than a Borrower) may liquidate or dissolve, or any Borrower or any Restricted Subsidiary may (if the validity, perfection and priority of the Liens securing the Obligations is not adversely affected thereby) change its legal form if the Parent Borrower determines in good faith that such action is in the best interest of Holdings and its Subsidiaries and is not disadvantageous to the Lenders in any material respect (it being understood that in the case of any dissolution of a Restricted Subsidiary that is a Guarantor, such Subsidiary shall at or before the time of such dissolution transfer its assets to another Restricted Subsidiary that is a Guarantor in the same jurisdiction or a different jurisdiction reasonably satisfactory to the Administrative Agent unless such Disposition of assets is permitted hereunder; and in the case of any change in legal form, a Restricted Subsidiary that is a Guarantor will remain a Guarantor unless such Guarantor is otherwise permitted to cease being a Guarantor hereunder);

(c) any Restricted Subsidiary may Dispose of all or substantially all of its assets (upon voluntary liquidation or otherwise) to any Borrower or to any Restricted Subsidiary; provided that if the transferor in such a transaction is a Borrower or a Guarantor, then (i) the transferee must either be a Borrower or a Guarantor in the same jurisdiction or a different jurisdiction reasonably satisfactory to the Administrative Agent and (ii) to the extent constituting an Investment, such Investment must be a Permitted Investment or Indebtedness of a Restricted Subsidiary which is not a Loan Party in accordance with Section 7.01, respectively; provided, further, that the Borrowers may Dispose of all or substantially all of their assets (upon voluntary liquidation or otherwise) to any other Loan Party;

(d) any Restricted Subsidiary (other than a Borrower) may merge, amalgamate or consolidate with, or dissolve into, any other Person in order to effect Permitted Investment; provided that (i) the continuing or surviving Person shall, to the extent subject to the terms hereof, have complied with the requirements of Section 6.12 and (ii) to the extent constituting an Investment, such Investment must be a Permitted Investment and (iii) to the extent constituting a Disposition, such Disposition must be permitted hereunder;

(e) the Borrowers and the other Restricted Subsidiaries may consummate the Transactions;

(f) any Restricted Subsidiary (other than a Borrower) may merge, dissolve, liquidate, amalgamate, consolidate with or into another Person in order to effect a Disposition permitted pursuant to Section 7.04 (other than Dispositions permitted by Section 7.03); and

(g) any Permitted Investment may be structured as a merger, consolidation or amalgamation of a Subsidiary that is not a Borrower.

Section 7.04 Asset Sales. Cause or make an Asset Sale, unless:

(1) the Borrowers or any of their Restricted Subsidiaries, as the case may be, receive consideration (including by way of relief from, or by any other person assuming responsibility for, any liabilities, contingent or otherwise) at the time of such Asset Sale at least equal to the Fair Market Value (as determined at the time of contractually agreeing to such Asset Sale) of the assets sold or otherwise disposed of; and

(2) except in the case of a Permitted Asset Swap, at least 75% of the consideration therefor received by such Borrower or such Restricted Subsidiary, as the case may be, is in the form of cash or Cash Equivalents or Replacement Assets; provided, that the amount of:

(a) any liabilities (as shown on such Borrower's or such Restricted Subsidiary's most recent balance sheet or in the notes thereto for which internal financial statements are available immediately preceding such date or, if incurred or accrued subsequent to the date of such balance sheet, such liabilities that would have been reflected on such Borrower's or such Restricted Subsidiary's balance sheet or in the footnotes thereto if such incurrence or accrual had taken place

on or prior to the date of such balance sheet in the good faith determination of the Borrower) of such Borrower or such Restricted Subsidiary other than liabilities that are by their terms subordinated to the Obligations or are otherwise extinguished in connection with the transactions relating to such Asset Sale, or that are assumed by the transferee of any such assets or Equity Interests pursuant to an agreement that releases or indemnifies such Borrower or such Restricted Subsidiary, as the case may be, from further liability;

(b) any notes or other obligations or other securities or assets received by such Borrower or such Restricted Subsidiary from such transferee that are converted by such Borrower or such Restricted Subsidiary into cash or Cash Equivalents, or by their terms are required to be satisfied for cash or Cash Equivalents (to the extent of the cash or Cash Equivalents received) within 180 days of the receipt thereof; and

(c) any Designated Non-Cash Consideration received by the Borrowers or any of their Restricted Subsidiaries in such Asset Sale having an aggregate Fair Market Value, taken together with all other Designated Non-Cash Consideration received pursuant to this clause (c) that is at that time outstanding, not to exceed the greater of (x) $33,000,000 and (y) 33% of Consolidated EBITDA, calculated at the time of the receipt of such Designated Non-Cash Consideration (with the Fair Market Value of each item of Designated Non-Cash Consideration being measured at the time received and without giving effect to subsequent changes in value);

shall each be deemed to be Cash Equivalents for the purposes of this clause (2).

Within 18 months after any Borrower's or any Restricted Subsidiary's receipt of the Net Cash Proceeds of any Asset Sale or Casualty Event, such Borrower or such Restricted Subsidiary shall apply an amount equal to the Net Cash Proceeds from such Asset Sale or such Casualty Event, at its option:

(3) to prepay Loans and other Permitted Debt in accordance with Section 2.05(b)(ii);

(4) to acquire or make an investment in any one or more businesses, assets (other than working capital assets), or property or capital expenditures, in each case used or useful in a Similar Business;

(5) to acquire or make an investment in (or other expenditure in respect of) any one or more businesses, properties (other than working capital assets) or assets (other than working capital assets) that replace the businesses, properties and/or assets that are the subject of such Asset Sale or Casualty Event and that will be owned by a Borrower or a Subsidiary; or

(6) any combination of the foregoing;

provided that the Borrowers and their Restricted Subsidiaries will be deemed to have complied with the provisions described in clause (4) or (5) of this paragraph if and to the extent that, within 18 months after the Asset Sale that generated the Net Cash Proceeds, such Borrower or such Restricted Subsidiary, as applicable, has entered into and not abandoned or rejected a binding agreement to make an investment in compliance with the provision described in clauses (4) and (5) of this paragraph, and that investment is thereafter completed within 180 days after the end of such 18 month period.

Pending the final application of any such amount of Net Cash Proceeds pursuant to Section 2.05(b)(ii) and this Section 7.04, such Borrower or such Restricted Subsidiary may temporarily reduce Indebtedness under the Revolving Credit Facility, or otherwise invest or utilize such Net Cash Proceeds in any manner not prohibited by this Agreement.

Section 7.05 Restricted Payments.

(1) declare or pay any dividend or make any payment or distribution on account of the Borrowers' or any of their Restricted Subsidiaries' Equity Interests, including any payment made in connection with any merger or consolidation involving a Borrower (other than (A) dividends or distributions by such Borrower payable solely in Equity Interests (other than Disqualified Stock) of such Borrower; or (B) dividends or distributions by a Restricted Subsidiary so long as, in the case of any dividend or distribution payable on or in respect of any class or series of securities issued by a Restricted Subsidiary other than a Wholly Owned Restricted Subsidiary, a Borrower or a Restricted Subsidiary receives at least its pro rata share of such dividend or distribution in accordance with its Equity Interests in such class or series of securities);

(2) purchase, redeem, defease or otherwise acquire or retire for value any Equity Interests of the Parent Borrower or any direct or indirect parent of Parent Borrower, including in connection with any merger or consolidation;

(3) make any principal payment on, or redeem, repurchase, defease or otherwise acquire or retire for value, in each case, prior to any scheduled repayment, sinking fund payment or maturity, any material Subordinated Indebtedness of any Borrower or any Guarantor (other than the payment, redemption, repurchase, defeasance, acquisition or retirement of (i) Subordinated Indebtedness of any Borrower or any Guarantor in anticipation of satisfying a sinking fund obligation, principal installment or final maturity, in each case due within one year of the date of such payment, redemption, repurchase, defeasance, acquisition or retirement and (ii) Indebtedness permitted under Section 7.01(g) or (i)) (to the extent, except in the case of Cure Equity, that such Indebtedness has an outstanding principal amount in excess of the greater of (x) $10,000,000 and (y) 10% of Consolidated EBITDA, a "Junior Financing");

(4) make any Restricted Investment;

(all such payments and other actions set forth in clauses (1) through (4) above being collectively referred to as 'Restricted Payments"), unless, at the time of such Restricted Payment:

(a) solely in the case of any Restricted Payment utilizing clause (c)(ii) below, no Event of Default under Section 8.01(a), (f), or (g) shall have occurred and be continuing or would occur as a consequence thereof;

(b) [reserved]; and

(c) such Restricted Payment, together with the aggregate amount of all other Restricted Payments made by the Borrowers and their Restricted Subsidiaries after the Closing Date (including Restricted Payments permitted by clause (1) of the next succeeding paragraph, but excluding all other Restricted Payments permitted by the next succeeding paragraph), is less than the sum of, without duplication,

(i) the greater of (x) $30,000,000 and (y) 30% of Consolidated EBITDA, *plus*

(ii) the Retained Excess Cash Flow Amount, *plus*

(iii) 100% of the aggregate net proceeds, including cash and the Fair Market Value of assets (other than cash), received by the Parent Borrower after the Closing Date from the issue or sale of Equity Interests of the Parent Borrower (other than Excluded Equity), including such Equity Interests issued upon exercise of warrants or options, *plus*

(iv) 100% of the aggregate amount of contributions to the capital of the Parent Borrower received in cash and the Fair Market Value of assets (other than cash) after the Closing Date (other than Excluded Equity), *plus*

(v) the principal amount of any Indebtedness, or the liquidation preference or maximum fixed repurchase price, as the case may be, of any Disqualified Stock, in each case, of any Borrower or any Restricted Subsidiary thereof issued after the Closing Date (other than Indebtedness or Disqualified Stock issued to a Restricted Subsidiary or an employee stock ownership plan or trust established by any Borrower or any Restricted Subsidiary (other than to the extent such employee stock ownership plan or trust has been funded by any Borrower or any Restricted Subsidiary)) that, in each case, has been converted into or exchanged for Equity Interests in the Parent Borrower or any direct or indirect parent of the Parent Borrower (other than Excluded Equity), *plus*

(vi) 100% of the aggregate amount received by any Borrower or any Restricted Subsidiary in cash and the Fair Market Value of assets (other than cash) received by any Borrower or any Restricted Subsidiary from:

(A) the sale or other disposition (other than to a Borrower or a Restricted Subsidiary of the Borrower) of Restricted Investments made by the Borrowers and their Restricted Subsidiaries and from repurchases and redemptions of such Restricted Investments from the Borrowers and their Restricted Subsidiaries by any Person (other than the Borrowers or any of their Restricted Subsidiaries) and from repayments of loans or advances that constituted Restricted Investments,

(B) the sale (other than to a Borrower or a Restricted Subsidiary or an employee stock ownership plan or trust established by a Borrower or any Restricted Subsidiary (other than to the extent such employee stock ownership plan or trust has been funded by a Borrower or any Restricted Subsidiary)) of the Equity Interests of an Unrestricted Subsidiary, or

(C) any distribution or dividend from an Unrestricted Subsidiary,*plus*

(vii) in the event any Unrestricted Subsidiary has been redesignated as a Restricted Subsidiary or has been merged, consolidated or amalgamated with or into, or transfers or conveys its assets to, or is liquidated into, a Borrower or a Restricted Subsidiary, in each case after the Closing Date, the Fair Market Value of the Investment of such Borrower or any Restricted Subsidiary in such Unrestricted Subsidiary at the time of such redesignation, combination or transfer (or of the assets transferred or conveyed, as applicable), other than in each case to the extent that the designation of such Subsidiary as an Unrestricted Subsidiary was made pursuant to clause (20) of the next succeeding paragraph or constituted a Permitted Investment, *plus*

(viii) the aggregate amount of Declined Amounts since the Closing Date,*plus*

(ix) the aggregate amount of Retained Asset Sale Proceeds.

This Section 7.05 will not prohibit:

(1) the payment of any dividend or distribution or consummation of any redemption within 60 days after the date of declaration thereof or the giving of a redemption notice related thereto, if at the date of declaration or notice such payment would have complied with the provisions of this Agreement;

(2) (a) the redemption, repurchase, retirement or other acquisition of any Equity Interests ("Retired Capital Stock") of the Parent Borrower or any direct or indirect parent of the Parent Borrower, or Junior Financing of any Borrower or any Subsidiary Guarantor, in exchange for, or out of the proceeds of the issuance or sale of, Equity Interests of the Parent Borrower or any direct or indirect parent of the Parent Borrower or contributions to the equity capital of the Parent Borrower (other than Excluded Equity) (collectively, including any such contributions, "Refunding Capital Stock");

(b) the declaration and payment of accrued dividends on the Retired Capital Stock out of the proceeds of the issuance or sale (other than to a Restricted Subsidiary of a Borrower or to an employee stock ownership plan or any trust established by any Borrower or any of its Restricted Subsidiaries) of Refunding Capital Stock; and

(c) if immediately prior to the retirement of the Retired Capital Stock, the declaration and payment of dividends thereon was permitted under clause (6) of this paragraph of Section 7.05 and has not been made as of such time (the "Unpaid Amount"), the declaration and payment of dividends on the Refunding Capital Stock (other than Refunding Capital Stock the proceeds of which were used to redeem, repurchase, retire or otherwise acquire any Equity Interests of the Parent Borrower or any direct or indirect parent of the Parent Borrower) in an aggregate amount no greater than the Unpaid Amount (with the payment of such Unpaid Amount being treated as a payment under the applicable provision);

(3) the prepayment, redemption, defeasance, repurchase or other acquisition or retirement of Junior Financing of any Borrower or any Subsidiary Guarantor made by exchange for, or out of the proceeds of the Incurrence of, Refinancing Indebtedness thereof;

(4) the payment of Initial Public Company Costs;

(5) the purchase, retirement, redemption or other acquisition (or Restricted Payments to the Parent Borrower or any direct or indirect parent of the Parent Borrower to finance any such purchase, retirement, redemption or other acquisition) for value of Equity Interests (including related stock appreciation rights or similar securities) of the Parent Borrower or any direct or indirect parent of the Parent Borrower held directly or indirectly by any future, present or former employee, officer, director, manager, consultant or independent contractor of the Parent Borrower or any direct or indirect parent of the Parent Borrower or any Subsidiary of the Parent Borrower or their estates, heirs, family members, spouses or former spouses or permitted transferees (including for all purposes of this clause (5), Equity Interests held by any entity whose Equity Interests are held by any such future, present or former employee, officer, director, manager, consultant or independent contractor or their estates, heirs, family members, spouses or former spouses or permitted transferees) pursuant to any management equity plan or stock option plan or any other management or employee benefit plan or other agreement or arrangement or any stock subscription or shareholder or similar agreement; provided, however, that the aggregate amounts paid under this clause (5) shall not exceed (x) $6,750,000 in any calendar year or (y) subsequent to the consummation of an underwritten public equity offering of common stock of the Parent Borrower or any direct or indirect parent of the Parent Borrower, $13,500,000 in any calendar year (with unused amounts in any calendar year being permitted to be carried over for the next two succeeding calendar years); provided, further, however, that such amount in any calendar year may be increased by an amount not to exceed:

(a) the cash proceeds received by a Borrower from the issuance or sale of Equity Interests (other than Disqualified Stock) of such Borrower or any direct or indirect parent of the such Borrower (to the extent contributed to such Borrower), in each case, to any future, present or former employees, officers, directors, managers, consultants or independent contractors of the Borrowers or their Restricted Subsidiaries or any direct or indirect parent of the Borrowers that occurs after the Closing Date; provided that the amount of such cash proceeds utilized for any such repurchase, retirement, other acquisition or dividend will not increase the amount available for Restricted Payments under clause (c) of the immediately preceding paragraph; *plus*

(b) the cash proceeds of key man life insurance policies received by the Borrowers or their Restricted Subsidiaries or any direct or indirect parent of the Borrowers (to the extent contributed to such Borrower) after the Closing Date; *plus*

(c) the amount of any cash bonuses otherwise payable to employees, officers, directors, managers, consultants or independent contractors of the Borrowers or their Restricted Subsidiaries or any direct or indirect parent of the Borrowers that are foregone in return for the receipt of Equity Interests; *less*

(d) the amount of cash proceeds described in clause (a), (b) or (c) of this clause (5) previously used to make Restricted Payments pursuant to this clause (5) (provided that the Parent Borrower may elect to apply all or any portion of the aggregate increase contemplated by clauses (a), (b) and (c) above in any calendar year);

provided, further, cancellation of Indebtedness owing to any Borrower or any Restricted Subsidiary from any future, current or former officer, director, employee, manager, consultant or independent contractor (or any permitted transferees thereof) of the Borrowers or any of their Restricted Subsidiaries or any direct or indirect parent of the Borrowers, in connection with a repurchase of Equity Interests of the Borrowers or any direct or indirect parent of the Borrowers from such Persons will not be deemed to constitute a Restricted Payment for purposes of this Section 7.05 or any other provisions of this Agreement;

(6) the declaration and payment of dividends or distributions to holders (other than Holdings) of any class or series of Disqualified Stock of the Borrowers or any of their Restricted Subsidiaries and any class or series of Preferred Stock of any Restricted Subsidiaries issued or Incurred in accordance with the covenant described in Section 7.01;

(7) the declaration and payment of dividends or distributions to holders of any class or series of Designated Preferred Stock (other than Disqualified Stock) and the declaration and payment of dividends to Holdings, the Borrower or any direct or indirect parent of a Borrower, the proceeds of which will be used to fund the payment of dividends to holders of any class or series of Designated Preferred Stock (other than Disqualified Stock) of a Borrower or any direct or indirect parent of a Borrower issued after the Closing Date; provided, however, that (A) for the most recently ended four full fiscal quarters for which internal financial statements are available immediately preceding the date of issuance of such Designated Preferred Stock, the Cash Interest Coverage Ratio of the Parent Borrower and its Restricted Subsidiaries is 2.00 to 1.00 or greater and (B) the aggregate amount of dividends declared and paid pursuant to this clause (7) does not exceed the net cash proceeds actually received by the Borrowers from the sale (or the contribution of the net cash proceeds from the sale) of Designated Preferred Stock;

(8) any Restricted Payments made in connection with the consummation of the Transactions, including any dividends, payments or loans made to the Parent Borrower or any direct or indirect parent of the Parent Borrower to enable it to make any such payments or any future payments to employees of the Parent Borrower, any Restricted Subsidiary of the Parent Borrower or any direct or indirect parent of the Parent Borrower under agreements entered into in connection with the Transactions;

(9) the declaration and payment of dividends on the Parent Borrower's common stock (or the payment of dividends to any direct or indirect parent of the Parent Borrower to fund the payment by any direct or indirect parent of the Parent Borrower of dividends on such entity's Equity Interests) of an aggregate amount per annum of (x) up to 6.0% of the cash proceeds net of underwriting fees received by the Parent Borrower from any public offering of common stock or contributed to the Parent Borrower by any direct or indirect parent of the Parent Borrower from any public offering of common stock (the applicable issuing entity, the "IPO Entity"), other than public offerings with respect to the Parent Borrower's Capital Stock registered on Form S-4 or S-8 or successor form thereto and other than any public sale constituting Excluded Contributions*plus* (y) 6.0% of the market capitalization of the Parent Borrower or a direct or indirect parent of the Parent Borrower, as applicable, in each case that is the IPO Entity;

(10) Restricted Payments that are made with Excluded Contributions;

(11) other Restricted Payments in an aggregate amount taken together with all other Restricted Payments made pursuant to this clause (11) not to exceed the greater of (x) $33,000,000 and (y) 33% of Consolidated EBITDA (minus any such unused amounts that were used to incur Indebtedness pursuant to Section 7.01(aa));

(12) [reserved];

(13) for so long as, for U.S. federal or state income tax purposes, Holdings is treated as a partnership or a disregarded entity treated as wholly owned, directly or indirectly, by an entity treated as a partnership and the Parent Borrower is treated either as a partnership or an entity disregarded from Holdings (or the partnership from which Holdings is disregarded), the Parent Borrower and any Subsidiary of Holdings may pay or make quarterly distributions to Holdings, and Holdings may distribute to each of its direct or indirect members, an aggregate amount equal to the estimated Deemed Tax Due for the relevant taxable period (such distributions by the Parent Borrower and Holdings to their direct or indirect members, collectively, the "Tax Distributions"). For the purpose of this paragraph (13), "Deemed Tax Due" means the product of (x) the aggregate net taxable income of the Parent Borrower for such taxable period (without taking into account if applicable, for purposes of determining such net taxable income and net taxable loss any adjustment to the basis of the Parent Borrower's and Holdings' property pursuant to Section 734, 743, or 754 of the Code and any comparable provision of state and local income tax law), reduced by net taxable losses of the Parent Borrower from prior taxable periods beginning after the Closing Date to the extent that the losses are of a character (ordinary or capital) that would permit the losses to be deducted by the direct or indirect owners of the Parent Borrower against the current taxable income of the Parent Borrower allocable to such owners and have not previously been taken into account in determining Tax Distributions, and (y) the maximum combined U.S. federal (including pursuant to section 1411 of the Code), state, and local tax rates applicable to any individual or corporation (whichever is highest) resident in any jurisdiction within the United States taking into account any allowed deduction of state and local income taxes for U.S. federal income tax purposes and the character of the income in question; provided that (A) in addition to the foregoing Tax Distributions, following the end of each taxable year of the Parent Borrower and Holdings, the Parent Borrower shall be permitted to distribute to Holdings (and Holdings may distribute to its direct or indirect members) an amount equal to the excess (if any) of (I) the product of the rate described in clause (y) and the final net taxable income of the Parent Borrower (determined as described in clause (x) for such taxable year) (such product, the "Actual Tax Liability") over (II) the sum of the quarterly amounts distributed pursuant to this paragraph (13) with respect to such taxable year (and any amounts distributed or permitted to be distributed pursuant to this proviso shall also be Tax Distributions); (B) if the Tax Distributions for a taxable year exceed the Actual Tax Liability for such year, subsequent Tax Distributions shall be reduced dollar-for-dollar by the amount of such excess, and (C) the Tax Distributions made pursuant to this paragraph (13) in respect of any Deemed Tax Due attributable to the income of any Unrestricted Subsidiary of the Parent Borrower may be made only to the extent that such Unrestricted Subsidiary has made cash payments for such purpose to the Parent Borrower or any of its other Subsidiaries;

(14) the declaration and payment of dividends, other distributions or other amounts to, or the making of loans to Holdings or any other direct or indirect parent of the Parent Borrower, in the amount required for such entity to, if applicable:

(a) pay amounts equal to the amounts required for Holdings or any other direct or indirect parent of the Parent Borrower to pay fees and expenses (including Taxes), customary salary, bonus and other benefits payable to, and indemnities provided on behalf of, officers, employees, directors, managers, consultants or independent contractors of Holdings or any other direct or indirect parent of the Parent Borrower, if applicable, and general corporate operating (including, without limitation, expenses related to auditing and other accounting matters) and overhead costs and expenses of the Parent Borrower or any direct or indirect parent of the Parent Borrower, if applicable, in each case to the extent such fees, expenses, salaries, bonuses, benefits and indemnities are attributable to the ownership or operation of the Parent Borrower and its Subsidiaries;

(b) pay, if applicable, amounts equal to amounts required for Holdings or any direct or indirect parent of the Parent Borrower to pay interest and/or principal on Indebtedness the proceeds of which have been contributed to the Parent Borrower (other than as Excluded Equity) and that has been guaranteed by, and is otherwise considered Indebtedness of, the Parent Borrower or any Subsidiary Incurred in accordance with Section 7.01 (except to the extent any such payments have otherwise been made by any such guarantor);

(c) pay fees and expenses incurred by Holdings or any other direct or indirect parent of the Parent Borrower related to (i) the maintenance of such parent entity of its corporate or other entity existence and performance of its obligations under this Agreement, (ii) any unsuccessful equity or debt offering of such parent entity (or any debt or equity offering from which such parent does not receive any proceeds) and (iii) any equity or debt issuance, incurrence or offering, any disposition or acquisition or any investment transaction by the Parent Borrower or any of its Restricted Subsidiaries (or any acquisition of or investment in any business, assets or property that will be contributed to the Borrowers or any of its Restricted Subsidiaries as part of the same or a related transaction) permitted by this Agreement;

