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

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2017

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to .

Commission file number: 001-37856

Medpace Holdings, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**32-0434904**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

5375 Medpace Way, Cincinnati, OH 45227
(Address of principal executive offices) (Zip Code)

(513) 579-9911
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Name of each exchange on which registered**
Common Stock, par value $0.01 per share	**Nasdaq Global Select Market**

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting 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	☐ (Do not check if a smaller reporting company)	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 13(a) of the Exchange Act. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant, based upon the closing sale price as reported on the Nasdaq Global Select Market on June 30, 2017, the last business day of the registrant's most recently completed second fiscal quarter, was approximately $182 million. For purposes of this computation, shares of the registrant's common stock held by each executive officer, director, and each person known to the registrant to own 10% or more of the outstanding voting power have been excluded in that such persons are affiliates.

Indicate the number of shares outstanding of each of the issuer's classes of Common Stock, as of the latest practicable date.

Class	**Number of Shares Outstanding**
Common Stock $0.01 par value	**35,484,924 shares outstanding as of February 23, 2018**

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement to be filed with the Securities and Exchange Commission relating to the 2018 Annual Meeting of Stockholders are incorporated herein by reference into Part III of this Annual Report on Form 10-K to the extent stated herein.

MEDPACE HOLDINGS, INC. AND SUBSIDIARIES
ANNUAL REPORT ON FORM 10-K
FOR FISCAL YEAR ENDED DECEMBER 31, 2017

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements. We intend such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All statements other than statements of historical facts contained herein, including statements regarding our results of operations; financial position and performance; liquidity and our ability to fund our business operations and initiatives; capital expenditure and debt service obligations; business strategies, plans and goals, including those related to marketing, acquisitions and expansion of our business; product approvals and plans; industry trends; expectations regarding consumer behaviors and trends; our culture and operating philosophy; human resource management; arrangements with and delivery of our services to the customers; conversion of backlog; dividend policy; legal proceedings; and our objectives for future operations, are forward-looking statements. The words “expect,” “anticipate,” “intend,” “plan,” “believe,” “seek,” “see,” “will,” “would,” “target,” and similar expressions are intended to identify forward-looking statements. Forward-looking statements are based largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives, and financial needs. These forward-looking statements are subject to inherent uncertainties, risks, changes in circumstances and other important factors that are difficult to predict. Moreover, we operate in a very competitive and rapidly changing environment in which new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all important factors on our business or the extent to which any factor, or combination of such factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed may not occur and our financial condition and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. We caution you therefore against relying on these forward-looking statements. Some of the important factors that could cause actual results to differ from our expectations include regional, national, or global political, economic, business, competitive, market and regulatory conditions and the other important factors included in “Item 1A Risk Factors” of Part I of this Annual Report on Form 10-K. We qualify all of our forward-looking statements by these cautionary statements. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise. For a further discussion of the risks relating to our business, see “Item 1A Risk Factors” of Part I of this Annual Report on Form 10-K.

WEBSITE AND SOCIAL MEDIA DISCLOSURE

We use our website (www.medpace.com) and our corporate Facebook, YouTube, LinkedIn, Vimeo, Instagram and Twitter accounts as channels of distribution of company information. The information we post through these channels may be deemed material. Accordingly, investors should monitor these channels, in addition to following our press releases, Securities and Exchange Commission, or SEC, filings and public conference calls and webcasts. The contents of our website and social media channels are not, however, a part of this report.

TRADEMARKS

We own or have the rights to use various trademarks referred to in this Annual Report on Form 10-K, including, among others, Medpace and ClinTrak and their respective logos. Solely for convenience, we may refer to trademarks in this Annual Report on Form 10-K without the TM and ® symbols. Such references are not intended to indicate, in any way, that we will not assert, to the fullest extent permitted by law, our rights to our trademarks. Other trademarks appearing in this Annual Report on Form 10-K are the property of their respective owners.

MARKET AND INDUSTRY INFORMATION

Market data used throughout this Annual Report on Form 10-K is based on management's knowledge of the industry and the good faith estimates of management. All of management's estimates presented herein are based on industry sources, including analyst reports and management's knowledge. We also relied, to the extent available, upon management's review of independent industry surveys and publications prepared by a number of sources and other publicly available information. We are responsible for all of the disclosure in this Annual Report on Form 10-K and while we believe that each of the publications, studies and surveys used throughout this Annual Report on Form 10-K are prepared by reputable sources, we have not independently verified market and industry data from third-party sources.