(d) make payments (i) to the Sponsor pursuant to or contemplated by the respective Management Agreements or (ii) to or on behalf of the Sponsor for any other monitoring, consulting, management, transaction, advisory, financing, underwriting or placement services or in respect of other investment banking activities, termination or similar fees, indemnities, reimbursements and reasonable and documented out-of-pocket fees and expenses of the Sponsor including, without limitation, in connection with acquisitions or divestitures, including in connection with the consummation of the Transactions, which payments are approved in respect of such activities by a majority of the Board of Directors of the Parent Borrower or any direct or indirect parent of the Parent Borrower in good faith;

(e) pay franchise and excise taxes, and other fees, taxes and expenses in connection with any ownership of the Parent Borrower or any of its Subsidiaries or required to maintain their organizational existences;

(f) make payments for the benefit of the Parent Borrower or any of its Restricted Subsidiaries to the extent such payments could have been made by the Parent Borrower or any of its Restricted Subsidiaries because such payments (x) would not otherwise be Restricted Payments and (y) would be permitted by Section 6.18; and

(g) make Restricted Payments to any direct or indirect parent of the Parent Borrower to finance, or to any direct or indirect parent of the Parent Borrower for the purpose of paying to any other direct or indirect parent of the Parent Borrower to finance, any Investment that, if consummated by the Parent Borrower or any of its Restricted Subsidiaries, would be a Permitted Investment; provided that (a) such Restricted Payment is made substantially concurrently with the closing of such Investment and (b) promptly following the closing thereof, such direct or indirect parent of the Borrowers causes (i) all property acquired (whether assets or Equity Interests) to be contributed to the Parent Borrower or any Restricted Subsidiary or (ii) the merger, consolidation or amalgamation (to the extent permitted by Section 7.03) of the Person formed or acquired into the Parent Borrower or any Restricted Subsidiary in order to consummate such acquisition or Investment, in each case, in accordance with the requirements of Section 6.12;

(15) (i) repurchases of Equity Interests deemed to occur upon exercise of stock options or warrants if such Equity Interests represent a portion of the exercise price of such options or warrants, (ii) payments made or expected to be made by the Parent Borrower or any Restricted Subsidiary in respect of withholding or similar taxes payable or expected to be payable by any future, present or former director, officer, employee, manager, consultant or independent contractor of the Parent Borrower or any direct or indirect parent of the Parent Borrower or any Subsidiary of the Parent Borrower (or their respective Affiliates, estates or immediate family members) in connection with the exercise of stock options or the grant, vesting or delivery of Equity Interests and (iii) loans or advances to officers, directors, employees, managers, consultants and independent contractors of the Parent Borrower or any direct or indirect parent of the Parent Borrower or any Subsidiary of the Parent Borrower in connection with such Person's purchase of Equity Interests of the Parent Borrower or any direct or indirect parent of the Parent Borrower; provided that no cash is actually advanced pursuant to this clause (iii) other than to pay taxes due in connection with such purchase, unless immediately repaid;

(16) purchases of receivables pursuant to a Receivables Repurchase Obligation in connection with a Qualified Receivables Factoring or Qualified Receivables Financing and the payment or distribution of Receivables Fees;

(17) payments or distributions to satisfy dissenters' rights, pursuant to or in connection with a consolidation, merger, amalgamation or transfer of assets that complies with the provisions of this Agreement;

(18) the distribution, as a dividend or otherwise, of shares of Capital Stock of, or Indebtedness owed to Holdings, the Borrower or a Restricted Subsidiary by, Unrestricted Subsidiaries (other than Unrestricted Subsidiaries the primary assets of which are cash and/or Cash Equivalents);

(19) the payment of cash in lieu of the issuance of fractional shares of Equity Interests in connection with any merger, consolidation, amalgamation or other business combination, or in connection with any dividend, distribution or split of or upon exercise, conversion or exchange of Equity Interests, warrants, options or other securities exercisable or convertible into, Equity Interests of the Parent Borrower or any direct or indirect parent of the Parent Borrower;

(20) [reserved];

(21) the making of payments (i) to the Sponsor pursuant to or contemplated by the Management Agreement or (ii) to or on behalf of the Sponsor for any other financial advisory, financing, underwriting or placement services or in respect of other investment banking activities, including, without limitation, in connection with acquisitions or divestitures, including in connection with the consummation of the Transactions, which payments are approved in respect of such activities by a majority of the Board of Directors of the Parent Borrower or any direct or indirect parent of the Parent Borrower in good faith;

(22) any Restricted Payment so long as immediately after giving effect to the making of such Restricted Payment on a Pro Forma Basis, the Parent Borrower and its Restricted Subsidiaries' Consolidated Total Net Leverage Ratio does not exceed 4.50 to 1.00;

(23) any payment, prepayment or repayment (or other repurchase, defeasance or acquisition) of Junior Financing so long as immediately after giving effect to the making of such payment on a Pro Forma Basis, the Parent Borrower and its Restricted Subsidiaries' Consolidated Total Net Leverage Ratio does not exceed 4.50 to 1.00; and

(24) any payment that is intended to prevent any Junior Financing from being treated as an "applicable high yield discount obligation" within the meaning of Section 163(i)(1) of the Code;

provided, however, that at the time of, and after giving effect to, any Restricted Payment permitted under clause (11), (22) and (23), no Event of Default shall have occurred and be continuing or would occur as a consequence thereof. For purposes of clauses (13) and (14) above, taxes shall include all interest and penalties with respect thereto and all additions thereto.

The Parent Borrower will not, and will not permit any of its Subsidiaries to, amend, modify or change any term or condition of any Junior Financing Document equal to or greater than the Threshold Amount in any manner that is, taken as a whole, materially adverse to the interests of the Administrative Agent or the Lenders.

The Borrowers will not permit any Restricted Subsidiary to become an Unrestricted Subsidiary except pursuant to the definition of "Unrestricted Subsidiary." For purposes of designating any Restricted Subsidiary as an Unrestricted Subsidiary, all outstanding Investments by the Parent Borrower and its Restricted Subsidiaries (except to the extent repaid) in the Subsidiary so designated will be deemed to be Restricted Payments or Permitted Investments in an amount determined as set forth in the last sentence of the definition of "Investments." Such designation will only be permitted if a Restricted Payment or Permitted Investment in such amount would be permitted at such time and if such Subsidiary otherwise meets the definition of an Unrestricted Subsidiary. Unrestricted Subsidiaries will not be subject to any of the restrictive covenants set forth in this Agreement.

For purposes of this Section 7.05, if any Restricted Payment (or a portion thereof) would be permitted at any time, whether at the time of declaration or payment, purchase, redemption, defeasance or other acquisition or retirement, or at the time of the making thereof, or subsequently at a later time, pursuant to one or more provisions described above and/or one or more of the exceptions contained in the definition of "Permitted Investments", the Parent Borrower may divide, classify and/or reclassify such Restricted Payment (or a portion thereof) in any manner that complies with this Section 7.05 (provided that any capacity under any baskets, exemptions or incurrence tests under this Section 7.05 or its component definitions which is limited to Investment, Permitted Investment or Restricted Investment capacity by its terms may not be utilized for purposes of making Restricted Payments of the types described in clauses (1) through (3) of the first paragraph of this Section 7.05) and may later divide, classify and/or reclassify any such Restricted Payment so long as the Restricted Payment (as so divided, classified and/or reclassified) would be permitted to be made in reliance on the applicable exception as of the date of such reclassification, it being understood that if any reclassification to clause (22) or (23) would be permitted after delivery of the most recent financial statements pursuant to Section 6.01, then such reclassification shall be automatic.

Section 7.06 Burdensome Agreements.

Permit any of its Restricted Subsidiaries to create or otherwise cause or suffer to exist or become effective any consensual encumbrance or consensual restriction on the ability of any Restricted Subsidiary to:

(a) (i) pay dividends or make any other distributions to the Borrowers or any of their Restricted Subsidiaries on its Capital Stock; or (ii) pay any Indebtedness owed to the Borrowers or any of their Restricted Subsidiaries;

(b) make loans or advances to the Borrowers or any of their Restricted Subsidiaries;

(c) create, incur, assume or suffer to exist Liens on the Collateral of such Person for the benefit of the Lenders with respect to the Facilities and the Obligations or under the Loan Documents; or

(d) sell, lease or transfer any of its properties or assets to the Borrowers or any of their Restricted Subsidiaries.

However, the preceding restrictions will not apply to encumbrances or restrictions existing under or by reason of:

(1) contractual encumbrances or restrictions of the Borrowers or any of their Restricted Subsidiaries in effect on the Closing Date, including pursuant to this Agreement and the other Loan Documents, related Swap Contracts and Indebtedness permitted pursuant to Section 7.01(c);

(2) [reserved];

(3) applicable law or any applicable rule, regulation or order;

(4) any agreement or other instrument of a Person acquired by or merged, amalgamated or consolidated with or into any Borrower or any Restricted Subsidiary or an Unrestricted Subsidiary that is designated a Restricted Subsidiary that was in existence at the time of such acquisition (or at the time it merges with or into any Borrower or any Restricted Subsidiary or assumed in connection with the acquisition of assets from such Person (but, in each case, not created in contemplation thereof)), which encumbrance or restriction is not applicable to any Person, or the properties or assets of any Person, other than the Person, or the property or assets of the Person, so acquired or designated; provided that in connection with a merger, amalgamation or consolidation under this clause (4), if a Person other than such Borrower or such Restricted Subsidiary is the successor company with respect to such merger, amalgamation or consolidation, any agreement or instrument of such Person or any Subsidiary of such Person, shall be deemed acquired or assumed, as the case may be, by such Borrower or such Restricted Subsidiary, as the case may be, at the time of such merger, amalgamation or consolidation;

(5) customary encumbrances or restrictions contained in contracts or agreements for the sale of assets applicable to such assets pending consummation of such sale, including customary restrictions with respect to a Subsidiary imposed pursuant to an agreement entered into for the sale or disposition of Capital Stock or assets of such Subsidiary;

(6) restrictions on cash or other deposits or net worth imposed by customers under contracts entered into in the ordinary course of business;

(7) customary provisions in operating or other similar agreements, asset sale agreements and stock sale agreements entered into in connection with the entering into of such transaction, which limitation is applicable only to the assets that are the subject of those agreements;

(8) purchase money obligations for property acquired and Capitalized Lease Obligations, to the extent such obligations impose restrictions of the nature discussed in clauses (c) or (d) in the first paragraph of this Section 7.06 on the property so acquired;

(9) customary provisions contained in leases, sub-leases, licenses, sublicenses, contracts and other similar agreements entered into in the ordinary course of business to the extent such obligations impose restrictions of the type described in clauses (c) or (d) in the first paragraph of this Section 7.06 on the property subject to such lease;

(10) any encumbrance or restriction effected in connection with a Qualified Receivables Factoring or Qualified Receivables Financing that, in the good faith determination of the Borrower, are necessary or advisable to effect such Qualified Receivables Factoring or Qualified Receivables Financing, as applicable;

(11) any encumbrance or restriction contained in other Indebtedness, Disqualified Stock or Preferred Stock of any Borrower or any Restricted Subsidiary that is incurred subsequent to the Closing Date pursuant to Section 7.01, provided that (i) such encumbrances and restrictions contained in any agreement or instrument will not materially affect the Borrowers' ability to make anticipated principal or interest payments under this Agreement (as determined by the Parent Borrower in good faith) or (ii) such encumbrances and restrictions contained in any agreement or instrument taken as a whole are not materially less favorable to the Lenders than the encumbrances and restrictions contained in this Agreement (as determined by the Parent Borrower in good faith);

(12) any encumbrance or restriction contained in secured Indebtedness otherwise permitted to be incurred pursuant to Sections 7.01 and 7.02 to the extent limiting the right of the debtor to dispose of the assets securing such Indebtedness;

(13) any encumbrance or restriction arising or agreed to in the ordinary course of business, not relating to any Indebtedness, and that do not, individually or in the aggregate, (x) detract from the value of the property or assets of the Borrowers or any Restricted Subsidiary in any manner material to the Borrowers or any Restricted Subsidiary or (y) materially affect the Borrowers' ability to make future principal or interest payments under this Agreement, in each case, as determined by the Parent Borrower in good faith;

(14) customary provisions in joint venture agreements or arrangements and other similar agreements or arrangements relating solely to the applicable joint venture; and

(15) any encumbrances or restrictions of the type referred to in Section 7.06(a), (b), (c) and (d) imposed by any amendments, modifications, restatements, renewals, increases, supplements, refundings, replacements or refinancings of the contracts, instruments or obligations referred to in clauses (1) through (14) above; provided that such encumbrances and restrictions contained in any such amendment, modification, restatement, renewal, increase, supplement, refunding, replacement or refinancing are, in the good faith judgment of the Parent Borrower, not materially more restrictive, taken as a whole, than the encumbrances and restrictions prior to such amendment, modification, restatement, renewal, increase, supplement, refunding, replacement or refinancing.

For purposes of determining compliance with this Section 7.06, (i) the priority of any Preferred Stock in receiving dividends or liquidating distributions prior to dividends or liquidating distributions being paid on common stock shall not be deemed a restriction on the ability to make distributions on Capital Stock and (ii) the subordination of loans or advances made to a Borrower or a Restricted Subsidiary to other Indebtedness Incurred by such Borrower or any such Restricted Subsidiary shall not be deemed a restriction on the ability to make loans or advances.

Section 7.07 Accounting Changes. Make any change in fiscal year; provided, however, that the Parent Borrower or Holdings may, upon written notice to the Administrative Agent, change its fiscal year to any other fiscal year reasonably acceptable to the Administrative Agent, in which case, the Parent Borrower and the Administrative Agent will, and are hereby authorized by the Lenders to, make any amendments to this Agreement that are necessary, in the judgment of the Administrative Agent and the Parent Borrower or Holdings, as applicable, to reflect such change in fiscal year.

Section 7.08 Financial Covenant. As of the end of each fiscal quarter of the Parent Borrower (commencing with the first full fiscal quarter ending after the Closing Date) and so long as the aggregate amount of L/C Obligations and Revolving Credit Loans outstanding as of the end of such fiscal quarter (excluding (i) Cash Collateralized Letters of Credit, (ii) L/C Obligations in an aggregate amount not in excess of $5,000,000 at any time outstanding and (iii) for the first four full fiscal quarters ending after the Closing Date, Borrowings of Revolving Credit Loans incurred on the Closing Date) exceeds 35.0% of the aggregate amount of all Revolving Credit Commitments in effect as of such date, permit the Consolidated First Lien Net Leverage Ratio as of the end of such fiscal quarter of the Parent Borrower to be greater than 8.00 to 1.00 (the "Financial Covenant").

Section 7.09 Holding Company. Holdings shall not conduct, transact or otherwise engage in any material business or operations; provided, that the following shall be permitted in any event: (i) its ownership of the Capital Stock of the Parent Borrower and the Subsidiaries and any Subsidiary of Holdings (that is not the Parent Borrower or a Subsidiary of the Parent Borrower) which is formed solely for purposes of acting as a co-obligor with respect to any Qualified Holding Company Indebtedness and which does not conduct, transact or otherwise engage in any material business or operation, and, in each case, activities incidental thereto; (ii) the entry into, and the performance of its obligations with respect to the Loan Documents (including any Specified Refinancing Debt or any New Term Facility), any Refinancing Notes, any New Incremental Notes, any Junior Financing Document, any Ratio Debt documentation, any documentation relating to any Permitted Refinancing of the foregoing or documentation relating to the Indebtedness otherwise permitted by the last sentence in this Section 7.09 and the Guarantees permitted by clause (v) below; (iii) the consummation of the Transactions; (iv) the performing of activities (including, without limitation, cash management activities) and the entry into documentation with respect thereto, in each case, permitted by this Agreement for Holdings to enter into and perform; (v) the payment of dividends and distributions (and other activities in lieu thereof permitted by this Agreement), the making of contributions to the capital of its Subsidiaries and Guarantees of Indebtedness permitted to be incurred hereunder by the Borrowers or any of the Restricted Subsidiaries and the Guarantees of other obligations not constituting Indebtedness; (vi) the maintenance of its legal existence (including the ability to incur fees, costs and expenses relating to such maintenance and performance of activities relating to its officers, directors, managers and employees and those of its Subsidiaries); (vii) the performing of activities in preparation for and consummating any public offering of its common stock or any other issuance or sale of its Capital Stock (other than Disqualified Stock) including converting into another type of legal entity; (viii) the participation in tax, accounting and other administrative matters as a member of the consolidated group of Holdings and the Parent Borrower, including compliance with applicable Laws and legal, tax and accounting matters related thereto and activities relating to its officers, directors, managers and employees; (ix) the holding of any cash and Cash Equivalents (but not operating any property); (x) the entry into and performance of its obligations with respect to contracts and other arrangements, including the providing of indemnification to officers, managers, directors and employees and (xi) any activities incidental to the foregoing. Holdings shall not create, incur, assume or suffer to exist any Lien on any Capital Stock of the Parent Borrower or any Subsidiary (other than Liens pursuant to any Loan Document, non-consensual Liens arising solely by operation of Law and Liens pursuant to documentation relating to other secured Indebtedness permitted to be incurred and secured hereunder and any Permitted Liens) and shall not incur any Indebtedness (other than in respect of Disqualified Stock, Qualified Holding Company Indebtedness or Guarantees permitted above and liabilities imposed by Law, including Tax liabilities).

Section 8.01 Events of Default. Any of the following shall constitute an "Event of Default":

(a) Non-Payment. The Parent Borrower or any other Loan Party fails to pay (i) when due and as required to be paid herein, any amount of principal of any Loan or L/C Disbursement, or (ii) within five Business Days after the same becomes due and payable, any interest on any Loan or on any L/C Obligation, or (iii) within ten Business Days after the same becomes due and payable, any fee due hereunder, or any other amount payable hereunder or with respect to any other Loan Document; provided that such grace period shall be tolled until delivery of a revised invoice if such failure is due to the payment by the Borrowers of an inaccurate invoice provided by the Administrative Agent or, in the case of amounts payable directly to any Lender, such Lender; or

(b) Specific Covenants. The Parent Borrower or any other Loan Party fails to perform or observe any term, covenant or agreement contained in any of Sections 6.03(a), 6.05(a) (solely with respect to any Borrower), 6.11 or in any Section of Article VII (subject to, in the case of the Financial Covenant, the cure rights contained in Section 8.03 and the proviso at the end of this clause (b)), or Holdings fails to perform or observe any term, covenant or agreement contained in Section 7.09; provided, that a Default by the Parent Borrower under Section 7.08 (a "Financial Covenant Event of Default") shall not constitute an Event of Default with respect to the Term Facilities, any New Term Facility or any Specified Refinancing Debt (unless refinancing the Revolving Credit Facility) unless and until the Required Revolving Lenders shall have terminated their Revolving Credit Commitments and declared all amounts outstanding under the Revolving Credit Facility to be due and payable; or

(c) Other Defaults. Any Loan Party fails to perform or observe any covenant or agreement (other than those specified in Section 8.01(a) or (b) above) contained in any Loan Document on its part to be performed or observed and such failure continues for 30 days after notice thereof by the Administrative Agent to the Parent Borrower; provided that any failure to observe or perform any covenant, condition or agreement contained in Section 5.18 that results in the Collateral Agent ceasing to have a perfected first priority security interest in the Collateral to the extent that any such loss of perfection or priority results from the failure of the Collateral Agent to maintain control of Collateral or possession of Collateral actually delivered to it and pledged under the Collateral Documents or to file Uniform Commercial Code amendments relating to a Loan Party's change of name or jurisdiction of formation (solely to the extent that the Parent Borrower provides the Collateral Agent written notice thereof in accordance with the Security Agreement, and the Collateral Agent and the Parent Borrower have agreed that the Collateral Agent will be responsible for filing such amendments) or continuation statements, and except as to Collateral consisting of real property to the extent that such losses are covered by a lender's title insurance policy and such insurer has not denied coverage shall not constitute a Default or Event of Default for purposes of this Section 8.01(c); or

(d) Representations and Warranties. Any representation, warranty, certification or statement of fact made or deemed made by or on behalf of the Parent Borrower or any other Loan Party herein, in any other Loan Document, or in any document required to be delivered in connection herewith or therewith shall be incorrect or misleading in any material respect (or in any respect if any such representation or warranty is already qualified by materiality) when made or deemed made and, to the extent capable of being cured, such incorrect representation, warranty, certification or statement of fact shall remain incorrect for a period of thirty (30) days; or

(e) Cross-Default. Any Loan Party or any Restricted Subsidiary (A) fails to make any payment beyond the applicable grace period with respect thereto, if any (whether by scheduled maturity, required prepayment, acceleration, demand, or otherwise) in respect of any Indebtedness (other than Indebtedness hereunder and intercompany Indebtedness) having an aggregate outstanding principal amount equal to or greater than the Threshold Amount or (B) fails to observe or perform any other agreement or condition relating to any such Indebtedness, or any other event occurs, the effect of which default or other event 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 or beneficiary or beneficiaries) after the expiration of any applicable grace or cure period therefor

to cause, with the giving of notice if required, such Indebtedness to become due or to be repurchased, prepaid, defeased or redeemed (automatically or otherwise), or an offer to repurchase, prepay, defease or redeem such Indebtedness to be made, in each case, prior to its stated maturity; provided that this clause (e)(B) shall not apply to (x) secured Indebtedness that becomes due as a result of the sale or transfer or other Disposition (including a Casualty Event) of the property or assets securing such Indebtedness permitted hereunder and under the documents providing for such Indebtedness and such Indebtedness is repaid when required under the documents providing for such Indebtedness, (y) events of default, termination events or any other similar event under the documents governing Swap Contracts for so long as such event of default, termination event or other similar event does not result in the occurrence of an early termination date or any acceleration or prepayment of any amounts or other Indebtedness payable thereunder or (z) Indebtedness that upon the happening of any such default or event automatically converts into Equity Interests (other than Disqualified Stock or, in the case of a Restricted Subsidiary, Disqualified Stock or Preferred Stock) in accordance with its terms; provided further, that such failure is unremedied and is not validly waived by the holders of such Indebtedness in accordance with the terms of the documents governing such Indebtedness prior to any termination of the Revolving Credit Commitments or acceleration of the Loans pursuant to Section 8.02; or

(f) Insolvency Proceedings, Etc. Any Loan Party or any Restricted Subsidiary (other than an Immaterial Subsidiary) institutes or consents to the institution of any proceeding under any Debtor Relief Law, a winding-up, an administration, a dissolution, or a composition or makes an assignment for the benefit of creditors or any other action is commenced (by way of voluntary arrangement, scheme of arrangement or otherwise); or appoints, applies for or consents to the appointment of any receiver, administrator, administrative receiver, trustee, custodian, conservator, liquidator, rehabilitator, judicial manager, provisional liquidator, administrator, receiver and manager, controller, monitor or similar officer for it or for all or any material part of its property; or any receiver, trustee, custodian, conservator, liquidator, rehabilitator, judicial manager, provisional liquidator, administrator, administrative receiver, receiver and manager, controller, monitor or similar officer is appointed without the application or consent of such Person and the appointment continues undischarged or unstayed for 60 days; or any proceeding under any Debtor Relief Law relating to any such Person or to all or substantially all of its property is instituted without the consent of such Person and continues undismissed or unstayed for 60 days, or an order for relief is entered in any such proceeding; or

(g) Inability to Pay Debts; Attachment. (i) Any Loan Party or any Restricted Subsidiary (other than any Immaterial Subsidiary) admits in writing its inability or fails generally to pay its debts as they become due or suspends making payments or enters into a moratorium or standstill arrangement in relation to its Indebtedness or is taken to have failed to comply with a statutory demand (or otherwise be presumed to be insolvent by applicable Law) or (ii) any writ or warrant of attachment or execution or similar process is issued, commenced or levied against all or substantially all of the property of any such Person and is not released, vacated or fully bonded within 60 days after its issue, commencement or levy, or any analogous procedure or step is taken in any jurisdiction; or

(h) Judgments. There is entered against any Loan Party or any Restricted Subsidiary a final judgment or order for the payment of money in an aggregate amount (as to all such judgments and orders) equal to or greater than the Threshold Amount (to the extent not paid and not covered by (i) independent third-party insurance as to which the insurer has been notified of such judgment or order and does not deny coverage or (ii) an enforceable indemnity to the extent that such Loan Party or Restricted Subsidiary shall have made a claim for indemnification and the applicable indemnifying party shall not have disputed such claim) and there is a period of 60 consecutive days during which a stay of enforcement of such judgment, by reason of a pending appeal or otherwise, is not in effect; or

(i) ERISA. (i) One or more ERISA Events occur or there is or arises an Unfunded Pension Liability (taking into account only Plans with positive Unfunded Pension Liability) which ERISA Event or Events or Unfunded Pension Liability or Unfunded Pension Liabilities results or could reasonably be expected to result in liability of any Loan Party in an aggregate amount which would reasonably be expected to result in a Material Adverse Effect, (ii) any Loan Party or any ERISA Affiliate fails to pay when due, after the expiration of any applicable grace period, any installment payment with respect to its withdrawal liability under Section 4201 of ERISA which has resulted or could reasonably be expected to result in liability of any

Loan Party in an aggregate amount which would reasonably be expected to result in a Material Adverse Effect or (iii) with respect to a Foreign Plan, a termination, withdrawal, imposition of a Lien or noncompliance with applicable Law or plan terms that would reasonably be expected to result in a Material Adverse Effect; or

(j) Invalidity of Certain Loan Documents. Any material provision of any Collateral Document, any Guaranty, the Intercompany Subordination Agreement and/or any intercreditor agreement required to be entered into pursuant to the terms of this Agreement (in each case, subject to the Perfection Exceptions), at any time after its execution and delivery and for any reason other than as expressly permitted hereunder or thereunder (including as a result of a transaction permitted under Section 7.03 or Section 7.04) or terminating the Aggregate Commitments and satisfaction in full of all the Obligations (other than contingent indemnification obligations as to which no claim has been asserted and obligations and liabilities under Secured Cash Management Agreements and Secured Hedge Agreements) ceases to be in full force and effect (except that any such failure to be in full force and effect with respect to the documents referred to in clause (vii) of the definition of "Loan Documents" shall constitute an Event of Default only if the Parent Borrower receives notice thereof and the Parent Borrower fails to remedy the relevant failure in all material respects within 15 days of receiving said notice); or any Loan Party contests in writing the validity or enforceability of any provision of this Agreement, any Collateral Document, any Guaranty, the Intercompany Subordination Agreement and/or any intercreditor agreement required to be entered into pursuant to the terms of this Agreement; or any Loan Party denies in writing that it has any or further liability or obligation under any Loan Document (other than as a result of repayment in full of the Obligations (other than contingent indemnification obligations as to which no claim has been asserted and obligations and liabilities under Secured Cash Management Agreements and Secured Hedge Agreements) and termination of the Aggregate Commitments), or purports in writing to revoke or rescind any Loan Document or the perfected Liens created thereby; or

(k) Change of Control. There occurs any Change of Control.