All of the market data used in this Annual Report on Form 10-K involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. While we believe the estimated market position, market opportunity and market size information included in this Annual Report on Form 10-K is generally reliable, such information, which in part is derived from management's estimates and beliefs, is inherently uncertain and imprecise and has not been verified by any independent source. Projections, assumptions and estimates of our future performance and the future performance of the industry in which we operate are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in "Item 1A Risk Factors" of Part I of this Annual Report on Form 10-K and elsewhere in this Annual Report on Form 10-K. These and other factors could cause results to differ materially from those expressed in our estimates and beliefs and in the estimates prepared by independent parties. See "Forward-Looking Statements" above.

GLOSSARY

We define the terms below that appear throughout this report as follows:

"Large pharmaceutical companies." Large pharmaceutical companies represent the top 20 pharmaceutical companies by worldwide prescription drug sales in the year ended December 31, 2016 as classified by Evaluate Ltd in EvaluatePharma© World Preview 2017 Outlook to 2022, an industry report.

"Mid-sized biopharmaceutical companies." Mid-sized biopharmaceutical companies represent biopharmaceutical companies with at least $250 million in sales in the year ended December 31, 2016, based on publicly available data and management's knowledge, that are not classified as a top 20 pharmaceutical company by Evaluate Ltd in EvaluatePharma© World Preview 2017 Outlook to 2022, an industry report.

"Phase I." Phase I trials are typically conducted in healthy individuals or, on occasion, in patients, and typically involve 20 to 80 subjects and range from a few months to several years. These trials are designed to establish the basic safety, dose tolerance, absorption, metabolism, distribution and excretion of the clinical product candidate, the side effects associated with increasing doses, and if possible, early evidence of effectiveness. If the trial establishes the basic safety and metabolism of the clinical product candidate, Phase II trials are generally initiated.

"Phase II." Phase II trials are conducted in a limited population of patients with the disease or condition that the clinical product candidate is intended to treat. These trials typically test a few hundred patients and last on average 12 to 18 months. Phase II trials are typically designed to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the clinical product candidate for specific targeted diseases or conditions, and to determine dose tolerance, optimal dosage and dosing schedule. Phase II trials are sometimes divided into two phases: Phase IIa trials typically evaluate the dose response of the clinical product candidate and Phase IIb trials typically evaluate the efficacy of the clinical product candidate at the prescribed doses. If the Phase II trials indicate that the clinical product candidate may be safe and effective, Phase III trials are generally initiated.

"Phase III." Phase III trials evaluate the clinical product candidate in significantly larger and more diverse patient populations than Phase I and II trials and are conducted at multiple, geographically dispersed sites. On average, this phase lasts from one to three years. Depending on the size and complexity, Phase III CRO contracts may include multiple sequential trials. During this phase, the clinical product candidate's overall benefit/risk ratio and the basis for product approval are established. If the clinical product candidate successfully completes Phase III, then the sponsor may submit a New Drug Application, or NDA, or Biologics License Application for approval by the United

States Food and Drug Administration, or FDA, or a similar marketing authorization application for approval by non-U.S. regulatory agencies.

“Phase IV.” Phase IV or “post-approval” trials are intended to monitor the drug’s long-term risks and benefits, to analyze different dosage levels, to evaluate different safety and efficacy parameters in target populations or to substantiate marketing claims. Phase IV trials typically enroll thousands of patients and last from six months to several years. The FDA may require Phase IV testing and surveillance programs to monitor the effect of approved drugs which have been commercialized, and the FDA has the power to prevent or limit further marketing of a product based on the results of post-marketing programs.

“Small biopharmaceutical companies.” Small biopharmaceutical companies represent biopharmaceutical companies that have less than $250 million in sales in the year ended December 31, 2016, based on publicly available data and management’s knowledge.

Part I

Item 1. Business

Overview

We are one of the world's leading clinical contract research organizations, or CROs, by revenue, solely focused on providing scientifically-driven outsourced clinical development services to the biotechnology, pharmaceutical and medical device industries. Our mission is to accelerate the global development of safe and effective medical therapeutics. We differentiate ourselves from our competitors by our disciplined operating model centered on providing full-service Phase I-IV clinical development services and our therapeutic expertise. We believe this combination results in timely and cost-effective delivery of clinical development services for our customers. We believe that we are a partner of choice for small and mid-sized biopharmaceutical companies based on our ability to consistently utilize our full-service, disciplined operating model to deliver timely and high-quality results for our customers. Accordingly, we believe we are well positioned to continue to expand our market share in the growing Phase I-IV CRO market.