Notwithstanding any other provisions herein or in any other Loan Document to the contrary, no dollar-denominated basket under Article VII shall be treated as having been breached if the relevant breach would not have occurred but for any fluctuation in exchange rates, and no action taken and reported to the Administrative Agent and the Lenders or otherwise publicly available shall provide the basis for any Event of Default more than two (2) years after the date on which such action was reported to the Administrative Agent and the Lenders; *provided* that such limitation shall not apply to the extent the Administrative Agent has commenced any remedial action or has provided notice to the Parent Borrower that it reserved its rights relating to such Event of Default.

Section 8.02 Remedies Upon Event of Default. If any Event of Default occurs and is continuing (including any Event of Default arising by virtue of the termination and declaration contemplated by the proviso to Section 8.01(b)), the Administrative Agent shall, at the request of, or may, with the consent of, the Required Lenders (and, if a Financial Covenant Event of Default occurs and is continuing, the Administrative Agent shall, at the request of, or may, with the consent of, the Required Revolving Lenders only, and in such case, without limiting the proviso to Section 8.01(b), only with respect to the Revolving Credit Facility and any Letters of Credit, L/C Credit Extensions and L/C Obligations), take any or all of the following actions:

(a) declare the commitment of each Lender to make Loans and any obligation of the L/C Issuers to make L/C Credit Extensions to be terminated, whereupon such commitments and obligation shall be terminated;

(b) declare the unpaid principal amount of all outstanding Loans, all interest accrued and unpaid thereon, and all other amounts owing or payable hereunder or under any other Loan Document to be immediately due and payable, without presentment, demand, protest or other notice of any kind, all of which are hereby expressly waived by the Borrowers;

(c) require that the Borrowers Cash Collateralize the L/C Obligations (in an amount equal to the then Outstanding Amount thereof); and

(d) exercise on behalf of itself, the L/C Issuers and the Lenders all rights and remedies available to it, the L/C Issuers and the Lenders under the Loan Documents, under any document evidencing Indebtedness in respect of which the Facilities have been designated as "Designated Senior Debt" (or any comparable term) and/or under applicable Law;

provided, however, that upon the occurrence of an actual or deemed entry of an order for relief with respect to the Borrowers under any Debtor Relief Law, the obligation of each Lender to make Loans and any obligation of the L/C Issuers to make L/C Credit Extensions shall automatically terminate, the unpaid principal amount of all outstanding Loans and all interest and other amounts as aforesaid shall automatically become due and payable, and the obligation of the Borrowers to Cash Collateralize the L/C Obligations as aforesaid shall automatically become effective, in each case without further act of the Administrative Agent or any Lender.

Notwithstanding anything herein to the contrary, any notice of Default, Event of Default or acceleration provided to the Borrowers by the Administrative Agent on behalf of one or more Lenders that have expressly requested that such notice be given to the Borrowers must be accompanied by a written Net Short Representation from any such Lender (other than an Unrestricted Lender) delivered to the Borrowers (with a copy to the Administrative Agent); *provided* that (A) in the absence of any such written Net Short Representation, each such Lender shall be deemed to have represented and warranted to the Borrowers and the Administrative Agent that it is not a Net Short Lender (it being understood and agreed that the Borrowers and the Administrative Agent shall be entitled to rely conclusively on each such representation and deemed representation) and (B) no Net Short Representation shall be required to be delivered during the pendency of a Default or Event of Default caused by a Bankruptcy Event.

Section 8.03 Right to Cure.

(a) Notwithstanding anything to the contrary contained in Section 8.01 or 8.02, in the event that the Parent Borrower fails to comply with the requirements of the Financial Covenant at any time when the Parent Borrower is required to comply with the Financial Covenant pursuant to the terms thereof, then (A) from the end of the most recently ended fiscal quarter of the Parent Borrower until the expiration of the fifteenth Business Day subsequent to the date the relevant Compliance Certificate is required to be delivered pursuant to Section 6.02(b) (the last day of such period being the "Anticipated Cure Deadline"), Holdings shall have the right (the "Cure Right") to (A) issue common Capital Stock (or preferred equity reasonably acceptable to the Administrative Agent) for cash and contribute the proceeds therefrom in the form of common Capital Stock or in another form reasonably acceptable to the Administrative Agent to the Parent Borrower, (B) obtain a contribution to its equity (which shall be in the form of common equity or otherwise in a form reasonably acceptable to the Administrative Agent) or (C) Incur Subordinated Indebtedness (which shall be in a form reasonably acceptable to the Administrative Agent) ("Cure Equity"), and upon the receipt by the Parent Borrower of such cash (the "Cure Amount"), pursuant to the exercise by the Parent Borrower of such Cure Right, the calculation of Consolidated EBITDA as used in the Financial Covenant shall be recalculated giving effect to the following pro forma adjustments:

(i) Consolidated EBITDA for such fiscal quarter (and for any subsequent period that includes such fiscal quarter) shall be increased, solely for the purpose of measuring the Financial Covenant and not for any other purpose under this Agreement (including but not limited to determining the availability or amount of any covenant baskets or carve-outs (including the determination of amounts available under Section 7.05) or determining the Applicable Commitment Fee or Applicable Rate, provided that, in determining the Applicable Commitment Fee or the Applicable Rate, effect shall be given to the relevant Cure Amount for purposes of clause (y) in the respective definitions thereof, such that no Event of Default shall be deemed to have occurred and be continuing), by an amount equal to the Cure Amount; provided that (1) the receipt by the Parent Borrower of the Cure Amount pursuant to the Cure Right shall be deemed to have no other effect whatsoever under this Agreement (including but not limited to determining the availability or amount of any covenant baskets or carve-outs or determining the Applicable Commitment Fee or Applicable Rate, provided that, in determining the Applicable Commitment Fee or the Applicable Rate, effect shall be given to the relevant Cure Amount for purposes of clause (y) in the respective definitions thereof, such that no Event of Default shall be deemed to have occurred and be continuing) and (2) no Cure Amount shall reduce Indebtedness on a Pro Forma Basis for the applicable period for purposes of calculating the Financial Covenant or calculating the Consolidated First Lien Net Leverage Ratio, the Consolidated Senior Secured Net Leverage Ratio or the Consolidated Total Net Leverage Ratio, nor shall any Cure Amount held by any Borrower Party qualify as "unrestricted cash or Cash Equivalents of the Borrower Parties" for the purposes of calculating any net obligations or liabilities under the terms of this Agreement; and

(ii) if, after giving effect to the foregoing recalculations, the Parent Borrower shall then be in compliance with the requirements of the Financial Covenant, the Parent Borrower shall be deemed to have satisfied the requirements of the Financial Covenant as of the relevant date of determination with the same effect as though there had been no failure to comply therewith at such date, and the applicable breach or default of the Financial Covenant that had occurred (and any other Default as a result thereof, including the failure to meet any condition requiring no Default or Event of Default based solely on the basis of any actual or purported Event of Default under the Financial Covenant) shall be deemed cured for the purposes of this Agreement; and

(iii) prior to the Anticipated Cure Deadline, no Default or Event of Default will be deemed to have occurred as a result of any failure to meet the Financial Covenant, and the Lenders (i) shall not be permitted to accelerate Loans held by them, to terminate the Revolving Credit Commitments held by them or to exercise remedies against the Collateral on the basis of a failure to comply with the requirements of the Financial Covenant, unless such failure is not cured pursuant to the exercise of the Cure Right on or prior to the Anticipated Cure Deadline and (ii) if there has been a failure to comply with the Financial Covenant for such period, shall not be obligated to make any Credit Extension under the Revolving Credit Facility until such Cure Amount has been received by the Parent Borrower.

(b) Notwithstanding anything herein to the contrary, (i) in each four consecutive fiscal-quarter period there shall be at least two fiscal quarters in respect of which the Cure Right is not exercised, (ii) there can be no more than five fiscal quarters in respect of which the Cure Right is exercised during the term of the Facilities and (iii) for purposes of this Section 8.03, the Cure Amount utilized shall be no greater than the minimum amount required to remedy the applicable failure to comply with the Financial Covenant.

Section 8.04 Application of Funds. After the exercise of remedies provided for in Section 8.02 (or after an actual or deemed entry of an order for relief with respect to the Borrowers under any Debtor Relief Law), any amounts received on account of the Obligations shall, subject to the provisions of Sections 2.16 and 2.17, be applied by the Administrative Agent in the following order:

(a) first, to payment of that portion of the Obligations constituting fees, indemnities, expenses and other amounts (including fees, disbursements and other charges of counsel payable under Section 10.04 and amounts payable under Article III and amounts owing in respect of (x) the preservation of Collateral or the Collateral Agent's security interest in the Collateral or (y) with respect to enforcing the rights of the Secured Parties under the Loan Documents) payable to the Administrative Agent and the Collateral Agent in their respective capacity as such;

(b) second, to payment in full of Unfunded Advances/Participations (the amounts so applied to be distributed between or among, as applicable, the Administrative Agent and the L/C Issuers pro rata in accordance with the amounts of Unfunded Advances/Participations owed to them on the date of any such distribution);

(c) third, to payment of that portion of the Obligations constituting fees, indemnities, expenses and other amounts (other than principal, interest and commitment fees and Letter of Credit fees) payable to the Lenders and the L/C Issuers (including fees, disbursements and other charges of counsel payable under Sections 10.04 and 10.05) arising under the Loan Documents and amounts payable under Article III, ratably among them in proportion to the respective amounts described in this clause (c) held by them;

(d) fourth, to payment of that portion of the Obligations constituting accrued and unpaid commitment fees, Letter of Credit fees and interest on the Loans, L/C Borrowings, Secured Cash Management Agreement or Secured Hedge Agreement ratably among the Lenders, the L/C Issuers, the Cash Management Banks and the Hedge Banks in proportion to the respective amounts described in this clause (d) held by them;

(e) fifth, (i) to payment of that portion of the Obligations constituting unpaid principal of the Loans, the L/C Borrowings and obligations of the Loan Parties then owing under Secured Hedge Agreements and the Secured Cash Management Agreements and (ii) to Cash Collateralize that portion of L/C Obligations comprising the aggregate undrawn amount of Letters of Credit to the extent not otherwise Cash Collateralized by the Borrowers pursuant to Sections 2.03 and 2.16, ratably among the Lenders, the L/C Issuers, the Hedge Banks party to such Secured Hedge Agreements and the Cash Management Banks party to such Secured Cash Management Agreements in proportion to the respective amounts described in this clause (e) held by them; provided that (x) any such amounts applied pursuant to the foregoing clause (ii) shall be paid to the Administrative Agent for the ratable account of the applicable L/C Issuers to Cash Collateralize such L/C Obligations, (y) subject to Sections 2.03(d) and 2.16, amounts used to Cash Collateralize the aggregate undrawn amount of Letters of Credit pursuant to this clause (e) shall be applied to satisfy drawings under such Letters of Credit as they occur and (z) upon the expiration of any Letter of Credit without any pending drawing, the *pro rata* share of Cash Collateral attributable to such expired Letter of Credit shall be applied by the Administrative Agent in accordance with the priority of payments set forth in this Section 8.04;

(f) sixth, to the payment of all other Obligations of the Loan Parties owing under or in respect of the Loan Documents that are then due and payable to the Administrative Agent and the other Secured Parties, ratably based upon the respective aggregate amounts of all such Obligations then owing to the Administrative Agent and the other Secured Parties; and

(g) last, after all of the Obligations have been paid in full (other than contingent indemnification obligations not yet due and owing), to the Borrowers or as otherwise required by Law;

provided that no amounts received from any Guarantor shall be applied to Excluded Swap Obligations of such Guarantor.

If any amount remains on deposit as Cash Collateral after all Letters of Credit have either been fully drawn or expired without any pending drawing, such remaining amount shall be applied to the other Obligations, if any, in accordance with the priority of payments set forth above. Notwithstanding the foregoing, Obligations arising under Secured Cash Management Agreements and Secured Hedge Agreements shall be excluded from the application of payments described above if the Administrative Agent has not received written notice thereof, together with such supporting documentation as the Administrative Agent may reasonably request, from the applicable Cash Management Bank or Hedge Bank, as the case may be. Each Cash Management Bank or Hedge Bank not a party to this Agreement that has given the notice contemplated by the preceding sentence shall, by such notice, be deemed to have acknowledged and accepted the appointment of the Administrative Agent pursuant to the terms of Article IX for itself and its Affiliates as if a "Lender" party hereto.

It is understood and agreed by each Loan Party and each Secured Party that the Administrative Agent and Collateral Agent shall have no liability for any determinations made by it in this Section 8.04, in each case except to the extent resulting from the gross negligence, bad faith or willful misconduct of the Administrative Agent or the Collateral Agent, as applicable (as determined by a court of competent jurisdiction in a final and non-appealable decision). Each Loan Party and each Secured Party also agrees that the Administrative Agent and the Collateral Agent may (but shall not be required to), at any time and in its sole discretion, and with no liability resulting therefrom, petition a court of competent jurisdiction regarding any application of Collateral in accordance with the requirements hereof, and the Administrative Agent and the Collateral Agent shall be entitled to wait for, and may conclusively rely on, any such determination.

ARTICLE IX.
Administrative Agent and Other Agents

Section 9.01 Appointment and Authorization of Agents.

(a) Each Lender and L/C Issuer hereby irrevocably appoints MS to act on its behalf as Administrative Agent hereunder and under the other Loan Documents (subject to the provisions in Section 9.09), and designates and authorizes the Administrative Agent to take such actions on its behalf under the provisions of this Agreement and each other Loan Document and to exercise such powers and perform such duties as are expressly delegated to the

Administrative Agent by the terms of this Agreement or any other Loan Document, together with such actions and powers as are reasonably incidental thereto. The Administrative Agent may perform any of its duties through its officers, directors, agents, employees, or affiliates. The provisions of this Article are solely for the benefit of the Administrative Agent and the Lenders, and no Loan Party shall have rights as a third party beneficiary of any of such provisions. Notwithstanding any provision to the contrary contained elsewhere herein or in any other Loan Document no Agent shall have any duties or responsibilities, except those expressly set forth herein, nor shall any Agent have or be deemed to have any fiduciary relationship with any Lender or participant, and no implied covenants, functions, responsibilities, duties, obligations or liabilities shall be read into this Agreement or any other Loan Document or otherwise exist against any Agent. Regardless of whether a Default has occurred and is continuing and without limiting the generality of the foregoing sentence, the use of the term "agent" herein and in the other Loan Documents with reference to any Agent is not intended to connote any fiduciary or other implied (or express) obligations arising under agency doctrine of any applicable Law. Instead, 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. Without limiting the foregoing, each Lender and each L/C Issuer hereby authorizes the Administrative Agent to execute and deliver, and to perform its obligations under, each of the Loan Documents to which the Administrative Agent is a party, and to exercise all rights, powers and remedies that the Administrative Agent may have under such Loan Documents.

(b) Each L/C Issuer shall act on behalf of the Lenders with respect to any Letters of Credit issued by it and the documents associated therewith, and such L/C Issuer shall have all of the benefits and immunities (i) provided to the Agents in this Article IX with respect to any acts taken or omissions suffered by such L/C Issuer in connection with Letters of Credit issued by it or proposed to be issued by it and the applications and agreements for letters of credit pertaining to such Letters of Credit as fully as if the term "Agent" as used in this Article IX and in the definition of "Agent-Related Person" included such L/C Issuer with respect to such acts or omissions, and (ii) as additionally provided herein with respect to such L/C Issuer.

(c) The Administrative Agent shall also act as the Collateral Agent under the Loan Documents, and each of the Lenders (including in its capacities as a Lender, L/C Issuer (if applicable) and a potential Cash Management Bank party to a Secured Cash Management Agreement and/or a potential Hedge Bank party to a Secured Hedge Agreement) hereby irrevocably appoints and authorizes the Administrative Agent to act as the agent of (and to hold any security interest, charge or other Lien created by the Collateral Documents for and on behalf of or in trust for) such Lender for purposes of acquiring, holding and enforcing any and all Liens on Collateral granted by any of the Loan Parties to secure any of the Secured Obligations, together with such powers and discretion as are reasonably incidental thereto. In this connection, the Administrative Agent as Collateral Agent (and any co-agents, sub-agents and attorneys-in-fact appointed by the Administrative Agent pursuant to Section 9.02 for purposes of holding or enforcing any Lien on the Collateral (or any portion thereof) granted under the Collateral Documents, or for exercising any rights and remedies thereunder at the direction of the Administrative Agent), shall be entitled to the benefits of all provisions of this Article IX (including Section 9.07, as though such co-agents, sub-agents and attorneys-in-fact were the Collateral Agent under the Loan Documents) and Section 10.04 as if set forth in full herein with respect thereto and all references to Administrative Agent in this Article IX shall, where applicable, be read as including a reference to the Collateral Agent. Without limiting the generality of the foregoing, the Lenders hereby expressly authorize the Administrative Agent as Collateral Agent to execute any and all documents (including releases, payoff letters and similar documents) with respect to the Collateral and the rights of the Secured Parties with respect thereto (including any intercreditor agreement), as contemplated by and in accordance with the provisions of this Agreement and the Collateral Documents and acknowledge and agree that any such action by any Agent shall bind the Lenders (including in its capacities as a Lender, L/C Issuer (if applicable) and a potential Cash Management Bank party to a Secured Cash Management Agreement and/or a potential Hedge Bank party to a Secured Hedge Agreement).

Section 9.02 Delegation of Duties. The Administrative Agent may execute any of its duties and exercise its rights and powers under this Agreement or any other Loan Document (including for purposes of holding or enforcing any Lien on the Collateral (or any portion thereof) granted under the Collateral Documents or of exercising any rights and remedies thereunder) by or through agents, employees or attorneys-in-fact and shall be entitled to advice of counsel and other consultants or experts concerning all matters pertaining to such duties. The Administrative Agent and any such sub agent may perform any and all of its duties and exercise its rights and powers by or through their respective Agent-Related Persons. The Administrative Agent shall not be responsible for the negligence or misconduct of any agent or attorney-in-fact that it selects in the absence of gross negligence or willful misconduct by

the Administrative Agent, as determined by a final non-appealable judgment by a court of competent jurisdiction. The exculpatory provisions of this Article IX shall apply to any such sub agent and to the Agent-Related Persons 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 Administrative Agent.

Section 9.03 Liability of Agents.

(a) No Agent-Related Person shall be (i) liable for any action taken or omitted to be taken by any of them under or in connection with this Agreement or any other Loan Document or the transactions contemplated hereby (except for its own gross negligence, bad faith or willful misconduct in connection with its duties expressly set forth herein, to the extent determined in a final, non-appealable judgment by a court of competent jurisdiction), (ii) liable for any action taken or not taken by it (A) with the consent or at the request of the Required Lenders (or such other number or percentage of the Lenders as shall be necessary, or as the Administrative Agent shall believe in good faith shall be necessary, under the circumstances as provided in Sections 10.01 and 8.02) or (B) in the absence of its own gross negligence or willful misconduct as determined by the final, non-appealable judgment of a court of competent jurisdiction, in connection with its duties expressly set forth herein, (iii) responsible in any manner to any Lender or participant for any recital, statement, representation or warranty made by any Loan Party or any officer thereof, contained herein or in any other Loan Document, or in any certificate, report, statement or other document referred to or provided for in, or received by the Administrative Agent under or in connection with, this Agreement or any other Loan Document, (iv) responsible for or have any duty to ascertain or inquire into the validity, effectiveness, genuineness, enforceability or sufficiency of this Agreement or any other Loan Document or any other agreement, instrument or document, or the creation, perfection or priority of any Lien, or security interest created or purported to be created under the Collateral Documents, or for any failure of any Loan Party or any other party to any Loan Document to perform its obligations hereunder, (v) responsible for or have any duty to ascertain or inquire into the value or the sufficiency of any Collateral or (vi) responsible for or have any duty to ascertain or inquire into the satisfaction of any condition set forth in Article IV or elsewhere herein, other than to confirm receipt of items expressly required to be delivered to the Administrative Agent. No Agent-Related Person shall be under any obligation to any Lender or participant to ascertain or to inquire as to the observance or performance of any of the agreements contained in, or conditions of, this Agreement or any other Loan Document, or to inspect the properties, books or records of any Loan Party or any Affiliate thereof. 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 relating to Disqualified Institutions, Affiliate Lenders or Net Short Lenders. 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, Affiliate Lender or a Net Short Lender or (y) have any liability with respect to or arising out of any assignment or participant of loans, or disclosure of confidential information, to, or the restriction on any exercise of rights or remedies of, any Disqualified Institution, Affiliate Lender or Net Short Lender.

(b) The Administrative Agent shall not have any duty to (i) take any discretionary action or exercise any discretionary powers, except discretionary rights and powers expressly contemplated hereby or by the other Loan Documents that such Agent is required to exercise as directed in writing by the Required Lenders (or such other number or percentage of the Lenders as shall be expressly provided for herein or in the other Loan Documents); provided that no Agent shall be required to take any action that, in its opinion or the opinion of its counsel, may expose such Agent to liability or that is contrary to any Loan Document or applicable Law; and (ii) to disclose, except as expressly set forth herein and in the other Loan Documents, and shall not be liable for the failure to disclose, any information relating to the Borrowers or any of their Affiliates that is communicated to or obtained by any Person serving as an Agent or any of its Affiliates in any capacity; provided, further, that that the Administrative Agent may seek clarification or direction from the Required Lenders prior to the exercise of any such instructed action and may refrain from acting until such clarification or direction has been provided. Except as expressly set forth in the Loan Documents, the Administrative Agent shall not have any duty to disclose, and shall not be liable for the failure to disclose, any information relating to Holdings, the Borrowers, any Subsidiary or any Affiliate of any of the foregoing that is communicated to or obtained by the Person serving as Administrative Agent or any of its Affiliates in any capacity. Nothing in this Agreement shall require the Administrative Agent to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder or in the exercise of any of its rights or powers if it shall have reasonable grounds for believing that repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it.

(c) Any assignor of a Loan or seller of a participation hereunder shall be entitled to rely conclusively on a representation of the assignee Lender or Participant in the relevant Assignment and Assumption or participation agreement, as applicable, that such assignee or purchaser is not a Disqualified Institution, an Affiliate Lender or a Net Short Lender. No Agent shall have any responsibility or liability for monitoring the list or identities of, or enforcing provisions relating to, Disqualified Institutions, Affiliate Lenders or Net Short Lenders.

Section 9.04 Reliance by Agents.

(a) Each Agent shall be entitled to rely, and shall be fully protected in relying, upon any writing, communication, signature, resolution, representation, notice, request, consent, certificate, instrument, affidavit, letter, telegram, facsimile, telex or telephone message, electronic mail message, Internet or intranet website posting or other distribution statement or other document or conversation reasonably believed by it to be genuine and correct and to have been signed, sent or made by the proper Person or Persons. Each Agent also may rely upon any statement made to it orally or by telephone and reasonably 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 that by its terms must be fulfilled to the satisfaction of a Lender, the Administrative Agent may presume that such condition is satisfactory to such Lender unless the Administrative Agent shall have received notice to the contrary from such Lender prior to the making of such Loan. Each Agent may consult with, and rely upon (and be fully protected in relying upon), advice and statements of legal counsel (including counsel to any Loan Party), independent accountants and other experts selected by such Agent. Each Agent shall be fully justified in failing or refusing to take any action under any Loan Document unless it shall first receive such advice or concurrence of the Required Lenders (or such greater number of Lenders as may be expressly required hereby in any instance) as it deems appropriate and, if it so requests, it shall first be indemnified to its satisfaction by the Lenders against any and all liability and expense which may be incurred by it by reason of taking or continuing to take any such action. Each Agent shall in all cases be fully protected in acting, or in refraining from acting, under this Agreement or any other Loan Document in accordance with a request or consent of the Required Lenders (or such greater number of Lenders as may be expressly required hereby in any instance) and such request and any action taken or failure to act pursuant thereto shall be binding upon all the Lenders.

(b) For purposes of determining compliance with the conditions specified in Sections 4.01 and 4.02, each Lender that has signed this Agreement shall be deemed to have consented to, approved or accepted or to be satisfied with, each document or other matter required thereunder to be consented to or approved by or acceptable or satisfactory to a Lender unless the Administrative Agent shall have received notice from such Lender prior to the proposed Closing Date, specifying its objection thereto.

Section 9.05 Notice of Default. The Administrative Agent shall not be deemed to have knowledge or notice of the occurrence of any Default, except with respect to defaults in the payment of principal, interest and fees required to be paid to the Administrative Agent for the account of the Lenders, unless the Administrative Agent shall have received written notice from a Lender or the Parent Borrower referring to this Agreement, describing such Default and stating that such notice is a "notice of default." The Administrative Agent will notify the Lenders of its receipt of any such notice. 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 any Loan Document, (ii) the contents of any certificate, report or other document delivered thereunder or in connection therewith, (iii) the performance or observance of any of the covenants, agreements or other terms or conditions set forth in any Loan Document or the occurrence of any Default, (iv) the sufficiency, validity, enforceability, effectiveness or genuineness of any Loan Document or any other agreement, instrument or document, (v) the satisfaction of any condition set forth in Article IV or elsewhere in any Loan Document, other than to confirm receipt of items expressly required to be delivered to the Administrative Agent or satisfaction of any condition that expressly refers to the matters described therein being acceptable or satisfactory to the Administrative Agent, (vi) the creation, perfection or priority of Liens on the Collateral or (vii) compliance by Affiliate Lenders with the terms hereof relating to Affiliate Lenders. The Administrative Agent shall take such action with respect to any Event of Default as may be directed by the Required Lenders or the Required Revolving Lenders, as applicable, in accordance with Article VIII; provided, however, that unless and until the Administrative Agent has received any such direction, the Administrative Agent may (but shall not be obligated to) take such action, or refrain from taking such action, with respect to such Event of Default as it shall deem advisable or in the best interest of the Lenders.

Without limiting the delegation of authority to the Administrative Agent set forth herein, the Required Lenders (or, where expressly indicated, the Required Revolving Lenders) shall direct the Administrative Agent with respect to the exercise of rights and remedies hereunder and under other Loan Documents, and the exercise of rights and remedies with respect to (i) the Term Loans and any securities or interests issued pursuant to this Agreement and (ii) any Collateral. Any such rights and remedies shall not be exercised other than through the Administrative Agent. Each Lender, whether or not a party hereto, will be deemed, by its acceptance of the benefits of the Collateral and of the Guarantees of the Secured Obligations, to have agreed to the foregoing provisions. Each Lender expressly and irrevocably agrees that it will not hinder or direct the Administrative Agent to take any action that will hinder the automatic release of any security interest, Lien or Guarantee provided for by this Section 9.11 (including, without limitation, in connection with any Disposition permitted pursuant to Section 7.04 and including, without limitation, any refusal to release liens, return possessory collateral, execute and/or file release documentation or take any other reasonably requested actions to documents or effectuate the release of Liens on Collateral, in each case, at the Borrowers' sole cost and expense) and expressly and irrevocably agrees that the Administrative Agent shall be authorized to, and shall, take any necessary action to release any such security interest, Lien or Guarantee to the extent authorized to do so by Section 9.11 without any obligation or requirement to notify or obtain consent from any Lender (and the Administrative Agent shall not condition any such actions on providing notice to, or obtaining consent from, the Lenders).

Section 9.06 Credit Decision; Disclosure of Information by Agents. Each Lender acknowledges that no Agent-Related Person has made any representation or warranty to it, and that no act by any Agent hereafter taken, including any consent to and acceptance of any assignment or review of the affairs of any Loan Party or any Affiliate thereof, shall be deemed to constitute any representation or warranty by any Agent-Related Person to any Lender as to any matter, including whether Agent-Related Persons have disclosed material information in their possession. Each Lender represents to each Agent that it has, independently and without reliance upon any Agent-Related Person and based on such documents and information as it has deemed appropriate, made its own appraisal of, and investigation into, the business, prospects, operations, property, financial and other condition and creditworthiness of the Loan Parties and their respective Subsidiaries, and all applicable bank or other regulatory Laws relating to the transactions contemplated hereby, and made its own decision to enter into this Agreement and to extend credit to the Borrowers and the other Loan Parties hereunder. Each Lender also represents that it will, independently and without reliance upon any Agent-Related Person and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit analysis, appraisals and decisions in taking or not taking action under this Agreement and the other Loan Documents, and to make such investigations as it deems necessary to inform itself as to the business, prospects, operations, property, financial and other condition and creditworthiness of the Borrowers and the other Loan Parties. Except for notices, reports and other documents expressly required to be furnished to the Lenders by any Agent herein, such Agent shall not have any duty or responsibility to provide any Lender 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 any Agent-Related Person.

Section 9.07 Indemnification of Agents. Whether or not the transactions contemplated hereby are consummated, each Lender shall, on a ratable basis based on such Lender's Pro Rata Share of all the Facilities, indemnify upon demand each Agent-Related Person (to the extent not reimbursed by or on behalf of any Loan Party and without limiting the obligation of any Loan Party to do so), and hold harmless each Agent-Related Person in each case from and against any and all Indemnified Liabilities incurred by such Agent-Related Person (including, for the avoidance of doubt, any such Agent-Related Person in its capacity as L/C Issuer); provided, however, that no Lender shall be liable for any Indemnified Liabilities incurred by an Agent-Related Person to the extent such Indemnified Liabilities are determined in a final, non-appealable judgment by a court of competent jurisdiction to have resulted from such Agent-Related Person's own gross negligence, bad faith or willful misconduct; provided, however, that no action taken in accordance with the directions of the Required Lenders (or such other number or percentage of the Lenders as shall be required by the Loan Documents) shall be deemed to constitute gross negligence, bad faith or willful misconduct for purposes of this Section 9.07; provided, further, that to the extent any L/C Issuer is entitled to indemnification under this Section 9.07 solely in its capacity and role as an L/C Issuer, only the Revolving Credit Lenders shall be required to indemnify such L/C Issuer under this Section 9.07 (which indemnity shall be provided by such Lenders based upon their respective Pro Rata Share of the Revolving Credit Facility). In the case of any investigation, litigation or proceeding giving rise to any Indemnified Liabilities, this Section 9.07 shall apply whether or not any such investigation, litigation or proceeding is brought by any Lender or any other Person. Without limiting

the foregoing, each Lender shall reimburse the Administrative Agent upon demand for its Pro Rata Share of any costs or out-of-pocket expenses (including the fees, disbursements and other charges of counsel) incurred by the Administrative Agent in connection with the preparation, execution, delivery, administration, modification, amendment or enforcement (whether through negotiations, legal proceedings or otherwise) of, or legal advice in respect of rights or responsibilities under, this Agreement, any other Loan Document, or any document contemplated by or referred to herein, to the extent that the Administrative Agent is not reimbursed for such expenses by or on behalf of the Borrower; provided that such reimbursement by the Lenders shall not affect the Borrower's continuing reimbursement obligations with respect thereto; provided further, that failure of any Lender to indemnify or reimburse the Administrative Agent shall not relieve any other Lender of its obligation in respect thereof. The undertaking in this Section 9.07 shall survive termination of the Aggregate Commitments, the payment of all other Obligations and the resignation or removal of the Administrative Agent.

Section 9.08 Agents in their Individual Capacities. Any Agent and its Affiliates may make loans to, issue letters of credit for the account of, accept deposits from, acquire Capital Stock in and generally engage in any kind of banking, trust, financial advisory, underwriting or other business with each of the Loan Parties and their respective Affiliates as though it were not an Agent or an L/C Issuer hereunder and without notice to or consent of the Lenders. The Lenders acknowledge that, pursuant to such activities, an Agent or its Affiliates may receive information regarding any Loan Party or its Affiliates (including information that may be subject to confidentiality obligations in favor of such Loan Party or such Affiliate) and acknowledge that such Agent shall be under no obligation to provide such information to them. With respect to its Loans, such Agent shall have the same rights and powers under this Agreement as any other Lender and may exercise such rights and powers as though it were not an Agent or an L/C Issuer, and the terms "Lender" and "Lenders" include such Agent in its individual capacity (unless otherwise expressly indicated or unless the context otherwise requires).

Section 9.09 Successor Agents.

(a) The Administrative Agent or Collateral Agent may resign as the Administrative Agent or Collateral Agent, as applicable, upon 30 days' written notice to the Parent Borrower and the Lenders. Upon receipt of any such notice of resignation, the Required Lenders shall appoint from among the Lenders a successor agent for the Lenders, which successor agent shall be consented to by the Parent Borrower at all times other than during the existence of an Event of Default under Section 8.01(a), (f), or (g) (which consent of the Parent Borrower shall not be unreasonably withheld or delayed). If no successor agent is appointed prior to the effective date of the resignation of the Administrative Agent or Collateral Agent, as applicable, the Administrative Agent or Collateral Agent may appoint, after consulting with the Lenders and the Parent Borrower, a successor agent. Upon the acceptance of its appointment as successor agent hereunder, the Person acting as such successor agent shall succeed to all the rights, powers and duties of the retiring Administrative Agent or Collateral Agent, as applicable, and the term "Administrative Agent" or "Collateral Agent," as applicable, shall mean such successor administrative agent or such successor collateral agent, as applicable, and the retiring Administrative Agent's or Collateral Agent's appointment, powers and duties as the Administrative Agent or Collateral Agent, as applicable, shall be terminated. After the retiring Administrative Agent's or Collateral Agent's resignation hereunder as the Administrative Agent or Collateral Agent, the provisions of this Article IX and Sections 10.04 and 10.05 shall continue in effect for its benefit as to any actions taken or omitted to be taken by it while it was the Administrative Agent or Collateral Agent under this Agreement. If no successor agent has accepted appointment as the Administrative Agent or Collateral Agent by the date which is 30 days following the retiring Administrative Agent's or Collateral Agent's notice of resignation, the retiring Administrative Agent's or Collateral Agent's resignation shall nevertheless thereupon become effective and (i) the retiring Administrative Agent or Collateral Agent, as applicable, shall be discharged from its duties and obligations hereunder and under the other Loan Documents (except that in the case of any collateral security held by the Administrative Agent or Collateral Agent on behalf of the Lenders under any of the Loan Documents, the retiring Agent shall continue to hold such collateral security as bailee, trustee or other applicable capacity until such time as a successor of such Agent is appointed), (ii) all payments, communications and determinations provided to be made by, to or through the Administrative Agent shall instead be made by or to each Lender directly, until such time as the Required Lenders appoint a successor Administrative Agent as provided for above in this Section 9.09 and (iii) the Lenders shall perform all of the duties of the Administrative Agent or Collateral Agent, as applicable, hereunder until such time, if any, as the Required Lenders appoint a successor agent as provided for above. Upon the acceptance of any appointment as the Administrative Agent or Collateral Agent hereunder by a successor and upon the execution and filing or recording of such financing statements, or amendments thereto, and such amendments or supplements to the Mortgages, and

such other instruments or notices, as may be necessary or desirable, or as the Required Lenders may request, in order to continue the perfection of the Liens granted or purported to be granted by the Collateral Documents, the Administrative Agent or Collateral Agent, as applicable, shall thereupon succeed to and become vested with all the rights, powers, discretion, privileges, and duties of the retiring Administrative Agent or Collateral Agent. Upon the acceptance of any appointment as the Administrative Agent or Collateral Agent hereunder by a successor or upon the expiration of the 30-day period following the retiring Administrative Agent's or Collateral Agent's notice of resignation without a successor agent having been appointed, the retiring Administrative Agent or Collateral Agent, as applicable, shall be discharged from its duties and obligations hereunder and under the other Loan Documents other than as specifically set forth in clause (i) above of this Section 9.09(a) but the provisions of this Article IX and Sections 10.04 and 10.05 shall continue in effect for the benefit of such retiring Agent, its sub-agents and their respective Agent-Related Persons in respect of any actions taken or omitted to be taken by any of them solely in respect of the Loan Documents or Obligations, as applicable, while the retiring Agent was acting as Administrative Agent or Collateral Agent, as applicable.

(b) Any resignation by MS as Administrative Agent or Collateral Agent pursuant to this Section 9.09 shall also constitute its resignation or removal as an L/C Issuer, in which case the resigning or removed L/C Issuer (x) shall not be required to issue any further Letters of Credit hereunder and (y) shall maintain all of its rights as L/C Issuer with respect to any Letters of Credit issued by it prior to the date of such resignation. Upon the acceptance of a successor's appointment as Administrative Agent or Collateral Agent hereunder or upon the expiration of the 30-day period following the retiring Administrative Agent or Collateral Agent's notice of resignation without a successor agent having been appointed, (i) such successor (if any) shall succeed to and become vested with all of the rights, powers, privileges and duties of the retiring L/C Issuer, (ii) the retiring L/C Issuer shall be discharged from all of their respective duties and obligations hereunder or under the other Loan Documents and (iii) the successor L/C Issuer (if any) shall issue letters of credit in substitution for the Letters of Credit, if any, outstanding at the time of such succession or make (or the Borrower shall enter into) other arrangements satisfactory to the retiring L/C Issuer to effectively assume the obligations of the retiring L/C Issuer with respect to such Letters of Credit.

Section 9.10 Administrative Agent May File Proofs of Claim. In case of the pendency of any receivership, administrative receivership, judicial management, insolvency, liquidation, bankruptcy, reorganization (by way of voluntary arrangement, schemes of arrangement or otherwise), arrangement, adjustment, composition or other judicial proceeding relative to any Loan Party, the Administrative Agent (irrespective of whether the principal of any Loan or L/C Obligation shall then be due and payable as herein expressed or by declaration or otherwise and irrespective of whether the Administrative Agent shall have made any demand on the Borrowers) shall be entitled and empowered, by intervention in such proceeding or otherwise:

(a) to file and prove a claim for the whole amount of the principal and interest owing and unpaid in respect of the Loans, L/C Obligations 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 and the Administrative Agent (including any claim for the reasonable compensation, expenses, disbursements and advances of the Lenders and the Administrative Agent and their respective agents and counsel to the extent provided for herein and all other amounts due the Lenders and the Administrative Agent under Sections 2.03(h) and (i), 2.09 and 10.04) allowed in such judicial proceeding; and

(b) to collect and receive any monies or other property payable or deliverable on any such claims and to distribute the same;

and any administrator, administrative receiver, custodian, receiver, assignee, trustee, judicial manager, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Lender to make such payments to the Administrative Agent and, in the event that the Administrative Agent shall consent to the making of such payments directly to the Lenders, to pay to the Administrative Agent any amount due for the reasonable compensation, expenses, disbursements and advances of the Agents and their respective agents and counsel, and any other amounts, in each case, due the Administrative Agent under Sections 2.09 and 10.04.

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 any plan of reorganization (by way of voluntary arrangement, schemes of arrangement or otherwise), arrangement, adjustment or composition affecting the Obligations or the rights of any Lender or to authorize the Administrative Agent to vote in respect of the claim of any Lender in any such proceeding.

Section 9.11 Collateral and Guaranty Matters(c) . (a) Each of the Lenders (including in their capacities as potential Hedge Banks party to a Secured Hedge Agreement and potential or actual Cash Management Banks party to a Secured Cash Management Agreement) and each L/C Issuer irrevocably authorize the Administrative Agent and the Collateral Agent, and each of the Administrative Agent and the Collateral Agent shall, to the extent requested by the Parent Borrower (or as otherwise specified below) or, solely in the case of clause (iv) below, to the extent provided for under this Agreement,

(i) release any Lien on any property granted to or held by the Administrative Agent or Collateral Agent under any Loan Document (A) upon termination of the Aggregate Commitments and payment in full of all Obligations (other than (I) contingent indemnification obligations as to which no claim has been asserted and (II) obligations and liabilities under Secured Cash Management Agreements and Secured Hedge Agreements) and the expiration without any pending drawing or termination of all Letters of Credit (other than Letters of Credit which have been Cash Collateralized), (B) that is sold, disposed of or distributed or to be sold, disposed of or distributed as part of or in connection with any transaction permitted hereunder or under any other Loan Document, in each case to a Person that is not a Loan Party, (C) subject to Section 10.01, if approved, authorized or ratified in writing by the Required Lenders, (D) that constitutes Excluded Property as a result of an occurrence not prohibited hereunder or (E) owned by a Subsidiary Guarantor upon release of such Subsidiary Guarantor from its obligations under its Guaranty pursuant to clause (iii) below;

(ii) release or subordinate any Lien on any property granted to or held by the Administrative Agent or Collateral Agent under any Loan Document to the holder of any Permitted Lien on such property that is permitted by clauses (1), (4), (5), (6) (only with regard to Section 7.01(d)), (9), (11) (solely with respect to cash deposits), (16), (17) (other than with respect to self-insurance arrangements), (18) (solely to the extent constituting Excluded Property), (21), (23) (solely to the extent relating to a lien of the type allowed pursuant to clause (9) of the definition thereof), (25) (solely to the extent relating to a lien of the type allowed pursuant to clause (6) of the definition of "Permitted Liens" and securing obligations under Indebtedness of the type allowed pursuant to Section 7.01(d)), (26) (solely to the extent the Lien of the Collateral Agent on such property is not, pursuant to such agreements, required or permitted to be senior to or *pari passu* with such Liens), (29) (solely with respect to cash deposits), (34), (39) (only for so long as required to be secured for such letter of intent or investment), (45), (46) and (48) of the definition thereof;

(iii) release any Guarantor from its obligations under the applicable Guaranty if in the case of any Restricted Subsidiary, such Person ceases to be a Subsidiary or otherwise becomes an Excluded Subsidiary as a result of a transaction or designation permitted hereunder; provided that no such release shall occur if such Guarantor continues to be a guarantor in respect of any Specified Refinancing Debt, any Refinancing Notes, any New Incremental Notes or, to the extent incurred by a Loan Party (other than Holdings), any other Indebtedness if either (x) the principal amount of such Indebtedness exceeds the Threshold Amount or (y) an Event of Default is continuing at the time of such release; and

(iv) establish intercreditor arrangements as contemplated by this Agreement.

Upon request by the Administrative Agent at any time, the Required Lenders will confirm in writing the Collateral Agent's authority to release or subordinate its interest in particular types or items of property, or to release any Guarantor from its obligations under the Guaranty pursuant to this Section 9.11. In each case as specified in this Section 9.11, the applicable Agent will (and each Lender irrevocably authorizes the applicable 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 or subordination of such item of Collateral from the assignment and security interest granted under the Collateral Documents, or to evidence the release of such Guarantor from its obligations under the Guaranty, in each case in accordance with the terms of the Loan Documents and this Section 9.11. Additionally, upon reasonable request of the Parent Borrower, the Collateral Agent will return possessory Collateral held by it that is released from the security interests created by the Collateral Documents pursuant to this Section 9.11; provided that in each case of this Section 9.11, the Parent Borrower shall have delivered to the Administrative Agent

and Collateral Agent a certificate of a Responsible Officer of the Parent Borrower certifying that any such transaction has been consummated in compliance with this Agreement and the other Loan Documents and that such release is permitted hereby; provided, that in the event that the Collateral Agent loses or misplaces any possessory collateral delivered to the Collateral Agent by the Parent Borrower, upon reasonable request of the Parent Borrower, the Collateral Agent shall provide a loss affidavit to the Parent Borrower, in the form customarily provided by the Collateral Agent in such circumstances.

(b) each Agent, each Lender (including in its capacities as a potential Cash Management Bank and a potential Hedge Bank), each LC Issuer and each other Secured Party irrevocably authorizes the Administrative Agent and Collateral Agent to be the agent for and representative of the Lenders with respect to the Guaranty, the Collateral and the Collateral Documents and agrees that, notwithstanding anything to the contrary in any Loan Document:

(i) Liens on any property granted to or held by an Agent or in favor of any Secured Party under any Loan Document will be automatically and immediately released, and each Secured Party irrevocably authorizes and directs the Agents to enter into, and each agrees that it will enter into, the necessary or advisable documents requested by the Parent Borrower and associated therewith, upon the occurrence of any of the following events (each, a "Lien Release Event"),

(1) the payment in full in cash of all the Obligations (other than (1) Secured Cash Management Services, Swap Contracts and contingent obligations in respect of which no claim has been made and (2) obligations in respect of Letters of Credit that have been backstopped or cash collateralized on terms satisfactory to the applicable LC Issuer);

(2) a transfer of the property subject to such Lien as part of, or in connection with, a transaction that is permitted by the terms of the Loan Documents to any Person that is not a Loan Party;

(3) with respect to property owned by any Guarantor or with respect to which any Guarantor has rights, the release of such Guarantor from its obligations under its Guaranty pursuant to clause (iii) below;

(4) the approval, authorization or ratification of the release of such Lien by the Required Lenders, or such percentage as may be required pursuant to Section 10.01;

(5) such property becoming Excluded Property or an asset owned by an Excluded Subsidiary;

(6) as to the assets owned by such Excluded Subsidiary (or with respect to which an Excluded Subsidiary and no Loan Party has rights), upon any Person becoming an Excluded Subsidiary; and/or

(7) any Receivables Asset becoming subject to a Qualifying Receivables Factoring or Qualifying Receivables Financing;

;provided that upon the Administrative Agent's reasonable request, the Parent Borrower shall deliver to the Administrative Agent and Collateral Agent a certificate of a Responsible Officer of the Parent Borrower certifying that any such transaction has been or shall be consummated in compliance with this Agreement and the other Loan Documents and that such transaction is not prohibited by the terms of this Agreement and the Administrative Agent shall be fully protected in relying on such certificate.

(ii) upon the request of the Parent Borrower (such request, the "Release/Subordination Event") it will release or subordinate any Lien on any property granted to or held by the Administrative Agent or the Collateral Agent under any Loan Document to the holder of any Lien on such property as contemplated by Section 9.11(a)(ii) above;

(iii) a Subsidiary Guarantor will be automatically and immediately released from its obligations under the Guaranty upon (A) such Subsidiary Guarantor ceasing to be a Subsidiary of a Borrower, (B) such Subsidiary Guarantor ceasing to be a Restricted Subsidiary, or (C) such Subsidiary Guarantor becoming an Excluded Subsidiary as a result of a transaction permitted hereunder (clauses (A)-(C), each a "Guaranty Release Event"), and each Secured Party irrevocably authorizes and directs the Agents to enter into, and each Agent agrees it will enter into, the necessary and advisable documents requested by the Parent Borrower to (1) release (or acknowledge the release of) such Subsidiary Guarantor from its obligations under the Guaranty and (2) release (or acknowledge the release of) any Liens granted by such Subsidiary or Liens on the Equity Interests of such Subsidiary;

Section 9.12 Other Agents; Arranger and Managers. None of the Lenders or other Persons identified on the facing page or signature pages of this Agreement as a "syndication agent," "joint lead arranger," or "joint bookrunner" shall have any right, power, obligation, liability, responsibility or duty under this Agreement other than those applicable to all Lenders as such; provided that each Arranger shall be entitled to any express rights given to that Arranger under any Loan Document. Without limiting the foregoing, none of the Lenders or other Persons so identified shall have or be deemed to have any fiduciary relationship with any Lender. Each Lender acknowledges that it has not relied, and will not rely, on any of the Lenders or other Persons so identified in deciding to enter into this Agreement or in taking or not taking action hereunder.