We were founded in 1992 by Dr. August J. Troendle, an industry pioneer, as a Phase II-IV focused CRO with a strong, scientifically-driven and disciplined operating model, and we continue today as a founder-led enterprise with Dr. Troendle retaining a significant ownership stake in Medpace. Throughout our 25-year history, we have grown almost exclusively organically, with our core founding members having been integrally involved in developing and instilling our differentiated culture and operating philosophy across our company. We focus on conducting clinical trials across all major therapeutic areas, with particular strength in Cardiology, Metabolic Disease, Oncology, Endocrinology, Central Nervous System, or CNS, and Antiviral and Anti-infective or AVAI, as well as therapeutic expertise in Medical Devices. Our global platform includes approximately 2,500 employees across 35 countries, providing our customers with broad access to diverse markets and patient populations as well as local regulatory expertise and market knowledge.

Our singular focus on executing our disciplined, full-service operating model is a core tenet of our differentiated approach. Our operating model entails partnering with our customers from the beginning of the clinical trial process and holistically navigating all subsequent components of the process. This approach differs from other leading CROs that provide functional or partial outsourcing services as a core component of their business. We believe our full-service approach allows us to deliver timely and high-quality results for our customers. By clearly communicating and aligning our expectations with those of our customers at the beginning of an engagement, we develop a trusted relationship where our customers typically grant us greater control over the clinical trial process. This results in greater accountability on our part and, we believe, more consistent delivery of our services. We believe our partnering approach, coupled with our full-service, scientifically-driven model, ensures efficient and high-quality trial execution, limits changes in the scope of trials and enables timely completion of trials.

We focus on providing clinical development solutions primarily to companies that recognize the benefits of utilizing our full-service outsourcing model. We believe our model is particularly attractive to small and mid-sized biopharmaceutical companies, which seek specialized capabilities and infrastructure required for complex and global clinical trials, including therapeutic expertise, insightful protocol design, project feasibility assessment and timely and high-quality trial execution. We expect that outsourced development expenditures for small and mid-sized biopharmaceutical companies will continue to grow. We believe we can expand our market share with this customer segment given our continued strategic focus and the attractiveness of our model to these companies. Furthermore, as the clinical development and regulatory processes grow increasingly more global and complex, we believe large pharmaceutical companies will increasingly recognize the benefits of our disciplined, full-service operating model. For the year ended December 31, 2017, we generated 64%, 25% and 11% of our net service revenue from small biopharmaceutical companies, mid-sized biopharmaceutical companies and large pharmaceutical companies, respectively.

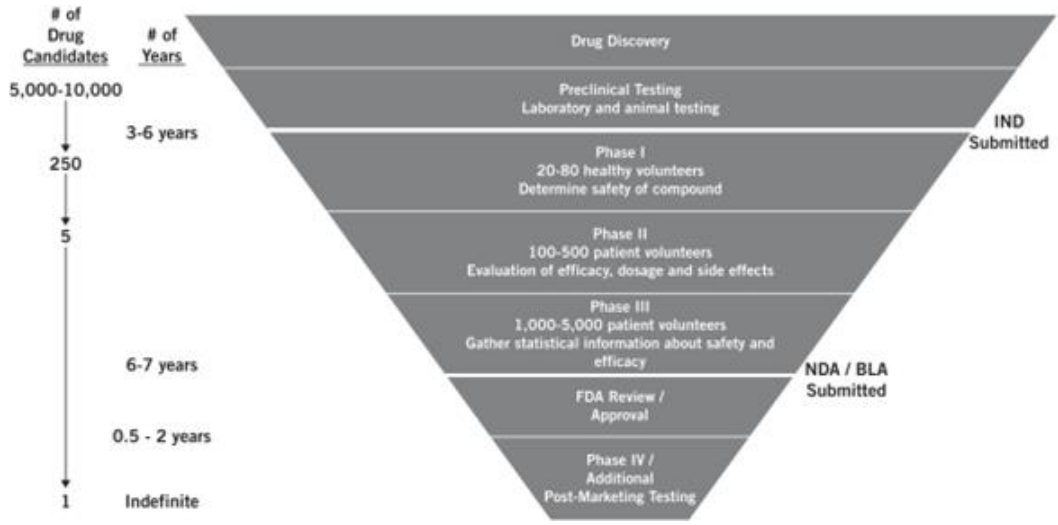
Our Market

Clinical Development Process

Before a new drug can be commercialized, it often must undergo extensive pre-clinical and clinical testing and regulatory review to verify safety and efficacy. CROs provide a comprehensive range of product development services for Phase I-IV clinical trials. These clinical trials are separated into distinct phases in order to thoroughly evaluate the product. Pharmaceutical Research and Manufacturers of America, 2017 Biopharmaceutical Research Industry Profile, a trade group publication, indicates that from drug discovery through approval by the United States Food and Drug Administration, or FDA, developing a new medicine takes 10 to 15 years and costs approximately $2.6 billion.