Section 9.13 Secured Cash Management Agreements and Secured Hedge Agreements. No Cash Management Bank or Hedge Bank that obtains the benefits of Section 8.04, any Guaranty or any Collateral by virtue of the provisions hereof or of any Guaranty or any Collateral Document shall have any right to notice of any action or to consent to, direct or object to any action hereunder or under any other Loan Document or otherwise in respect of the Collateral (including the release or impairment of any Collateral) other than in its capacity as a Lender and, in such case, only to the extent expressly provided in the Loan Documents. Notwithstanding any other provision of this Article IX to the contrary, the Administrative Agent shall not be required to verify the payment of, or that other satisfactory arrangements have been made with respect to, Obligations arising under Secured Cash Management Agreements and Secured Hedge Agreements unless the Administrative Agent has received written notice of such Obligations, together with such supporting documentation as the Administrative Agent may request, from the applicable Cash Management Bank or Hedge Bank, as the case may be.

Section 9.14 Appointment of Supplemental Agents, Incremental Arrangers, Incremental Notes Arrangers and Specified Refinancing Agents.

(a) It is the purpose of this Agreement and the other Loan Documents that there shall be no violation of any Law of any jurisdiction denying or restricting the right of banking corporations or associations to transact business as agent or trustee in such jurisdiction. It is recognized that in case of litigation under this Agreement or any of the other Loan Documents, and in particular in case of the enforcement of any of the Loan Documents, or in case the Administrative Agent or the Collateral Agent deems that by reason of any present or future Law of any jurisdiction it may not exercise any of the rights, powers or remedies granted herein or in any of the other Loan Documents or take any other action which may be desirable or necessary in connection therewith, the Administrative Agent and the Collateral Agent are hereby authorized to appoint an additional individual or institution selected by them in their sole discretion as a separate trustee, co-trustee, administrative agent, collateral agent, administrativesub-agent or administrative co-agent, as applicable (any such additional individual or institution being referred to herein individually as a "Supplemental Agent" and collectively as "Supplemental Agents").

(b) In the event that the Administrative Agent or the Collateral Agent appoints a Supplemental Agent with respect to any Collateral, (i) each and every right, power, privilege or duty expressed or intended by this Agreement or any of the other Loan Documents to be exercised by or vested in or conveyed to the Administrative Agent or the Collateral Agent with respect to such Collateral shall be exercisable by and vest in such Supplemental Agent to the extent, and only to the extent, necessary to enable such Supplemental Agent to exercise such rights, powers and privileges with respect to such Collateral and to perform such duties with respect to such Collateral, and every covenant and obligation contained in the Loan Documents and necessary to the exercise or performance thereof by such Supplemental Agent shall run to and be enforceable by either the Administrative Agent and the Collateral Agent or such Supplemental Agent, and (ii) the provisions of this Article IX and of Sections 10.04 and 10.05 (obligating the Borrowers to pay the Administrative Agent's and the Collateral Agent's expenses and to indemnify

the Administrative Agent and the Collateral Agent) that refer to the Administrative Agent and/or the Collateral Agent shall inure to the benefit of such Supplemental Agent and all references therein to the Administrative Agent and/or Collateral Agent shall be deemed to be references to the Administrative Agent and/or Collateral Agent and/or such Supplemental Agent, as the context may require.

(c) Should any instrument in writing from the Borrowers, Holdings or any other Loan Party be required by any Supplemental Agent so appointed by the Administrative Agent or the Collateral Agent for more fully and certainly vesting in and confirming to him or it such rights, powers, privileges and duties, the Borrowers or Holdings, as applicable, shall, or shall cause such Loan Party to, execute, acknowledge and deliver any and all such instruments promptly upon request by the Administrative Agent or the Collateral Agent. In case any Supplemental Agent, or a successor thereto, shall die, become incapable of acting, resign or be removed, all the rights, powers, privileges and duties of such Supplemental Agent, to the extent permitted by Law, shall vest in and be exercised by the Administrative Agent or the Collateral Agent, as applicable, until the appointment of a new Supplemental Agent.

(d) In the event that the Parent Borrower appoints or designates any Incremental Arranger, Incremental Notes Arranger or Specified Refinancing Agent pursuant to Sections 2.14, 2.15 and 2.18, as applicable, (i) each and every right, power, privilege or duty expressed or intended by this Agreement or any of the other Loan Documents to be exercised by or vested in or conveyed to an agent or arranger with respect to New Loan Commitments, New Incremental Notes or Specified Refinancing Debt, as applicable, shall be exercisable by and vest in such Incremental Arranger, Incremental Notes Arranger or Specified Refinancing Agent to the extent, and only to the extent, necessary to enable such Incremental Arranger, Incremental Notes Arranger or Specified Refinancing Agent to exercise such rights, powers and privileges with respect to the New Loan Commitments, New Incremental Notes or Specified Refinancing Debt, as applicable, and to perform such duties with respect to such New Loan Commitments, New Incremental Notes or Specified Refinancing Debt, and every covenant and obligation contained in the Loan Documents and necessary to the exercise or performance thereof by such Incremental Arranger, Incremental Notes Arranger or Specified Refinancing Agent shall run to and be enforceable by either the Administrative Agent or such Incremental Arranger, Incremental Notes Arranger or Specified Refinancing Agent, and (ii) the provisions of this Article IX and of Sections 10.04 and 10.05 (obligating the Borrowers to pay the Administrative Agent's and the Collateral Agent's expenses and to indemnify the Administrative Agent and the Collateral Agent) that refer to the Administrative Agent and/or the Collateral Agent shall inure to the benefit of such Incremental Arranger, Incremental Notes Arranger or Specified Refinancing Agent and all references therein to the Administrative Agent and/or Collateral Agent shall be deemed to be references to the Administrative Agent and/or Collateral Agent and/or such Incremental Arranger, Incremental Notes Arranger or Specified Refinancing Agent, as the context may require. Each Lender and L/C Issuer hereby irrevocably appoints any Incremental Arranger, Incremental Notes Arranger or Specified Refinancing Agent to act on its behalf hereunder and under the other Loan Documents pursuant to Sections 2.14, 2.15 and 2.18, as applicable, and designates and authorizes such Incremental Arranger, Incremental Notes Arranger or Specified Refinancing Agent to take such actions on its behalf under the provisions of this Agreement and each other Loan Document and to exercise such powers and perform such duties as are expressly delegated to such Incremental Arranger, Incremental Notes Arranger or Specified Refinancing Agent by the terms of this Agreement or any other Loan Document, together with such actions and powers as are reasonably incidental thereto.

Section 9.15 Intercreditor Agreement. The Administrative Agent and the Collateral Agent are authorized by the Lenders and other Secured Parties to, to the extent required by the terms of the Loan Documents, (i) enter into the First Lien/Second Lien Intercreditor Agreement, the Pari Passu Intercreditor Agreement and any other intercreditor agreement contemplated by this Agreement, (ii) enter into any Collateral Document, or (iii) make or consent to any filings or take any other actions in connection therewith (and any amendments, amendments and restatements, restatements or waivers of or supplements to or other modifications to, such agreements in connection with the incurrence by any Loan Party of any Indebtedness of such Loan Party that is permitted to be secured pursuant to Sections 7.01 and 7.02 of this Agreement, in order to permit such Indebtedness to be secured by a valid, perfected lien on the Collateral (with such priority as may be designated by such Loan Party, to the extent such priority is permitted by the Loan Documents)), and the parties hereto acknowledge that any intercreditor agreement, Collateral Document, consent, filing or other action will be binding upon them. Each Lender and other Secured Party (a) hereby agrees that it will be bound by and will take no actions contrary to the provisions of any intercreditor agreement (if entered into) and (b) hereby authorizes and instructs the Administrative Agent and the Collateral Agent to enter into any intercreditor agreement contemplated by this Agreement or Collateral Document (and any amendments, amendments and restatements, restatements or waivers of or supplements to or other modifications to, such

agreements) in connection with the incurrence by any Loan Party of any Indebtedness of such Loan Party that is required or permitted to be secured on a *pari passu* or junior basis with the Liens securing the Obligations pursuant to Sections 7.01 and 7.02 of this Agreement, in order to permit such Indebtedness to be secured by a valid, perfected lien on the Collateral (with such priority as may be designated by such Loan Party, to the extent such priority is permitted by the Loan Documents), and to subject the Liens on the Collateral securing the Obligations to the provisions thereof.

Section 9.16 Withholding Tax. To the extent required by any applicable law, the Administrative Agent may withhold from any payment to any Lender an amount equivalent to any applicable withholding Tax. Without limiting or expanding the provisions of Section 3.01, each Lender shall indemnify the Administrative Agent against, and shall make payable in respect thereof within 30 days after demand therefor, any and all Taxes and any and all related losses, claims, liabilities and expenses (including fees, charges and disbursements of any counsel for the Administrative Agent) incurred by or asserted against the Administrative Agent by the U.S. Internal Revenue Service or any other Governmental Authority as a result of the failure of the Administrative Agent to properly withhold tax from amounts paid to or for the account of any Lender for any reason (including, without limitation, because the appropriate form was not delivered or not property executed, or because such Lender failed to notify the Administrative Agent of a change in circumstance that rendered the exemption from, or reduction of withholding tax ineffective). 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 this Agreement or any other Loan Document against any amount due the Administrative Agent under this paragraph. The agreements in this paragraph shall survive the resignation and/or replacement of the Administrative Agent, any assignment of rights by, or the replacement of, a Lender and the repayment, satisfaction or discharge of all other obligations under any Loan Document.

Section 9.17 Certain ERISA Matters.

(a) Each Lender (x) represents and warrants, as of the date such Person became a Lender party hereto, to, and (y) covenants, from the date such Person became a Lender party hereto to the date such Person ceases being a Lender party hereto, for the benefit of, the Administrative Agent and not, for the avoidance of doubt, to or for the benefit of the Borrower or any other Loan Party, that at least one of the following is and will be true:

(i) such Lender is not using "plan assets" (within the meaning of Section 3(42) of ERISA or otherwise) of one or more Benefit Plans with respect to such Lender's entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments or this Agreement,

(ii) the transaction exemption set forth in one or more PTEs, such as PTE84-14 (a class exemption for certain transactions determined by independent qualified professional asset managers), PTE 95-60 (a class exemption for certain transactions involving insurance company general accounts), PTE 90-1 (a class exemption for certain transactions involving insurance company pooled separate accounts), PTE91-38 (a class exemption for certain transactions involving bank collective investment funds) or PTE 96-23 (a class exemption for certain transactions determined byin-house asset managers), is applicable with respect to such Lender's entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments and this Agreement,

(iii) (A) such Lender is an investment fund managed by a "Qualified Professional Asset Manager" (within the meaning of Part VI of PTE 84-14), (B) such Qualified Professional Asset Manager made the investment decision on behalf of such Lender to enter into, participate in, administer and perform the Loans, the Letters of Credit, the Commitments and this Agreement, (C) the entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments and this Agreement satisfies the requirements of sub-sections (b) through (g) of Part I of PTE 84-14 and (D) to the best knowledge of such Lender, the requirements of subsection (a) of Part I of PTE84-14 are satisfied with respect to such Lender's entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments and this Agreement, or

(iv) such other representation, warranty and covenant as may be agreed in writing between the Administrative Agent, in its sole discretion, and such Lender.

(b) In addition, unless either (1) sub-clause (i) in the immediately preceding clause (a) is true with respect to a Lender or (2) a Lender has provided another representation, warranty and covenant in accordance with sub-clause (iv) in the immediately preceding clause (a), such Lender further (x) represents and warrants, as of the date such Person became a Lender party hereto, to, and (y) covenants, from the date such Person became a Lender party hereto to the date such Person ceases being a Lender party hereto, for the benefit of, the Administrative Agent and not, for the avoidance of doubt, to or for the benefit of the Borrower or any other Loan Party, that the Administrative Agent is not a fiduciary with respect to the assets of such Lender involved in such Lender's entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments and this Agreement (including in connection with the reservation or exercise of any rights by the Administrative Agent under this Agreement, any Loan Document or any documents related hereto or thereto).

Section 9.18 Credit Bidding. The Secured Parties hereby irrevocably authorize the Administrative Agent, at the direction of the Required Lenders, to credit bid all or any portion of the Obligations (including by accepting some or all of the Collateral in satisfaction of some or all of the Obligations pursuant to a deed in lieu of foreclosure or otherwise) and in such manner purchase (either directly or through one or more acquisition vehicles) all or any portion of the Collateral (a) at any sale thereof conducted under the provisions of the Bankruptcy Code, including under Sections 363, 1123 or 1129 of the Bankruptcy Code, or any similar laws in any other jurisdictions to which a Loan Party is subject, or (b) at any other sale, foreclosure or acceptance of collateral in lieu of debt conducted by (or with the consent or at the direction of) the Administrative Agent (whether by judicial action or otherwise) in accordance with any applicable law. In connection with any such credit bid and purchase, the Obligations owed to the Secured Parties shall be entitled to be, and shall be, credit bid by the Administrative Agent at the direction of the Required Lenders on a ratable basis (with Obligations with respect to contingent or unliquidated claims receiving contingent interests in the acquired assets on a ratable basis that shall vest upon the liquidation of such claims in an amount proportional to the liquidated portion of the contingent claim amount used in allocating the contingent interests) for the asset or assets so purchased (or for the equity interests or debt instruments of the acquisition vehicle or vehicles that are issued in connection with such purchase). In connection with any such bid, (i) the Administrative Agent shall be authorized to form one or more acquisition vehicles and to assign any successful credit bid to such acquisition vehicle or vehicles, (ii) each of the Secured Parties' ratable interests in the Obligations which were credit bid shall be deemed without any further action under this Agreement to be assigned to such vehicle or vehicles for the purpose of closing such sale, (iii) the Administrative Agent shall be authorized to adopt documents providing for the governance of the acquisition vehicle or vehicles (provided that any actions by the Administrative Agent with respect to such acquisition vehicle or vehicles, including any disposition of the assets or equity interests thereof, shall be governed, directly or indirectly, by, and the governing documents shall provide for, control by the vote of the Required Lenders or their permitted assignees under the terms of this Agreement or the governing documents of the applicable acquisition vehicle or vehicles, as the case may be, irrespective of the termination of this Agreement and without giving effect to the limitations on actions by the Required Lenders contained in Section 10.01 of this Agreement), (iv) the Administrative Agent on behalf of such acquisition vehicle or vehicles shall be authorized to issue to each of the Secured Parties, ratably on account of the relevant Obligations which were credit bid, interests, whether as equity, partnership, limited partnership interests or membership interests, in any such acquisition vehicle and/or debt instruments issued by such acquisition vehicle, all without the need for any Secured Party or acquisition vehicle to take any further action, and (v) to the extent that Obligations that are assigned to an acquisition vehicle are not used to acquire Collateral for any reason (as a result of another bid being higher or better, because the amount of Obligations assigned to the acquisition vehicle exceeds the amount of Obligations credit bid by the acquisition vehicle or otherwise), such Obligations shall automatically be reassigned to the Secured Parties pro rata with their original interest in such Obligations and the equity interests and/or debt instruments issued by any acquisition vehicle on account of such Obligations shall automatically be cancelled, without the need for any Secured Party or any acquisition vehicle to take any further action. Notwithstanding that the ratable portion of the Obligations of each Secured Party are deemed assigned to the acquisition vehicle or vehicles as set forth in clause (ii) above, each Secured Party shall execute such documents and provide such information regarding the Secured Party (and/or any designee of the Secured Party which will receive interests in or debt instruments issued by such acquisition vehicle) as the Administrative Agent may reasonably request in connection with the formation of any acquisition vehicle, the formulation or submission of any credit bid or the consummation of the transactions contemplated by such credit bid.

ARTICLE X.
Miscellaneous

Section 10.01 Amendments, Etc. Except as otherwise expressly set forth in this Agreement or the applicable Loan Document, and other than with respect to any amendment, modification or waiver contemplated by clauses (a) (other than in the case of an increased Commitment)through (h) below, which shall only require the consent of the Lenders expressly set forth therein and not the Required Lenders, no amendment or waiver of any provision of this Agreement or any other Loan Document, and no consent to any departure by any Borrower or any other Loan Party therefrom, shall be effective unless in writing signed by the Required Lenders (or by the Administrative Agent at the instruction of the Required Lenders) and the applicable Borrower or Loan Party, as the case may be, and each such amendment, waiver or consent shall be effective only in the specific instance and for the specific purpose for which given; provided, that the Parent Borrower provide written notice of such amendment, modification, waiver or consent to the Administrative Agent; provided further, however, that no such amendment, waiver or consent shall:

(a) extend or increase the Commitment of any Lender, or reinstate the Commitment of any Lender after the termination of such Commitment pursuant to Section 8.02, in each case without the written consent of such Lender (it being understood that a waiver of any condition precedent set forth in Section 4.02 or the waiver of (or amendment to the terms of) any Default or Event of Default, mandatory prepayment or mandatory reduction of the Commitments shall not constitute an extension or increase of any Commitment of any Lender);

(b) postpone any date scheduled for, or reduce the amount of, any payment of principal of, or interest on, any Loan or L/C Borrowing or any fees or other amounts payable hereunder, without the written consent of each Lender directly and adversely affected thereby (and subject to such further requirements as may be applicable thereto under the last two paragraphs of this Section 10.01), it being understood that the waiver of any obligation to pay interest at the Default Rate, or the amendment or waiver of any mandatory prepayment of Loans under the Term Facilities shall not constitute a postponement of any date scheduled for the payment of principal, interest or fees;

(c) reduce the principal of, or the rate of interest specified herein on, or change the currency of, any Loan or L/C Borrowing (it being understood that a waiver of any Default or Event of Default or mandatory prepayment shall not constitute a reduction or forgiveness of principal), or (subject to clause (iii) of the proviso following clause (h) below) any fees or other amounts payable hereunder or under any other Loan Document without the written consent of each Lender directly and adversely affected thereby, it being understood that any change to the definitions of Consolidated First Lien Net Leverage Ratio or in the component definitions thereof shall not constitute a reduction in any rate of interest or any fees based thereon; provided, however, that only the consent of the Required Lenders shall be necessary to amend the definition of "Default Rate" or to waive any obligation of the Borrowers to pay interest at the Default Rate;

(d) change any provision of Section 8.04 without the written consent of each Lender directly and adversely affected thereby with respect to such change;

(e) change (i) any provision of this Section 10.01 (other than any change to the last two paragraphs of this Section that would otherwise be permitted by this Section 10.01), or the definition of Required Lenders, or any other provision hereof specifying the number or percentage of Lenders or portion of the Loans or Commitments required to amend, waive or otherwise modify any rights hereunder or make any determination or grant any consent hereunder (other than the definition specified in clause (ii) of this Section 10.01(e) or modifications in connection with repurchases of Term Loans, amendments with respect to the New Term Facilities or New Revolving Facility and amendments with respect to extensions of maturity, which shall only require the written consent of each Lender directly and adversely affected thereby), without the written consent of each Lender, or (ii) the definition of "Required Revolving Lenders," without the written consent of each Revolving Credit Lender;

(f) other than as expressly contemplated by Section 9.11(a)(i), (ii) and (iii) and Section 9.11(b)(i), (ii) and (iii), release all or substantially all of the Liens on the Collateral in any transaction or series of related transactions, without the written consent of each Lender;

(g) other than as expressly contemplated by Section 9.11(a)(iii) and Section 9.11(b)(iii), release all or substantially all of the aggregate value of the Guaranty, or all or substantially all of the Guarantors, without the written consent of each Lender; or

(h) (i) amend or otherwise modify Section 7.08 (or solely for the purposes of determining compliance with the Financial Covenant, any defined terms used therein), or (ii) waive or consent to any Default or Event of Default resulting from a breach of the Financial Covenant, (iii) alter the rights or remedies of the Required Revolving Lenders arising pursuant to Article VIII as a result of a breach of Section 7.08 or (iv) waive any condition precedent set forth in Section 4.02 with respect to Credit Extensions involving the Revolving Credit Facility, in each case, without the written consent of the Required Revolving Lenders; provided, however, that the amendments, modifications, waivers and consents described in this clause (h) shall not require the consent of any Lenders other than the Required Revolving Lenders;

and provided further that (i) no amendment, waiver or consent shall, unless in writing and signed by an L/C Issuer in addition to the Borrowers and the Lenders required above, affect the rights or duties of such L/C Issuer, in its capacity as such, under this Agreement or any Letter of Credit Application or other Issuer Document relating to any Letter of Credit issued or to be issued by it; (ii) no amendment, waiver or consent shall, unless in writing and signed by the Administrative Agent, the Collateral Agent in their respective capacities as such, in addition to the Parent Borrower and the Lenders required above, affect the rights or duties of, or any fees or other amounts payable to, the Administrative Agent under this Agreement or any other Loan Document; and (iii) Section 10.07(g) may not be amended, waived or otherwise modified without the consent of each Granting Lender all or any part of whose Loans are being funded by an SPC at the time of such amendment, waiver or other modification. Notwithstanding anything to the contrary herein, any amendment, modification, waiver or other action which by its terms requires the consent of all Lenders or each affected Lender may be effected with the consent of the applicable Lenders other than Defaulting Lenders or Affiliate Lenders (other than Debt Fund Affiliates), except that (x) no amendment, waiver or consent relating to Section 10.01(a), (b) or (c) may be effected, in each case without the consent of such Defaulting Lender or Affiliate Lender, (y) any amendment, modification, waiver or other action that by its terms adversely affects any Defaulting Lender or Affiliate Lender in its capacity as a Lender in a manner that differs in any material respect from, and is more adverse to such Defaulting Lender or Affiliate Lender than it is to, other affected Lenders shall require the consent of such Defaulting Lender or Affiliate Lender and (z) Net Short Lenders shall have the right to approve or disapprove any amendment, waiver or consent, only to the extent set forth in Section 10.25. Notwithstanding anything to the contrary herein, any waiver, amendment, modification or consent in respect of this Agreement or any other Loan Document that by its terms affects the rights or duties under this Agreement or any other Loan Document of Lenders holding Loans or Commitments of a particular Tranche (but not the Lenders holding Loans or Commitments of any other Tranche) may be effected by an agreement or agreements in writing entered into by the Parent Borrower and the requisite percentage in interest of the Lenders with respect to such Tranche that would be required to consent thereto under this Section 10.01 if such Lenders were the only Lenders hereunder at the time.

This Section 10.01 shall be subject to any contrary provision of Section 2.14 or Section 2.18. In addition, notwithstanding anything else to the contrary contained in this Section 10.01, (a) amendments and modifications in connection with the transactions provided for by Section 2.14 or Section 2.18 that benefit existing Lenders may be effected without such Lenders' consent, (b) if the Administrative Agent and the Parent Borrower shall have jointly identified an obvious error or any error, ambiguity or omission, defect or inconsistency of a technical nature, in each case, in any provision of the Loan Documents, then the Administrative Agent and the Parent Borrower shall be permitted to amend such provision, (c) the Administrative Agent and the Parent Borrower shall be permitted to amend any provision of any Collateral Document, the Guaranty, or enter into any new agreement or instrument, to be consistent with this Agreement and the other Loan Documents or as required by local law to give effect to any guaranty, or to give effect to or to protect any security interest for the benefit of the Secured Parties, in any property so that the security interests comply with applicable Law, and in each case, such amendments, documents and agreements shall become effective without any further action or consent of any other party to any Loan Document if in the case of amendments contemplated by clause (b) the same is not objected to in writing by the Required Lenders within five Business Days following receipt of notice thereof and (d) if one or more currencies is added as an

Alternative Currency, the Borrower, the Administrative Agent the Revolving Credit Lenders and any applicable L/C Issuer shall be entitled to amend the provisions of this Agreement and the other Loan Documents to add interest rate provisions and other operational or mechanical provisions relating to Revolving Credit Loans and Letters of Credit denominated in any such currencies.

Notwithstanding anything to the contrary herein, in connection with any amendment, modification, waiver or other action requiring the consent or approval of Required Lenders, Lenders that are Debt Fund Affiliates shall not be permitted, in the aggregate, to account for more than 49.9% of the amounts actually included in determining whether the threshold in the definition of "Required Lenders" has been satisfied. The voting power of each Lender that is a Debt Fund Affiliate shall be reduced, pro rata, to the extent necessary in order to comply with the immediately preceding sentence.

Notwithstanding anything to the contrary herein, at any time and from time to time, upon notice to the Administrative Agent (who shall promptly notify the applicable Lenders) specifying in reasonable detail the proposed terms thereof, the Parent Borrower may make one or more loan modification offers to (i) all the Lenders of any Facility that would, if and to the extent accepted by any such Lender, (a) extend the scheduled Maturity Date and any amortization of the Loans and Commitments under such Facility and/or change the Applicable Rate and/or fees payable with respect to the Loans and Commitments under such Facility (in each case solely with respect to the Loans and Commitments of accepting Lenders in respect of which an acceptance is delivered) and (b) treat the Loans and Commitments so modified as a new "Facility" for all purposes under this Agreement; provided that (x) such loan modification offer is made to each Lender under the applicable Facility on the same terms and subject to the same procedures as are applicable to all other Lenders under such Facility (which procedures in any case shall be reasonably satisfactory to the Administrative Agent) and (y) no loan modification shall affect the rights or duties of, or any fees or other amounts payable to, the Administrative Agent or any L/C Issuer, without its prior written consent or (ii) the specified Lenders of any Facility that would, if and to the extent accepted by any such Lender (the "Accepting Lender"), (a) extend the scheduled Maturity Date and any amortization of the Loans and Commitments under such Facility and, if applicable, change the Applicable Rate and/or fees payable with respect to the Loans and Commitments under such Facility (in each case solely with respect to the Loans and Commitments of accepting Lenders in respect of which an acceptance is delivered) and (b) treat the Loans and Commitments so modified as a new "Facility" for all purposes under this Agreement; provided that (w) in no event shall such extended Loans and Commitments (1) have covenants that are more restrictive to the Borrowers than the terms applicable to the non-extended Loans and Commitments of the original Facility from which such Loans and Commitments are extended (the "Non-Extended Loans and Commitments"), (2) have a higher Applicable Rate and/or fees than theNon-Extended Loans and Commitments or (3) receive a greater than ratable share of any optional or mandatory prepayments than such Non-Extended Loans and Commitments, in each case, prior to the final maturity date of such Non-Extended Loans and Commitments applicable at the time of such loan modification, (x) such loan modification offer is made to the Accepting Lenders under the applicable Facility on the same terms and subject to the same procedures as are applicable to all other Accepting Lenders under such Facility (which procedures in any case shall be reasonably satisfactory to the Administrative Agent), (y) if the aggregate principal amount of Revolving Credit Commitments or Term Loans in respect of which Lenders shall have accepted the relevant loan modification offer shall exceed the maximum aggregate principal amount of Revolving Credit Commitments or Term Loans of such Accepting Lenders, as applicable, subject to the loan modification offer, then the Revolving Credit Commitments or Term Loans, as applicable, of the lenders of the applicable Facility who were not provided with the opportunity to extend their Revolving Credit Commitments or Term Loans may have their Revolving Credit Commitments terminated or Term Loans repaid on a non-ratable basis up to such maximum amount based on the respective principal amounts with respect to which the Accepting Lenders have accepted such loan modification offer and (z) no loan modification shall affect the rights or duties of, or any fees or other amounts payable to, the Administrative Agent or any L/C Issuer, without its prior written consent.

In connection with any such loan modification offer, the Parent Borrower and each accepting Lender shall execute and deliver to the Administrative Agent such agreements and other documentation as the Administrative Agent shall reasonably specify to evidence the acceptance of the applicable loan modification offer and the terms and conditions thereof, and this Agreement and the other Loan Documents shall be amended in a writing (which may be executed and delivered by the Parent Borrower and the Administrative Agent and shall be effective only with respect to the applicable Loans and Commitments of Lenders that shall have accepted the relevant loan modification offer (and only with respect to Loans and Commitments as to which any such Lender has accepted the loan modification offer)) to the extent necessary or appropriate, in the judgment of the Administrative Agent, to reflect the existence of,

and to give effect to the terms and conditions of, the applicable loan modification (including the addition of such modified Loans and/or Commitments as a "Facility" hereunder). No Lender shall have any obligation whatsoever to accept any loan modification offer, and may reject any such offer in its sole discretion. On the effective date of any loan modification applicable to the Revolving Credit Facility, the Borrowers shall prepay any Revolving Credit Loans or L/C Advances (to the extent participated to Revolving Credit Lenders) outstanding on such effective date (and pay any additional amounts required pursuant to Section 3.06) to the extent necessary to keep the outstanding Revolving Credit Loans or L/C Advances (to the extent participated to Revolving Credit Lenders), as the case may be, ratable with any revised Pro Rata Share of a Revolving Credit Lender in respect of the Revolving Credit Facility arising from any non-ratable loan modification to the Revolving Credit Commitments under this Section 10.01. Notwithstanding the foregoing, no modification referred to above shall become effective unless the Administrative Agent, to the extent reasonably requested by the Administrative Agent, shall have received legal opinions, board resolutions, officers' certificates and/or reaffirmation agreements consistent with those delivered on the Closing Date under Section 4.01 or delivered from time to time pursuant to Section 6.12, Section 6.14 and/or Section 6.16 with respect to Holdings and the Parent Borrower, all material Subsidiary Guarantors and each other Subsidiary Guarantor that is organized in a jurisdiction for which local counsel to the Administrative Agent in such jurisdiction advises that such deliveries are reasonably necessary to preserve the Collateral in such jurisdiction.

Section 10.02 Notices; Electronic Communications.

(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 telecopy, as follows:

(i) if to the Parent Borrower, to it at 8855 Mesa Rim Road, San Diego, CA 92121, Attention: Kevin Herde; Facsimile: (619) 954-4668;

(ii) if to Morgan Stanley Senior Funding, Inc. or Morgan Stanley Bank, N.A., as set forth on Schedule 10.02;

(iii) if to any other Lender, to it at its address (or telecopy number) set forth in its Administrative Questionnaire.

Notices sent by hand or overnight courier service, or mailed by certified or registered mail, shall be deemed to have been given when received; notices sent by facsimile shall be deemed to have been given when sent (except that, if not given during normal business hours for the recipient, shall be deemed to have been given at the opening of business on the next business day for the recipient). Notices delivered through Approved Electronic Platforms, to the extent provided in paragraph (b) below, shall be effective as provided in said paragraph (b).

(b) Notices and other communications to the Lenders and the L/C Issuers hereunder may be delivered or furnished by using Approved Electronic Platforms pursuant to procedures approved by the Administrative Agent; provided that the foregoing shall not apply to notices pursuant to Article II unless otherwise agreed by the Administrative Agent and the applicable Lender. The Administrative Agent or the Parent Borrower may, in its discretion, agree to accept notices and other communications to it hereunder by electronic communications pursuant to procedures approved by it; provided that approval of such procedures may be limited to particular notices or communications.

(c) Unless the Administrative Agent otherwise prescribes (with the Parent Borrower's consent), (i) notices and other communications 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), and (ii) notices or communications 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 (i), of notification that such notice or communication is available and identifying the website address therefor; provided that, for both clauses (i) and (ii) above, if such notice, email or other communication is not sent during the normal business hours of the recipient, such notice or communication shall be deemed to have been sent at the opening of business on the next business day for the recipient.

(d) Any party hereto may change its address or telecopy number for notices and other communications hereunder by notice to the other parties hereto.

(e) The Administrative Agent, the Collateral Agent, the L/C Issuers and the Lenders shall be entitled to rely and act upon any notices (including telephonic Committed Loan Notices) purportedly given by or on behalf of the Parent Borrower even if (i) such notices were not made in a manner specified herein, were incomplete or were not preceded or followed by any other form of notice specified herein, or (ii) the terms thereof, as understood by the recipient, varied from any confirmation thereof except to the extent such reliance is deemed to be gross negligence, bad faith or willful misconduct of the Administrative Agent, Collateral Agent, L/C Issuer or Lender in a final non-appealable judgment of a court of competent jurisdiction. The Borrowers shall indemnify the Administrative Agent, the Collateral Agent, each L/C Issuer, each Lender and the Related Parties of each of them from all losses, costs, expenses and liabilities resulting from the reliance by such Person on each notice purportedly given by or on behalf of the Parent Borrower to the extent required by Section 10.05. All telephonic notices to and other telephonic communications with the Administrative Agent may be recorded by the Administrative Agent, and each of the parties hereto hereby consents to such recording.

Section 10.03 No Waiver; Cumulative Remedies; Enforcement.

(a) No failure by any Lender, any L/C Issuer, the Administrative Agent or the Collateral Agent to exercise, and no delay by any such Person in exercising, any right, remedy, power or privilege hereunder or under any other Loan Document shall operate as a waiver thereof; nor shall any single or partial exercise of any right, remedy, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, remedy, power or privilege. The rights, remedies, powers and privileges provided hereunder and under each other Loan Document, are cumulative and not exclusive of any rights, remedies, powers and privileges provided by Law.

(b) Notwithstanding anything to the contrary contained herein or in any other Loan Document, the authority to enforce rights and remedies hereunder and under the other Loan Documents against the Loan Parties or any of them shall be vested exclusively in, and all actions and proceedings at law in connection with such enforcement shall be instituted and maintained exclusively by, the Administrative Agent or the Collateral Agent in accordance with Section 8.02 for the benefit of all the Lenders and the L/C Issuers; provided, however, that the foregoing shall not prohibit (a) the Administrative Agent or the Collateral Agent from exercising on its own behalf the rights and remedies that inure to its benefit (solely in its capacity as the Administrative Agent or the Collateral Agent) hereunder and under the other Loan Documents, (b) each L/C Issuer from exercising the rights and remedies that inure to its benefit (solely in its capacity as an L/C Issuer) hereunder and under the other Loan Documents, or (c) any Lender from exercising setoff rights in accordance with Section 10.09 (subject to the terms of Section 2.13); and provided further, that if at any time there is no Person acting as Administrative Agent hereunder and under the other Loan Documents, then (i) the Required Lenders shall have the rights otherwise ascribed to the Administrative Agent pursuant to Section 8.02 and (ii) in addition to the matters set forth in clauses (b) and (c) of the preceding proviso and subject to Section 2.13, any Lender may, with the consent of the Required Lenders, enforce any rights and remedies available to it and as authorized by the Required Lenders. In the event of a foreclosure by the Collateral Agent on any of the Collateral pursuant to a public or private sale, the Administrative Agent, the Collateral Agent or any Lender (or any person nominated by them) may be the purchaser of any or all of such Collateral at any such sale and the Administrative Agent, as agent for and representative of the Lenders (but not any Lender or Lenders in its or their respective individual capacities unless the Required Lenders shall otherwise agree in writing), 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 in any such public sale, to use and apply any of the Obligations as a credit on account of the purchase price for any Collateral payable by the Administrative Agent at such sale.

(c) If the Administrative Agent and the Borrowers acting together identify any ambiguity, omission, mistake, typographical error or other defect in any provision of this Agreement or any other Loan Document, then the Administrative Agent and the Borrowers shall be permitted to amend, modify or supplement such provision to cure such ambiguity, omission, mistake, typographical error or other defect, and such amendment shall become effective without any further action or consent of any other party to this Agreement.

Section 10.04 Expenses. The Borrowers agree (a) to pay or reimburse the Administrative Agent and the other Agents for all reasonable and documented out-of-pocket costs and expenses incurred in connection with the preparation, negotiation, syndication and execution of this Agreement and the other Loan Documents (including reasonable expenses incurred in connection with due diligence and travel, courier, reproduction, printing and delivery expenses), and any amendment, waiver, consent or other modification of the provisions hereof and thereof, and the consummation and administration of the transactions contemplated hereby and thereby, including the reasonable fees, disbursements and other charges of counsel (limited to the reasonable and documented fees, disbursements and other charges of one primary counsel to the Agents and, if necessary, one local counsel in each relevant jurisdiction (which may include a single special counsel acting in multiple jurisdictions, in each case, in jurisdictions material to the interests of the Lenders) and special counsel for each relevant specialty), and (b) to pay or reimburse the Administrative Agent, the other Agents and each Lender (including, for the avoidance of doubt, each L/C Issuer) for all reasonable documented out-of-pocket costs and expenses incurred in connection with the enforcement of any rights or remedies under this Agreement or the other Loan Documents (including all such costs and expenses incurred during any legal proceeding, including any proceeding under any Debtor Relief Law or in connection with any workout or restructuring), including the fees, disbursements and other charges of counsel (limited to the reasonable fees, disbursements and other charges of one counsel to the Administrative Agent, the other Agents and the Lenders taken as a whole, and, if necessary, of one local counsel in each relevant jurisdiction (which may include a single special counsel acting in multiple jurisdictions, in each case, in jurisdictions material to the interests of the Lenders) and of special counsel for each relevant specialty and, in the event of any actual or perceived conflict of interest, one additional counsel in each relevant jurisdiction for each Lender or group of similarly affected Lenders or Agents subject to such conflict after notification to the Parent Borrower). The foregoing costs and expenses shall include all reasonable search, filing, recording, title insurance and appraisal charges and fees, and other out-of-pocket expenses incurred by any Agent. All amounts due under this Section 10.04 shall be paid within 30 days after invoiced or demand therefor (with a reasonably detailed invoice with respect thereto) (except for any such costs and expenses incurred prior to the Closing Date, which shall be paid on the Closing Date to the extent invoiced at least three Business Days prior to the Closing Date). The agreements in this Section 10.04 shall survive the termination of the Aggregate Commitments and repayment of all other Obligations. If any Loan Party fails to pay when due any costs, expenses or other amounts payable by it hereunder or under any Loan Document, such amount may be paid on behalf of such Loan Party by the Administrative Agent after any applicable grace periods have expired, in its sole discretion and the Borrowers shall immediately reimburse the Administrative Agent, as applicable. This Section 10.04 shall not apply with respect to Taxes other than any Taxes arising from any non-Tax cost or expense.

Section 10.05 Indemnification by the Borrower. The Borrowers shall indemnify and hold harmless each Arranger, each Agent-Related Person, each Lender, each L/C Issuer, each of their respective Affiliates and each partner, director, officer, employee, counsel, agent and representative of the foregoing and, in the case of any funds, trustees and advisors and attorneys-in-fact (collectively, the "Indemnitees") from and against (and will reimburse each Indemnitee, as and when incurred, for) any and all liabilities, obligations, losses, damages, penalties, claims, demands, actions, judgments, suits, costs (including settlement costs), disbursements, and reasonable and documented or invoiced out-of-pocket fees and expenses (including the reasonable and documented fees, disbursements and other charges of (i) one counsel to the Indemnitees taken as a whole, (ii) in the case of an actual or perceived conflict of interest, where the Indemnitee affected by such conflict informs the Parent Borrower and thereafter retains its own counsel, of another firm of counsel for each such affected Indemnitee in each relevant jurisdiction material to the interests of the Lenders, and (iii) if necessary, one local counsel in each jurisdiction material to the interests of the Indemnitees (which may include a single special counsel acting in multiple jurisdictions) and special counsel for each relevant specialty) of any kind or nature whatsoever which may at any time be imposed on, incurred by or asserted or awarded against any such Indemnitee in any way relating to or arising out of or in connection with or by reason of (x) any actual or prospective claim, litigation, investigation or proceeding in any way relating to, arising out of, in connection with or by reason of any of the following, whether based on contract, tort or any other theory (including any investigation of, preparation for, or defense of any pending or threatened claim, investigation, litigation or proceeding): (a) the execution, delivery, enforcement, performance or administration of any Loan Document or any other agreement, letter or instrument delivered in connection with the transactions contemplated thereby or the consummation of the transactions contemplated thereby or (b) any Commitment, Loan or Letter of Credit or the use or proposed use of the proceeds therefrom (including any refusal by any L/C Issuer to honor a demand for payment under a Letter of Credit if the documents presented in connection with such demand do not strictly comply with the terms of such Letter of Credit); provided that such indemnity shall not, as to any Indemnitee, be available to the extent that such liabilities, obligations, losses, damages, penalties, claims, demands, actions, judgments, suits, costs, disbursements, fees or expenses are determined by a court of competent jurisdiction in a final and non-appealable judgment to have resulted from (A) the bad faith, gross negligence or willful misconduct of such Indemnitee or any

of its Affiliates or controlling persons or any of the officers, directors, employees, agents, advisors, or members of any of the foregoing or (B) any dispute that is among Indemnitees (other than any dispute involving claims against the Administrative Agent, any Arranger or any other Agent or any L/C Issuer, in each case in their respective capacities as such) that a court of competent jurisdiction has determined in a final and non-appealable judgment did not involve actions or omissions of the Parent Borrower or its Subsidiaries or any of their respective Affiliates; or (y) any Environmental Liability related in any way to Holdings or any of its Subsidiaries, ((x) and (y), collectively, the "Indemnified Liabilities") in all cases, provided that such indemnity shall not, as to any Indemnitee, be available to the extent that such losses, claims, damages, liabilities or related expenses are determined by a court of competent jurisdiction by final and nonappealable judgment to have resulted from the gross negligence or willful misconduct of such Indemnitee. No Indemnitee shall be liable for any damages arising from the use by others of any information or other materials obtained through the Approved Electronic Platform or other information transmission systems (including electronic telecommunications) in connection with this Agreement unless determined by a court of competent jurisdiction in a final and non-appealable judgment to have resulted from the gross negligence, bad faith or willful misconduct of such Indemnitee, nor shall any Indemnitee or any Loan Party have any liability for any special, punitive, indirect or consequential damages relating to this Agreement or any other Loan Document or arising out of its activities in connection herewith or therewith (whether before or after the Closing Date); provided that such waiver of special, punitive, indirect or consequential damages shall not limit the indemnification obligations of the Loan Parties under this Section 10.05. In the case of an investigation, litigation or other proceeding to which the indemnity in this Section 10.05 applies, such indemnity shall be effective whether or not such investigation, litigation or proceeding is brought by any Loan Party, its directors, shareholders or creditors or an Indemnitee or any other Person, and whether or not any Indemnitee is otherwise a party thereto. Should any investigation, litigation or proceeding be settled, or if there is a judgment in any such investigation, litigation or proceeding, the Borrowers shall indemnify and hold harmless each Indemnitee in the manner set forth above; provided that the Borrowers shall not be liable for any settlement effected without the Parent Borrower's prior written consent (such consent not to be unreasonably withheld, delayed or conditioned). All amounts due under this Section 10.05 shall be payable within 30 days after demand therefor. The agreements in this Section 10.05 shall survive the resignation of the Administrative Agent, the replacement of any Lender, the termination of the Aggregate Commitments and the repayment, satisfaction or discharge of all the other Obligations. This Section 10.05 shall not apply with respect to Taxes other than any Taxes that represent losses, claims, damages, etc. arising from any non-Tax claim.

Section 10.06 Payments Set Aside. To the extent that any payment by or on behalf of the Borrowers is made to any Agent, to any L/C Issuer or any Lender, or any Agent, any L/C Issuer or any Lender exercises its right of setoff, and such payment or the proceeds of such setoff or any part thereof is subsequently invalidated, declared to be fraudulent or preferential, set aside or required (including pursuant to any settlement entered into by such Agent, such L/C Issuer or such Lender in its discretion) to be repaid to a trustee, receiver or any other party, in connection with any proceeding under any Debtor Relief Law or otherwise, then (a) to the extent of such recovery, the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such setoff had not occurred, and (b) each Lender and each L/C Issuer severally agrees to pay to the Administrative Agent upon demand its applicable share (without duplication) of any amount so recovered from or repaid by any Agent, plus interest thereon from the date of such demand to the date such payment is made at a rate per annum equal to the NYFRB Rate from time to time in effect. The obligations of the Lenders and the L/C Issuers under clause (b) of the preceding sentence shall survive the payment in full of the Obligations and the termination of this Agreement.

Section 10.07 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 assigns permitted hereby, except that the Borrowers may not assign or otherwise transfer any of its rights or obligations hereunder without the prior written consent of the Administrative Agent and each Lender, and no Lender may assign or otherwise transfer any of its rights or obligations hereunder except (i) to an Eligible Assignee (other than to any Disqualified Institution to the extent the list of Disqualified Institutions is made available to the Lenders upon request) in accordance with the provisions of Section 10.07(b), (ii) by way of participation in accordance with the provisions of Section 10.07(d), (iii) by way of pledge or assignment of a security interest subject to the restrictions of Section 10.07(f) or (iv) to an SPC in accordance with the provisions of Section 10.07(g). Any other attempted assignment or transfer by any party hereto (other than to any Disqualified Institution) 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 assigns permitted hereby, Participants to the extent provided in Section 10.07(d) and, to the extent expressly contemplated hereby, the Indemnitees) any legal or equitable right, remedy or claim under or by reason of this Agreement.

(b) Any Lender may at any time 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 its Commitment(s) and the Loans (including for purposes of this Section 10.07(b), participations in L/C Obligations) at the time owing to it); provided that:

(i) (A) in the case of an assignment of the entire remaining amount of the assigning Lender's Commitment under any Facility and the Loans at the time owing to it under such Facility, no minimum amount shall need be assigned, and (B) in any case not described in clause (b)(i)(A) of this Section 10.07, the aggregate amount of the Commitment (which for this purpose includes Loans outstanding thereunder) or, if the applicable Commitment is not then in effect, the outstanding principal balance of the Loans of the assigning Lender subject to each such assignment, determined as of the date the Assignment and Assumption with respect to such assignment is delivered to the Administrative Agent or, if "Trade Date" is specified in the Assignment and Assumption, as of the Trade Date, shall not be less than $5,000,000, in the case of any assignment in respect of the Revolving Credit Facility, or $1,000,000, in the case of any assignment in respect of a Term Facility, in each case, unless each of the Administrative Agent and, so long as no Event of Default under Section 8.01(a), (f) or (g) has occurred and is continuing, the Parent Borrower otherwise consents (such consent not to be unreasonably withheld, conditioned or delayed); provided, however, that concurrent assignments to members of an Assignee Group and concurrent assignments from members of an Assignee Group to a single Eligible Assignee (or to an Eligible Assignee and members of its Assignee Group) will be treated as a single assignment for purposes of determining whether such minimum amount has been met;

(ii) each partial assignment shall be made as an assignment of a proportionate part of all the assigning Lender's rights and obligations under this Agreement with respect to the Loans or the Commitment assigned, except that this clause (ii) shall not prohibit any Lender from assigning all or a portion of its rights and obligations among separate Facilities on a non-pro rata basis;

(iii) no consent shall be required for any assignment except to the extent required by clause (b)(i)(B) of this Section 10.07 and, in addition (A) the consent of the Parent Borrower (such consent not to be unreasonably withheld, conditioned or delayed) shall be required for any assignment unless (1) an Event of Default under Section 8.01(a), (f) or (g) has occurred and is continuing at the time of such assignment, (2) such assignment is in respect of a Term Facility and is to a Lender, an Affiliate of a Lender or an Approved Fund (other than any Disqualified Institution, to the extent the list of Disqualified Institutions has been made available to the Lenders) or (3) such assignment is in respect of the Revolving Credit Facility and is to a Revolving Credit Lender, an Affiliate of a Revolving Credit Lender or an Approved Fund related thereto (other than any Disqualified Institution, to the extent the list of Disqualified Institutions has been made available to the Lenders); provided that (1) the Parent Borrower shall be deemed to have consented to any assignment unless the Parent Borrower objects thereto by written notice to the Administrative Agent within ten Business Days after having received notice thereof and (2) during the 90 day period following the Closing Date, the Parent Borrower shall be deemed to have consented to an assignment to any Lender if such Lender was previously identified and approved in the initial allocations of the Loans and Commitments provided by the Arrangers to the Parent Borrower, (B) the consent of the Administrative Agent (such consent not to be unreasonably withheld or delayed) shall be required for any assignment unless (1) such assignment is in respect of a Term Facility and is to a Lender, an Affiliate of a Lender or an Approved Fund or (2) such assignment is in respect of the Revolving Credit Facility and is to a Revolving Credit Lender, an Affiliate of a Revolving Credit Lender or an Approved Fund related thereto (provided that in each case the Administrative Agent shall acknowledge any such assignment) and (C) the consent of each L/C Issuer (such consent not to be unreasonably withheld, conditioned or delayed) shall be required for any assignment in respect of the Revolving Credit Facility; provided, however, that the consent of each L/C Issuer shall not be required for any assignment in respect of a Term Loan;

(iv) 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), together with a processing and recordation fee of $3,500 (except the Administrative Agent, in its sole discretion, may elect to waive such processing and recording fee in the case of any assignment). Each Eligible Assignee that is not an existing Lender shall deliver to the Administrative Agent an Administrative Questionnaire;

(v) no such assignment shall be made (A) to any Defaulting Lender or any of its Subsidiaries, or any Person who, upon becoming a Lender hereunder, would constitute a Defaulting Lender or a Subsidiary of a Defaulting Lender, (B) to any Natural Person, (C) to any Disqualified Institution, to the extent the list of Disqualified Institutions has been made available to the Lenders, (D) to Holdings, the Parent Borrower or any its Subsidiaries except as permitted under clause (j) below or (E) to any Affiliate Lender except as permitted under Section 10.07(i);

(vi) no Revolving Credit Commitments or Revolving Credit Loans may be assigned to any Affiliate Lender;

(vii) the assigning Lender shall deliver any Notes or, in lieu thereof, a lost note affidavit and indemnity reasonably acceptable to the Parent Borrower evidencing such Loans to the Parent Borrower or the Administrative Agent; and

(viii) in connection with any assignment of rights and obligations of any Defaulting Lender hereunder, no such assignment shall be effective unless and until, in addition to the other conditions thereto set forth herein, the parties to the assignment shall make such additional payments to the Administrative Agent in an aggregate amount sufficient, upon distribution thereof as appropriate (which may be outright payment, purchases by the assignee of participations or subparticipations, or other compensating actions, including funding, with the consent of the Parent Borrower and the Administrative Agent, the applicable Pro Rata Share of Loans previously requested but not funded by the Defaulting Lender, to each of which the applicable assignee and assignor hereby irrevocably consent), to (x) pay and satisfy in full all payment liabilities then owed by such Defaulting Lender to the Administrative Agent or any L/C Issuer or Lender hereunder (and interest accrued thereon) and (y) acquire (and fund as appropriate) its full Pro Rata Share of all Loans and participations in Letters of Credit in accordance with its Pro Rata Share; provided that notwithstanding the foregoing, in the event that any assignment of rights and obligations of any Defaulting Lender hereunder shall become effective under applicable Law without compliance with the provisions of this clause, then the assignee of such interest shall be deemed to be a Defaulting Lender for all purposes of this Agreement until such compliance occurs.

Subject to acceptance and recording thereof by the Administrative Agent pursuant to Section 10.07(c), from and after the effective date specified in each Assignment and Assumption, the Eligible Assignee thereunder shall be a party to this Agreement and, to the extent of the interest assigned by 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 entitled to the benefits of Sections 3.01, 3.04, 3.05, 10.04 and 10.05 with respect to facts and circumstances occurring prior to the effective date of such assignment, and subject to the obligations set forth in Section 10.08). Upon request, and the surrender by the assigning Lender of its Note (or, in lieu thereof, a lost note affidavit and indemnity reasonably acceptable to the Parent Borrower), the Parent Borrower (at its expense) shall execute and deliver a Note to the assignee Lender. Any assignment or transfer by a Lender of rights or obligations under this Agreement (other than any purported assignment or transfer to a Disqualified Institution, to the extent the list of Disqualified Institutions has been made available to the Lenders) that does not comply with this clause (b) shall be treated for purposes of this Agreement as a sale by such Lender of a participation in such rights and obligations in accordance with Section 10.07(d).

(c) The Administrative Agent, acting solely for this purpose as anon-fiduciary agent of the Borrowers (and such agency being solely for tax purposes), shall maintain at the Administrative Agent's Office a copy of each Assignment and Assumption delivered to it and a register in which it shall record the names and addresses of the Lenders, and the Commitments of, and principal amounts (and related interest amounts) of the Loans, L/C Obligations (specifying the Unreimbursed Amounts), L/C Borrowings and amounts due under Section 2.03, owing to, each Lender pursuant to the terms hereof from time to time (the "Register"). The entries in the Register shall be conclusive, absent

manifest error, and the Borrowers, the Agents 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. In addition, the Administrative Agent shall maintain on the Register information regarding the designation, and revocation of designation, of any Lender as Defaulting Lender. The Register shall be available for inspection by any Borrower, any Agent and any Lender (but only to entries with respect to itself), at any reasonable time and from time to time upon reasonable prior notice. This Section 10.07(c) and Section 2.11 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 regulations (or any other relevant or successor provisions of the Code or of such Treasury regulations).

(d) Any Lender may at any time, without the consent of, or notice to, the Parent Borrower, the Administrative Agent or the L/C Issuers, sell participations to any Person (other than a Natural Person, an Affiliate Lender (other than a Debt Fund Affiliate), a Person that the Administrative Agent has identified in a notice to the Lenders as a Defaulting Lender or a Disqualified Institution, to the extent the list of Disqualified Institutions has been made available to the Lenders) (each, a "Participant") in all or a portion of such Lender's rights and/or obligations under this Agreement (including all or a portion of its Commitment and/or the Loans (including such Lender's participations in L/C Obligations) owing to it); provided that (i) such Lender's obligations under this Agreement shall remain unchanged, (ii) such Lender shall remain solely responsible to the other parties hereto for the performance of such obligations and (iii) the Borrowers, the Agents 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 a Lender sells such a participation shall provide that such Lender shall retain the sole right to enforce this Agreement and the other Loan Documents and to approve any amendment, modification or waiver of any provision of this Agreement or any other Loan Document; provided that such agreement or instrument may provide that such Lender will not, without the consent of the Participant, agree to any amendment, waiver or other modification described in the first proviso to Section 10.01 (in the case of any amendment, waiver or other modification described in clause (a), (b), (c) or (f) of such proviso, that directly and adversely affects such Participant). Subject to Section 10.07(e), the Borrowers agree that each Participant shall be entitled to the benefits of Sections 3.01, 3.04 and 3.05 (subject to the requirements and the limitations of such Sections (it being understood that the documentation required under Section 3.01(g) shall be delivered solely to the participating Lender) and Section 3.08) to the same extent as if it were a Lender and had acquired its interest by assignment pursuant to Section 10.07(b). To the extent permitted by law, each Participant also shall be entitled to the benefits of Section 10.09 as though it were a Lender; provided such Participant agrees to be subject to Section 2.13 as though it were a Lender.

(e) A Participant (i) agrees to be subject to the provisions of Sections 3.08 as if it were an assignee pursuant to Section 10.07(b) and (ii) shall not be entitled to receive any greater payment under Section 3.01, 3.04 or 3.05 than the applicable Lender would have been entitled to receive with respect to the participation sold to such Participant, except to the extent that a Participant's right to a greater payment results from a change in any Law after the Participant becomes a Participant.

(f) Any Lender may at any time pledge or assign a security interest in all or any portion of its rights under this Agreement (including under its Note, if any) (other than to a Disqualified Institution, to the extent the list of Disqualified Institutions has been made available to the Lenders, or a Natural Person) to secure obligations of such Lender, including any pledge or assignment to secure obligations to a Federal Reserve Bank or any central bank having jurisdiction over such Lender; provided that no such pledge or assignment shall release such Lender from any of its obligations hereunder or substitute any such pledgee or assignee for such Lender as a party hereto.

(g) Notwithstanding anything to the contrary herein, any Lender (a "Granting Lender") may grant to a special purpose funding vehicle identified as such in writing from time to time by the Granting Lender to the Administrative Agent and the Parent Borrower (an "SPC") the option to provide all or any part of any Loan that such Granting Lender would otherwise be obligated to make pursuant to this Agreement; provided that (i) nothing herein shall constitute a commitment by any SPC to fund any Loan, and (ii) if an SPC elects not to exercise such option or otherwise fails to make all or any part of such Loan, the Granting Lender shall be obligated to make such Loan pursuant to the terms hereof or, if it fails to do so, to make such payment to the Administrative Agent as is required under Section 2.12(b). Each party hereto hereby agrees that an SPC shall be entitled to the benefits of Sections 3.01, 3.04 and 3.05 (subject to the requirements and the limitations of such Sections and Section 3.08); provided that 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 the Borrowers under this Agreement (including under Section 3.01, 3.04 or 3.05), except to the extent that the SPC's right to a greater payment results from a change in any Law after the grant to the SPC takes place. Each party hereto further agrees that (i) no SPC shall be liable for any indemnity or similar payment obligation under this Agreement for which a Lender would be liable, and (ii) the Granting Lender shall for all purposes, including the approval of any amendment, waiver or other modification of any provision of any Loan Document, remain the Lender of record hereunder. Other than as expressly provided in this Section 10.07(g), (A) such Granting Lender's obligations under this Agreement shall remain unchanged, (B) such Granting Lender shall remain solely responsible to the other parties hereto for the performance of such obligations and (C) the Borrowers, the Agents and the other Lenders shall continue to deal solely and directly with such Granting Lender in connection with such Granting Lender's rights and obligations under this Agreement. The making of a 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. 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 debt of any SPC, it will not, other than in respect of matters unrelated to this Agreement or the transactions contemplated hereby, institute against, or join any other Person in instituting against, such SPC any bankruptcy, reorganization, arrangement, insolvency, or liquidation proceeding under the laws of the United States or any State thereof. Notwithstanding anything to the contrary contained herein, any SPC may (i) with notice to, but without prior consent of the Parent Borrower and the Administrative Agent and with the payment of a processing fee of $3,500, assign all or any portion of its rights hereunder with respect to any Loan to the Granting Lender and (ii) subject to Section 10.08, disclose on a confidential basis any non-public information relating to its funding of Loans to any rating agency, commercial paper dealer or provider of any surety or Guarantee or credit or liquidity enhancement to such SPC.

(h) Notwithstanding anything to the contrary herein, any Lender that is a Fund may create a security interest in all or any portion of the Loans owing to it and the Note, if any, held by it to the trustee for holders of obligations owed, or securities issued, by such Fund as security for such obligations or securities; provided that unless and until such trustee actually becomes a Lender in compliance with the other provisions of this Section 10.07, (i) no such pledge shall release the pledging Lender from any of its obligations under the Loan Documents, and (ii) such trustee shall not be entitled to exercise any of the rights of a Lender under the Loan Documents even though such trustee may have acquired ownership rights with respect to the pledged interest through foreclosure or otherwise.

(i) Notwithstanding anything to the contrary herein, any Lender may assign all or any portion of its Term Loans, Specified Refinancing Term Loans and New Term Loans hereunder to any Other Affiliate (including any Debt Fund Affiliate), but only if:

(i) the assigning Lender and Other Affiliate purchasing such Lender's Term Loans, Specified Refinancing Term Loans or New Term Loans, as applicable, shall execute and deliver to the Administrative Agent an assignment agreement substantially in the form of Exhibit E-2 hereto (an "Affiliate Lender Assignment and Assumption") in lieu of an Assignment and Assumption;

(ii) after giving effect to such assignment (and any cancellation of Loans in respect thereof), Other Affiliates (other than Debt Fund Affiliates) shall not, in the aggregate, own or hold Term Loans, Specified Refinancing Term Loans and New Term Loans with an aggregate principal amount in excess of 25% of the principal amount of all Term Loans then outstanding (calculated as of the date of such purchase); and

(iii) such Other Affiliate (other than Debt Fund Affiliates) shall at all times thereafter be subject to the voting restrictions specified in Section 10.01.

(j) Notwithstanding anything to the contrary herein, so long as no Default or Event of Default pursuant to Sections 8.01(a), (f) or (g) exists, any Lender may assign all or any portion of its Term Loans, Specified Refinancing Term Loans and New Term Loans hereunder to Holdings or any of its Subsidiaries, but only if:

(i) (A) such assignment is made pursuant to a Dutch Auction open to all Term Lenders, Specified Refinancing Term Loan lenders or New Term Loan lenders on a pro rata basis or (B) such assignment is made as an open market purchase;

(ii) Holdings and its Subsidiaries do not use the proceeds of the Revolving Credit Facility (whether or not the Revolving Credit Facility has been increased pursuant to Section 2.14 or refinanced pursuant to Section 2.18) to acquire such Term Loan; and

(iii) any such Term Loans shall be promptly and permanently cancelled upon acquisition thereof by Holdings or any of its Subsidiaries.

In connection with any assignment pursuant to Section 10.07(i) or (j), each Lender acknowledges and agrees that, in connection therewith, (1) the Other Affiliates, Holdings and/or any of its Subsidiaries may have, and later may come into possession of, information regarding the Sponsor, Holdings, any of its Subsidiaries and/or any of their respective Affiliates not known to such Lender and that may be material to a decision by such Lender to participate in such assignment (including material non-public information) ("Excluded Information"), (2) such Lender, independently and, without reliance on the Other Affiliates, Holdings, any of its Subsidiaries, any Agent or any of their respective Affiliates, has made its own analysis and determination to participate in such assignment notwithstanding such Lender's lack of knowledge of the Excluded Information and (3) none of the Other Affiliates, Holdings, any of its Subsidiaries, any Agent or any of their respective Affiliates shall be required to make any representation with respect to Excluded Information or have any liability to such Lender, and such Lender hereby waives and releases, to the extent permitted by law, any claims such Lender may have against Other Affiliates, Holdings, any of its Subsidiaries, any Agent or any of their respective Affiliates, under applicable laws or otherwise, with respect to the nondisclosure of the Excluded Information.

(k) Notwithstanding anything to the contrary herein, (i) Affiliate Lenders (other than Debt Fund Affiliates) shall not have any right to attend (including by telephone) any meeting or discussions (or portion thereof) among the Administrative Agent or any other Lender to which representatives of the Parent Borrower are not then present, (ii) Affiliate Lenders (other than Debt Fund Affiliates) shall not have any right to receive any information or material prepared by the Administrative Agent or any other Lender or any communication by or among the Administrative Agent and one or more other Lenders, except to the extent such information or materials have been made available to the Parent Borrower or its representatives, (iii) no assignments in respect of the Revolving Credit Facility may be made to the Sponsor or any of its Affiliates and (iv) the Sponsor and its Affiliates (other than Debt Fund Affiliates) shall not be entitled to receive advice of counsel to the Agents or other Lenders and shall not challenge any assertion of attorney-client privilege by any Agent or other Lender. Each Borrower and each Affiliate Lender (other than any Debt Fund Affiliates) hereby agrees that if a case under Title 11 of the Bankruptcy Code is commenced against the Borrowers, such Affiliate Lenders, with respect to any plan of reorganization that does not adversely affect any Affiliate Lender in any material respect as compared to other Lenders, shall be deemed to have voted in the same proportion as the Lenders that are not Affiliate Lenders voting on such matter; and each Affiliate Lender (other than any Debt Fund Affiliates) hereby acknowledges, agrees and consents that if, for any reason, its vote to accept or reject any plan pursuant to the Bankruptcy Code is not deemed to have been so voted, then such vote will be "designated" pursuant to Section 1126(e) of the 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 Bankruptcy Code.

(l) Notwithstanding anything to the contrary herein, any L/C Issuer may, upon 30 days' notice to the Parent Borrower and the Lenders, resign as L/C Issuer; provided that on or prior to the expiration of such 30-day period with respect to such resignation, the relevant L/C Issuer shall have identified a successor L/C Issuer willing to accept its appointment as successor L/C Issuer, and the effectiveness of such resignation shall be conditioned upon such successor assuming the rights and duties of the L/C Issuer. If an L/C Issuer resigns as L/C Issuer, it shall retain all the rights and obligations of an L/C Issuer hereunder with respect to all Letters of Credit outstanding as of the effective date of its resignation as L/C Issuer and all L/C Obligations with respect thereto (including the right to require the Lenders to make Base Rate Loans or fund risk participations in Unreimbursed Amounts pursuant to Section 2.03(d)). Upon the appointment of a successor L/C Issuer, (A) such successor shall succeed to and become vested with all of the rights, powers, privileges and duties of the retiring L/C Issuer, and (B) the successor L/C Issuer shall issue letters of credit in substitution for the Letters of Credit, if any, outstanding at the time of such succession or make other arrangements satisfactory to the retiring L/C Issuer to effectively assume the obligations of the retiring L/C Issuer with respect to such Letters of Credit.

(m) The applicable Lender, acting solely for this purpose as anon-fiduciary agent of the Borrowers (solely for tax purposes), shall maintain a register on which it enters the name and address of (i) each SPC (other than any SPC that is treated as a disregarded entity of the Granting Lender for U.S. federal income tax purposes) that has exercised its option pursuant to Section 10.07(g) and (ii) each Participant, and the amount of each such SPC's and Participant's interest in such Lender's rights and/or obligations under this Agreement complying with the requirements of Sections 163(f), 871(h) and 881(c)(2) of the Code and the United States Treasury Regulations (the "Participant Register"); provided that no Lender shall have any obligation to disclose all or any portion of the Participant Register (including the identity of any Participant or any information relating to a Participant's interest in any commitments, loans, letters of credit or its other obligations under any Loan Document) to any Person except to the extent that such disclosure is necessary in connection with a Tax audit or other proceeding to establish that such commitment, loan, letter of credit or other obligation is in registered form under Treasury Regulations Section 5f.103-1(c) and Proposed Treasury Regulations Section 1.163-5(b) (or any amended or successor version). The entries in the Participant Register shall be conclusive absent manifest error, and the Borrowers and such Lender shall treat each Person whose name is recorded in the Participant Register as the owner of the applicable rights and/or obligations of such Lender under this Agreement, notwithstanding notice to the contrary.

(n) In the event that a transfer by any of the Secured Parties of its rights and/or obligations under this Agreement (and/or any relevant Loan Document) occurred or was deemed to occur by way of novation, the Borrowers and any other Loan Parties explicitly agree that all securities and guarantees created under any Loan Documents shall be preserved for the benefit of the new Lender and the other Secured Parties.

(a) If any assignment or participation is made to any Disqualified Institution (other than a Net Short Lender) without the Parent Borrower's prior written consent pursuant to this Section 10.07, the Parent Borrower may, at its sole expense and effort, upon notice to the applicable Disqualified Institution and the Administrative Agent, (A) terminate any Revolving Credit Commitment of such Disqualified Institution and repay all obligations of the Borrowers owing to such Disqualified Institution in connection with such Revolving Credit Commitment, (B) in the case of outstanding Term Loans held by Disqualified Institutions, purchase or prepay such Term Loan by paying the lowest of (x) the principal amount thereof, (y) the amount that such Disqualified Institution paid to acquire such Term Loans and (z) the market price of such Term Loans, in each case plus accrued interest, accrued fees and all other amounts (other than principal amounts) payable to it hereunder and/or (C) require such Disqualified Institution to assign, without recourse (in accordance with and subject to the restrictions contained in this Section 10.07), all of its interest, rights and obligations under this Agreement to one or more Eligible Assignees at the lowest of (x) the principal amount thereof, (y) the amount that such Disqualified Institution paid to acquire such interests, rights and obligations and (z) the market price of such Term Loans, in each case *plus* accrued interest, accrued fees and all other amounts (other than principal amounts) payable to it hereunder. To the extent that any participation is purported to be made to any Person that was (at the time of such participation) a Net Short Lender on a pro forma basis for such participation, such transaction shall be subject to the applicable provisions of Section 10.25 (and the Borrowers shall be entitled to seek specific performance in any applicable court of law or equity to enforce this sentence).

Section 10.08 Confidentiality. Each of the Agents and the Lenders agrees to maintain the confidentiality of the Information, except that Information may be disclosed (a) to its Affiliates and to its and its Affiliates' respective partners, directors, officers, employees, trustees, representatives and agents, including accountants, legal counsel and other advisors and service providers on a need-to-know basis (it being understood that the Persons to whom such disclosure is made will be informed of the confidential nature of such Information and instructed to keep such Information confidential in accordance with customary practices); (b) to the extent requested by any regulatory authority having or claiming to have jurisdiction over such Agent, Lender or its respective Affiliates or in connection with any pledge or assignment permitted under clause (f) below; (c) in any legal, judicial, administrative proceeding or other compulsory process or otherwise as required by applicable Laws or regulations or by any subpoena or similar legal process, in each case based upon the reasonable advice of the disclosing Agent's or Lender's legal counsel (in which case the disclosing Agent or Lender, as applicable, agrees (except with respect to any audit or examination conducted by bank accountants or any governmental bank regulatory authority exercising examination or regulatory authority), to the extent not prohibited by applicable Law, to promptly notify the Parent Borrower prior to such disclosure); (d) to any other party to this Agreement; (e) in connection with the exercise of any remedies hereunder or under any other Loan Document or any suit, action or proceeding relating to this Agreement or any other Loan Document or the enforcement of rights hereunder or thereunder; (f) subject to an agreement containing provisions substantially the same (or more restrictive) as those of this Section 10.08, to any Eligible Assignee of or Participant in, or any prospective Eligible Assignee of or Participant in, any of its rights or obligations under this Agreement; provided that no such disclosure shall be made by such Lender or such Agent or any of their respective Affiliates to

any such Person that is a Disqualified Institution (but with respect to any Lender and its Affiliates, only to the extent the list of Disqualified Institutions has been made available to such Lender, and other than a Net Short Lender that provides a Net Short Representation at the time of such disclosure); (g) with the written consent of Holdings; (h) to the extent such Information becomes publicly available other than as a result of a breach of this Section 10.08; (i) to any state, federal or foreign authority or examiner (including the National Association of Insurance Commissioners or any other similar organization) regulating any Agent or Lender or any Affiliate of any Agent or Lender; (j) to any rating agency or the CUSIP Service Bureau or any similar agency when required by it (it being understood that, prior to any such disclosure, such rating agency shall undertake to preserve the confidentiality of any Information relating to the Loan Parties received by it from such Agent or Lender); (k) to any contractual counterparty (or prospective contractual counterparty) in any swap, hedge, or similar agreement or to any such contractual counterparty's (or prospective contractual counterparty's) professional advisor (other than a Disqualified Institution (but with respect to any Lender, only to the extent the list of Disqualified Institutions has been made available to such Lender, and other than a Net Short Lender that provides a Net Short Representation at the time of such disclosure)) and (l) in connection with any pledge or assignment pursuant to Sections 10.07(f) or (j), provided that such pledgee or assignee is directed to abide by the confidentiality provisions of this Section 10.08. In addition, the Agents and the Lenders may disclose the existence of this Agreement and information about this Agreement to market data collectors, similar service providers to the lending industry, and service providers to the Agents and the Lenders in connection with the administration and management of this Agreement, the other Loan Documents, the Commitments, and the Credit Extensions; provided that such Person is advised and agrees to be bound by the provisions of this Section 10.08.

For the purposes of this Section 10.08, "Information" means all information received from any Loan Party or any Subsidiary thereof relating to any Loan Party or any Subsidiary thereof or their respective businesses, other than any such information that (i) is publicly available to any Agent or any Lender, or any of their respective Affiliates, prior to disclosure by any Loan Party other than as a result of a breach of this Section 10.08 by such Lender or Agent, or such respective Affiliate, (ii) was already known to or in possession of Agent, any Lender or any of their respective Affiliates, (iii) is obtained by Agent or any Lender or any of their respective Affiliates from a third party who is not known by such Agent, such Lender or such respective Affiliate to be prohibited from disclosing the information to such party by a contractual, legal or fiduciary obligation to a Loan Party or any Subsidiary thereof, or (iv) is independently developed, discovered or arrived at by Agent or any Lender or any of their respective Affiliates. Any Person required to maintain the confidentiality of Information as provided in this Section 10.08 shall be considered to have complied with its obligation to do so if such Person has exercised the same degree of care to maintain the confidentiality of such Information as such Person would accord to its own confidential information.

Each Agent, each Lender and each L/C Issuer acknowledges that (i) the Information may include materialnon-public information concerning Holdings or any of its Subsidiaries, (ii) it has developed compliance procedures regarding the use of material non-public information and (iii) it will handle such material non-public information in accordance with applicable Law, including United States federal and state securities Laws.

EACH LENDER ACKNOWLEDGES THAT INFORMATION AS DEFINED IN THIS SECTION 10.08 FURNISHED TO IT PURSUANT TO THIS AGREEMENT MAY INCLUDE MATERIAL NON-PUBLIC INFORMATION CONCERNING HOLDINGS, THE BORROWERS AND THEIR RELATED PARTIES OR THEIR RESPECTIVE SECURITIES, AND CONFIRMS THAT IT HAS DEVELOPED COMPLIANCE PROCEDURES REGARDING THE USE OF MATERIAL NON-PUBLIC INFORMATION AND THAT IT WILL HANDLE SUCH MATERIALNON-PUBLIC INFORMATION IN ACCORDANCE WITH THOSE PROCEDURES AND APPLICABLE LAW, INCLUDING FEDERAL AND STATE SECURITIES LAWS.

ALL INFORMATION, INCLUDING REQUESTS FOR WAIVERS AND AMENDMENTS, FURNISHED BY THE BORROWERS OR THE ADMINISTRATIVE AGENT PURSUANT TO, OR IN THE COURSE OF ADMINISTERING, THIS AGREEMENT WILL BE SYNDICATE-LEVEL INFORMATION, WHICH MAY CONTAIN MATERIAL NON-PUBLIC INFORMATION ABOUT HOLDINGS OR ANY OF ITS SUBSIDIARIES OR THEIR RESPECTIVE SECURITIES. ACCORDINGLY, EACH LENDER REPRESENTS TO THE BORROWERS AND THE ADMINISTRATIVE AGENT THAT IT HAS IDENTIFIED IN ITS ADMINISTRATIVE QUESTIONNAIRE A CREDIT CONTACT WHO MAY RECEIVE INFORMATION THAT MAY CONTAIN MATERIAL NON-PUBLIC INFORMATION IN ACCORDANCE WITH ITS COMPLIANCE PROCEDURES AND APPLICABLE LAW.

Section 10.09 Setoff. In addition to any rights and remedies of the Lenders provided by Law, upon the occurrence and during the continuance of any Event of Default, each Secured Party is authorized at any time and from time to time, without prior notice to the Parent Borrower or any other Loan Party, any such notice being waived by Holdings (on its own behalf and on behalf of each Loan Party) to the fullest extent permitted by Law, to set off and apply any and all deposits (general or special, time or demand, provisional or final, in any currency), other than deposits in fiduciary accounts as to which a Loan Party is acting as fiduciary for another Person who is not a Loan Party and other than payroll or trust fund accounts, at any time held by, and other Indebtedness (in any currency) at any time owing by, such Lender to or for the credit or the account of the respective Loan Parties against any and all Obligations owing to such Secured Party hereunder or under any other Loan Document (or other Secured Document (as defined in the Security Agreement)), now or hereafter existing, irrespective of whether or not such Agent or such Lender shall have made demand under this Agreement or any other Loan Document (or other Secured Document (as defined in the Security Agreement)) and although such Obligations may be contingent or unmatured or denominated in a currency different from that of the applicable deposit or Indebtedness or are owed to a branch or office of such Lender different from the branch or office holding such deposit or obligated on such Indebtedness; provided that in the event that any Defaulting Lender shall exercise any such right of setoff, (x) all amounts so set off shall be paid over immediately to the Administrative Agent for further application in accordance with the provisions of Section 2.17 and, pending such payment, shall be segregated by such Defaulting Lender from its other funds and deemed held in trust for the benefit of the Administrative Agent and the Lenders, and (y) the Defaulting Lender shall provide promptly to the Administrative Agent a statement describing in reasonable detail the Obligations owing to such Defaulting Lender as to which it exercised such right of setoff. Each Secured Party agrees promptly to notify the Parent Borrower and the Administrative Agent after any such set-off and application made by such Secured Party; provided, however, that the failure to give such notice shall not affect the validity of such setoff and application. The rights of the Administrative Agent and each Secured Party under this Section 10.09 are in addition to other rights and remedies (including other rights of setoff) that the Administrative Agent and such Secured Party may have. Notwithstanding anything herein or in any other Loan Document to the contrary, in no event shall the assets of any Controlled Foreign Subsidiary or FSHCO (or other Excluded Property) constitute security for payment of the Obligations of the Borrower, it being understood that (a)(i) the Capital Stock of any Controlled Foreign Subsidiary or FSHCO that is directly owned by a Borrower or a Subsidiary Guarantor does not constitute such an asset, and may be pledged, to the extent set forth in Section 6.12 and (ii) proceeds of Excluded Property shall constitute security for payment of the Obligations of the Borrowers (unless such proceeds would constitute Excluded Property) and (b) the provisions hereof shall not limit, reduce or otherwise diminish in any respect the Borrowers' obligations to make any mandatory prepayment pursuant to Section 2.05(b)(ii).

Section 10.10 Interest Rate Limitation. Notwithstanding anything to the contrary in any Loan Document, the interest paid or agreed to be paid under the Loan Documents shall not exceed the maximum rate of non-usurious interest permitted by applicable Law (the "Maximum Rate"). If any Agent or any Lender shall receive interest in an amount that exceeds the Maximum Rate, the excess interest shall be applied to the principal of the Loans or, if it exceeds such unpaid principal, refunded to the Borrower. In determining whether the interest contracted for, charged, or received by an Agent or a Lender exceeds the Maximum Rate, such Person may, to the extent permitted by applicable Law, (a) characterize any payment that is not principal as an expense, fee, or premium rather than interest, (b) exclude voluntary prepayments and the effects thereof and (c) amortize, prorate, allocate, and spread in equal or unequal parts the total amount of interest throughout the contemplated term of the Obligations hereunder.

Section 10.11 Counterparts. This Agreement and each other Loan Document may be executed in one or more counterparts (and by different parties hereto in different 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 and each other Loan Document shall be effective as delivery of an original executed counterpart of this Agreement and such other Loan Document. The Agents may also require that any such documents and signatures delivered by telecopier or other electronic transmission be confirmed by a manually-signed original thereof; provided that the failure to request or deliver the same shall not limit the effectiveness of any document or signature delivered by telecopier or other electronic transmission.

Section 10.12 Integration; Effectiveness. This Agreement and the other Loan Documents constitute the entire contract 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. In the event of any conflict between the

provisions of this Agreement and those of any other Loan Document, the provisions of this Agreement shall control; provided that the inclusion of supplemental rights or remedies in favor of the Agents or the Lenders in any other Loan Document shall not be deemed a conflict with this Agreement. Each Loan Document was drafted with the joint participation of the respective parties thereto and shall be construed neither against nor in favor of any party, but rather in accordance with the fair meaning thereof. Except as provided in Section 4.01 or Section 4.02, this Agreement shall become effective when it shall have been executed by the Administrative Agent and when the Administrative Agent shall have received counterparts hereof that, when taken together, bear the signatures of each of the other parties hereto as of the date hereof.

Section 10.13 Survival of Representations and Warranties. All representations and warranties made hereunder and in any other Loan Document or other document delivered pursuant hereto or thereto or in connection herewith or therewith shall survive the execution and delivery hereof and thereof. Such representations and warranties have been or will be relied upon by each Agent and each Lender, regardless of any investigation made by any Agent or any Lender or on their behalf and notwithstanding that any Agent or any Lender may have had notice or knowledge of any Default at the time of any Credit Extension, and shall continue in full force and effect as long as any Loan or any other Obligation (other than contingent indemnification or other obligations and obligations and liabilities under Secured Cash Management Agreements and Secured Hedge Agreements) hereunder shall remain unpaid or unsatisfied or any Letter of Credit shall remain outstanding (other than Letters of Credit which have been Cash Collateralized).

Section 10.14 Severability. If any provision of this Agreement or the other Loan Documents is held to be illegal, invalid or unenforceable, (a) the legality, validity and enforceability of the remaining provisions of this Agreement and the other Loan Documents shall not be affected or impaired thereby and (b) the parties shall endeavor in good faith negotiations to replace the illegal, invalid or unenforceable provisions with valid provisions the economic effect of which comes as close as possible to that of the illegal, invalid or unenforceable provisions. The invalidity of a provision in a particular jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction. Without limiting the foregoing provisions of this Section 10.14, if and to the extent that the enforceability of any provisions in this Agreement relating to Defaulting Lenders shall be limited by Debtor Relief Laws then such provisions shall be deemed to be in effect only to the extent not so limited.

Section 10.15 Governing Law; Jurisdiction; Etc.

(a) Governing Law. THIS AGREEMENT AND EACH OTHER LOAN DOCUMENT (OTHER THAN WITH RESPECT TO ANY COLLATERAL DOCUMENTS TO THE EXTENT EXPRESSLY PROVIDED OTHERWISE THEREIN) SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK WITHOUT GIVING EFFECT TO THE CONFLICTS OF LAWS PRINCIPLES THEREOF, BUT INCLUDING SECTION 5-1401 OF THE NEW YORK GENERAL OBLIGATIONS LAW.

(b) Submission to Jurisdiction. EACH PARTY HERETO IRREVOCABLY AND UNCONDITIONALLY SUBMITS, FOR ITSELF AND ITS PROPERTY, TO THE EXCLUSIVE JURISDICTION OF THE COURTS OF THE STATE OF NEW YORK SITTING IN NEW YORK CITY IN THE BOROUGH OF MANHATTAN AND OF THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK SITTING IN THE BOROUGH OF MANHATTAN, AND ANY APPELLATE COURT FROM ANY THEREOF, IN ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT (OTHER THAN WITH RESPECT TO ANY COLLATERAL DOCUMENT TO THE EXTENT EXPRESSLY PROVIDED OTHERWISE THEREIN), OR FOR RECOGNITION OR ENFORCEMENT OF ANY JUDGMENT, AND EACH OF THE PARTIES HERETO IRREVOCABLY AND UNCONDITIONALLY AGREES THAT ALL CLAIMS IN RESPECT OF ANY SUCH ACTION OR PROCEEDING MAY BE HEARD AND DETERMINED IN SUCH NEW YORK STATE COURT OR, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, IN SUCH FEDERAL COURT. EACH OF THE PARTIES HERETO AGREES THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING SHALL BE CONCLUSIVE AND MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY LAW. NOTHING IN THIS AGREEMENT OR IN ANY OTHER LOAN DOCUMENT SHALL AFFECT ANY RIGHT THAT THE ADMINISTRATIVE AGENT, THE COLLATERAL AGENT, ANY LENDER OR ANY L/C ISSUER MAY OTHERWISE HAVE TO BRING ANY ACTION OR PROCEEDING RELATING TO THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT OR THE RECOGNITION OR ENFORCEMENT OF ANY JUDGMENT AGAINST ANY LOAN PARTY OR ITS PROPERTIES IN THE COURTS OF ANY JURISDICTION.

(c) Waiver of Venue. EACH PARTY HERETO IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY OBJECTION THAT IT MAY NOW OR HEREAFTER HAVE TO THE LAYING OF VENUE OF ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT IN ANY COURT REFERRED TO IN SECTION 10.15(b). EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, THE DEFENSE OF AN INCONVENIENT FORUM TO THE MAINTENANCE OF SUCH ACTION OR PROCEEDING IN ANY SUCH COURT.

Section 10.16 Service of Process. EACH PARTY HERETO IRREVOCABLY CONSENTS TO SERVICE OF PROCESS IN THE MANNER PROVIDED FOR NOTICES IN SECTION 10.02. NOTHING IN THIS AGREEMENT WILL AFFECT THE RIGHT OF ANY PARTY HERETO TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY APPLICABLE LAW.

Section 10.17 Waiver of Right to Trial by Jury. EACH PARTY TO THIS AGREEMENT HEREBY EXPRESSLY WAIVES ANY RIGHT TO TRIAL BY JURY OF ANY CLAIM, DEMAND, ACTION OR CAUSE OF ACTION ARISING UNDER ANY LOAN DOCUMENT OR IN ANY WAY CONNECTED WITH OR RELATED OR INCIDENTAL TO THE DEALINGS OF THE PARTIES HERETO OR ANY OF THEM WITH RESPECT TO ANY LOAN DOCUMENT, OR THE TRANSACTIONS RELATED THERETO, IN EACH CASE WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER FOUNDED IN CONTRACT OR TORT OR OTHERWISE; AND EACH PARTY HEREBY AGREES AND CONSENTS THAT ANY SUCH CLAIM, DEMAND, ACTION OR CAUSE OF ACTION SHALL BE DECIDED BY COURT TRIAL WITHOUT A JURY, AND THAT ANY PARTY TO THIS AGREEMENT MAY FILE AN ORIGINAL COUNTERPART OR A COPY OF THIS SECTION 10.17 WITH ANY COURT AS WRITTEN EVIDENCE OF THE CONSENT OF THE SIGNATORIES HERETO TO THE WAIVER OF THEIR RIGHT TO TRIAL BY JURY.

Section 10.18 Binding Effect. When this Agreement shall have become effective in accordance with Section 10.12, it shall thereafter shall be binding upon and inure to the benefit of Holdings, the Borrowers, each Agent and each Lender and their respective successors and permitted assigns, except that the Borrowers shall not have the right to assign their rights hereunder or any interest herein without the prior written consent of the Lenders, except as permitted by Section 7.03.

Section 10.19 No Advisory or Fiduciary Responsibility. In connection with all aspects of each transaction contemplated hereby (including in connection with any amendment, waiver or other modification hereof or of any other Loan Document), the Borrowers and Holdings acknowledge and agree, and each of them acknowledge its Subsidiaries' understanding and acknowledge and agree that it has informed their other Affiliates, that: (i) (A) no Secured Party will have any obligations except those obligations expressly set forth herein and no fiduciary, advisory or agency relationship between any of Holdings and its Subsidiaries and any Agent or any Arranger (or their respective Affiliates) is intended to be or has been created in respect of any of the transactions contemplated hereby and by the other Loan Documents, irrespective of whether any Agent or any Arranger (or their respective Affiliates) has advised or is advising Holdings and its Subsidiaries on other matters, (B) the arranging and other services regarding this Agreement provided by the Agents and the Arrangers (or their respective Affiliates) are arm's-length commercial transactions between Holdings and its Subsidiaries, on the one hand, and the Agents and the Arrangers (or their respective Affiliates), on the other hand and no Secured Party is acting as a financial advisor or a fiduciary to, or an agent of the Borrowers or any other person, (C) no Secured Party is advising the Borrowers as to any legal, tax, investment, accounting, regulatory or any other matters in any jurisdiction and the Borrowers shall consult with its own advisors concerning such matters and shall be responsible for making their own independent investigation and appraisal of the transactions contemplated hereby, and the Secured Parties shall have no responsibility or liability to the Borrowers with respect thereto, and (D) the Borrowers and Holdings are capable of evaluating, and understand and accept, the terms, risks and conditions of the transactions contemplated hereby and by the other Loan Documents; (ii) (A) each Agent and Arranger (or their respective Affiliates) is and has been acting solely as a principal and, except as may otherwise be expressly agreed in writing by the relevant parties, has not been, is not, and will not be acting as an advisor, agent or fiduciary for Holdings or the Borrowers or any of their respective Affiliates, or any other Person

and (B) neither any Agent nor any Arranger has any obligation to Holdings or any of its Affiliates with respect to the transactions contemplated hereby except those obligations expressly set forth herein and in the other Loan Documents; and (iii) each Secured Party and its Affiliates may be providing debt financing, equity capital or other services (including financial advisory services) to other companies in respect of which the Borrowers may have conflicting interests regarding the transactions described herein and otherwise; that no Secured Party will use confidential information obtained from the Borrowers by virtue of the transactions contemplated by the Loan Documents or its other relationships with the Borrowers in connection with the performance by such Secured Party of services for other companies, and no Secured Party will furnish any such information to other companies and that no Secured Party has any obligation to use in connection with the transactions contemplated by the Loan Documents, or to furnish to the Borrower, confidential information obtained from other companies. The Borrowers agree that they will not assert any claim against any Secured Party based on an alleged breach of fiduciary duty by such Secured Party in connection with this Agreement or the other Loan Documents and the transactions contemplated hereby.

Section 10.20 Affiliate Activities. The Borrowers and Holdings acknowledge that each Agent and each Arranger (and their respective Affiliates) is a full service securities firm engaged, either directly or through affiliates, in various activities, including securities trading, investment banking and financial advisory, investment management, principal investment, hedging, financing and brokerage activities and financial planning and benefits counseling for both companies and individuals. In the ordinary course of these activities, any of them may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and/or financial instruments (including bank loans) for their own account and for the accounts of customers and may at any time hold long and short positions in such securities and/or instruments. Such investment and other activities may involve securities and instruments of Holdings and its Affiliates, as well as of other entities and persons and their Affiliates which may (i) be involved in transactions arising from or relating to the engagement contemplated hereby and by the other Loan Documents, (ii) be customers or competitors of Holdings and its Affiliates or (iii) have other relationships with Holdings and its Affiliates. In addition, it may provide investment banking, underwriting and financial advisory services to such other entities and persons. It may also co-invest with, make direct investments in, and invest orco-invest client monies in or with funds or other investment vehicles managed by other parties, and such funds or other investment vehicles may trade or make investments in securities of Holdings and its Affiliates or such other entities. The transactions contemplated hereby and by the other Loan Documents may have a direct or indirect impact on the investments, securities or instruments referred to in this clause.

Section 10.21 Electronic Execution of Assignments and Certain Other Documents. The words "execution," "signed," "signature," and words of like import in any Loan Document, any Assignment and Assumption, any Committed Loan Notice or any amendment or other modification hereof or thereof (including waivers and consents) shall be deemed to include Electronic Signatures or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable Law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act; *provided* that the Administrative Agent shall be permitted to reasonably request original signatures with respect to any Loan Document.

Section 10.22 USA PATRIOT Act. Each Lender that is subject to the PATRIOT Act 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 USA PATRIOT Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001, as amended from time to time)) (the "PATRIOT Act"), it is required to obtain, verify and record information that identifies each Loan Party, which information includes the name and address of each Loan Party and other information that will allow such Lender or the Administrative Agent, as applicable, to identify each Loan Party in accordance with the PATRIOT Act. Each Loan Party shall, promptly following a request by the Administrative Agent or any Lender, provide all documentation and other information that the Administrative Agent or such Lender requests in order to comply with its ongoing obligations under applicable "know your customer" and anti-money laundering rules and regulations, including the PATRIOT Act.

Section 10.23 Judgment Currency. If, for the purposes of obtaining judgment in any court, it is necessary to convert a sum due hereunder or any other Loan Document in one currency into another currency, the rate of exchange used shall be that at which in accordance with normal banking procedures the Administrative Agent could purchase the first currency with such other currency on the Business Day preceding that on which final judgment is

given. The obligation of the Borrowers in respect of any such sum due from them to the Administrative Agent or the Lenders hereunder or under the other Loan Documents shall, notwithstanding any judgment in a currency (the "Judgment Currency") other than that in which such sum is denominated in accordance with the applicable provisions of this Agreement (the "Agreement Currency"), be discharged only to the extent that on the Business Day following receipt by the Administrative Agent of any sum adjudged to be so due in the Judgment Currency, the Administrative Agent may in accordance with normal banking procedures purchase the Agreement Currency with the Judgment Currency. If the amount of the Agreement Currency so purchased is less than the sum originally due to the Administrative Agent from the Borrowers in the Agreement Currency, the Borrowers agree, as a separate obligation and notwithstanding any such judgment, to indemnify the Administrative Agent or the Person to whom such obligation was owing against such loss. If the amount of the Agreement Currency so purchased is greater than the sum originally due to the Administrative Agent in such currency, the Administrative Agent agrees to return the amount of any excess to the Parent Borrower (or to any other Person who may be entitled thereto under applicable Law).

Section 10.24 Acknowledgement and Consent to Bail-In of Affected 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 Lender that is an Affected 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 the applicable 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 the applicable Resolution Authority to any such liabilities arising hereunder which may be payable to it by any Lender that is an Affected 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 Affected Financial Institution, its parent undertaking, 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 the applicable Resolution Authority.

Section 10.25 Disqualified Lenders and Net Short Positions. No Net Short Lender shall have the right to approve or disapprove any amendment, waiver or consent pursuant to Section 10.01 or under any Loan Document. In connection with any determination as to whether the requisite Lenders (including whether the Required Lenders or Required Facility Lenders) have provided any amendment, waiver or consent pursuant to Section 10.01 or under any other Loan Document:

(a) Net Short Lenders shall not be considered, and

(b) Net Short Lenders shall be deemed to have consented to any such amendment, waiver or consent with respect to its interest as a Lender in the same proportion as the allocation of voting with respect to such matter by Lenders who are not Net Short Lenders.

Each Lender that is not an Unrestricted Lender that delivers a written consent to any amendment, waiver or consent pursuant to Section 10.01 or under any other Loan Document shall concurrently deliver (or in the absence of any written Net Short Representation will be deemed to have delivered, concurrently with providing such consent) to the Borrowers (with a copy to the Administrative Agent) a Net Short Representation.

Section 10.26 Acknowledgement Regarding Any Supported QFCs. To the extent that the Loan Documents provide support, through a guarantee or otherwise, for Swap Contract or any other agreement or instrument that is a QFC (such support, "QFC Credit Support" and each such QFC a "Supported QFC"), the parties acknowledge and agree as follows with respect to the resolution power of the Federal Deposit Insurance Corporation under the Federal Deposit Insurance Act and Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act (together with the regulations promulgated thereunder, the "U.S. Special Resolution Regimes") in respect of such Supported QFC and QFC Credit Support (with the provisions below applicable notwithstanding that the Loan Documents and any Supported QFC may in fact be stated to be governed by the laws of the State of New York and/or of the United States or any other state of the United States):

(a) In the event a Covered Entity that is party to a Supported QFC (each, a "Covered Party") becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer of such Supported QFC and the benefit of such QFC Credit Support (and any interest and obligation in or under such Supported QFC and such QFC Credit Support, and any rights in property securing such Supported QFC or such QFC Credit Support) from such Covered Party will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if the Supported QFC and such QFC Credit Support (and any such interest, obligation and rights in property) were governed by the laws of the United States or a state of the United States. In the event a Covered Party or a BHC Act Affiliate of a Covered Party becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under the Loan Documents that might otherwise apply to such Supported QFC or any QFC Credit Support that may be exercised against such Covered Party are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if the Supported QFC and the Loan Documents were governed by the laws of the United States or a state of the United States. Without limitation of the foregoing, it is understood and agreed that rights and remedies of the parties with respect to a Defaulting Lender shall in no event affect the rights of any Covered Party with respect to a Supported QFC or any QFC Credit Support.

(b) As used in this Section 10.26, the following terms have the following meanings:

"BHC Act Affiliate" of a party means an "affiliate" (as such term is defined under, and interpreted in accordance with, 12 U.S.C. 1841(k)) of such party.

"Covered Entity" means any of the following: (i) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (ii) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (iii) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b).

"Default Right" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable.

"QFC" has the meaning assigned to the term "qualified financial contract" in, and shall be interpreted in accordance with, 12 U.S.C. 5390(c)(8)(D).

[REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the date first written above.

MARAVAI INTERMEDIATE HOLDINGS, LLC,
as Parent Borrower

By: /s/ Kevin Herde
Name: Kevin Herde
Title: Chief Financial Officer

VECTOR LABORATORIES, INC., as a Borrower

By: /s/ Kevin Herde
Name: Kevin Herde
Title: Chief Financial Officer

TRILINK BIOTECHNOLOGIES, LLC,
as a Borrower

By: /s/ Kevin Herde
Name: Kevin Herde
Title: Chief Financial Officer

CYGNUS TECHNOLOGIES, LLC,
as a Borrower

By: /s/ Kevin Herde
Name: Kevin Herde
Title: Chief Financial Officer

MARAVAI TOPCO HOLDINGS, LLC,
as Holdings

By: /s/ Kevin Herde
Name: Kevin Herde
Title: Chief Financial Officer

MORGAN STANLEY SENIOR FUNDING, INC., as Administrative Agent, Collateral Agent, an L/C Issuer and a Lender

By: /s/ Graham Robertson
Name: Graham Robertson
Title: Authorized Signatory

[Signature Page to Credit Agreement]

MORGAN STANLEY BANK, N.A., as a Lender

By: /s/ Graham Robertson
Name: Graham Robertson
Title: Authorized Signatory

[Signature Page to Credit Agreement]

GOLDMAN SACHS BANK USA, as an L/C Issuer and a Revolving Credit Lender

By: /s/ Thomas Manning
Name: Thomas Manning
Title: Authorized Signatory

[Signature Page to Credit Agreement]

JEFFERIES FINANCE LLC, as an L/C Issuer and a Revolving Credit Lender

By: /s/ Jason Kennedy
Name: Jason Kennedy
Title: Managing Director

ANTARES HOLDINGS LP, as an L/C Issuer and a Revolving Credit Lender
By: Antares Holdings GP Inc., its general partner

By: /s/ Bradley Mashinter
Name: Bradley Mashinter
Title: Duly Authorized Signatory

[Signature Page to Credit Agreement]

UBS AG, STAMFORD BRANCH, as an L/C Issuer and a Revolving Credit Lender

By: /s/ Houssem Daly
Name: Houssem Daly
Title: Associate Director

By: /s/ Anthony Joseph
Name: Anthony Joseph
Title: Associate Director

BANK OF AMERICA, N.A., as an L/C Issuer and a Revolving Credit Lender

By: /s/ David H. Strickert
Name: David H. Strickert
Title: Managing Director

[Signature Page to Credit Agreement]

CREDIT SUISSE AG, CAYMAN ISLANDS BRANCH, as an L/C Issuer and a Revolving Credit Lender

By: /s/ William O'Daly
Name: William O'Daly
Title: Authorized Signatory

By: /s/ Andrew Griffin
Name: Andrew Griffin
Title: Authorized Signatory