The following graphic, based on data presented in the Pharmaceutical Research and Manufacturers of America, 2013 Biopharmaceutical Research Industry Profile and 2017 Biopharmaceutical Research Industry Profile, industry trade group publications, illustrates the various stages and typical timeline of the clinical development process:

Stages of Clinical Development



Pharmaceutical and biotechnology companies outsource product development services to CROs in order to efficiently and cost-effectively manage the clinical development process and obtain regulatory approval and reach the market in as timely a manner as possible. Historically, outsourcing was driven primarily by the need for pharmaceutical and biotechnology companies to reduce cost and maintain focus on core competencies, or to provide services or capabilities that these companies did not have internally. In recent years, the role of a CRO has evolved and CROs are now increasingly an integral component of the product development process, providing their customers with regulatory and therapeutic expertise, complex clinical trial design, broader geographic coverage, access to diverse population pools and consistent and reliable data systems and procedures.

CRO Market Size

We estimate, based on industry sources, including analyst reports and management's knowledge, that total global biopharmaceutical clinical development expenditures were approximately $106 billion in 2016. We further estimate, based on these industry sources, that the portion of these expenditures attributable to Phase I-IV clinical development services was $53 billion, of which we estimate $27 billion was outsourced.

CRO Market Trends

Increasing Development Expenditures. We estimate that biopharmaceutical development expenditures will grow from approximately $106 billion in 2016 to approximately $116 billion in 2019, representing a CAGR of approximately 3%. We believe that the growth in development expenditures is primarily attributed to the heightened pace of biopharmaceutical innovation, pressure on companies to replenish pipelines with new therapies, the favorable regulatory environment and the significant amount of capital raised by biotechnology and pharmaceutical companies during the last several years. There were 14,872 drugs in the development pipeline in January 2017, as identified by PharmaProjects Pharma R&D Annual Review 2017, an industry publication, which was an increase of approximately 53% compared to the 9,737 that were in development in 2010. In line with the significant capital raised by biotechnology and pharmaceutical companies, based upon financial data available from FactSet Research Systems Inc. and S&P Global Market Intelligence Inc., providers of financial information, as of September 30, 2017, the companies comprising the NASDAQ Biotechnology Index, or NBI, had approximately $136.7 billion in cash available to support ongoing clinical development. This figure represents a 26.0% increase above the cash balance of approximately $108.5 billion held by the companies comprising the NBI as of December 31, 2016, and a 135.3% increase above the cash balance of approximately $58.1 billion held by companies comprising the NBI as of December 31, 2012.

Continued Outsourcing Penetration. Outsourcing penetration is the percentage of biopharmaceutical clinical development costs that are outsourced to CROs. We estimate, based on industry sources, including analyst reports and management's knowledge, that approximately 51% of Phase I-IV clinical development expenditures were outsourced in 2016, driven by increased clinical trial complexity, the need for regulatory and therapeutic expertise and global access to patient populations.

Pressures Facing Biopharmaceutical Industry. The biopharmaceutical industry continues to experience significant challenges, including regulatory and pricing pressures resulting from healthcare reform, intensifying generic competition, pipeline failures and the need for continued innovation. In order to combat these challenges and maintain revenue growth and operating margins, biopharmaceutical companies increasingly seek clinical expertise and seek to outsource clinical services to CROs to accelerate clinical development and maximize commercialization success.

Increasing Clinical Trial Complexity. Clinical trial design and structure have become increasingly complex based on regulatory agency sophistication, more complicated protocols and a growing focus by biopharmaceutical companies on developing new cutting-edge drug therapies. For example, based on the data available in the FDA's Orphan Drug Product designation database, the number of orphan drug designations granted increased by approximately 151% from 190 in 2012 to 476 in 2017. This growing complexity brings new challenges in study feasibility, site selection, patient recruitment and retention due to the rarity of orphan diseases, which globally may only have hundreds or thousands of patients. Additionally, measures of clinical trial complexity significantly increased over the last decade, with the mean number of procedures per protocol increasing by 68% as indicated by the Tufts Center for the Study of Drug Development, an independent non-profit research group. We believe full-service CROs with noted therapeutic leadership, full-service clinical operations, a proprietary technology platform, strategic regulatory guidance and integrated laboratories are well suited to successfully support these types of studies.

Small and Mid-Sized Biopharmaceutical Segment

We believe small and mid-sized biopharmaceutical companies are important to the continued growth of the CRO industry. These companies are primary centers of innovation, developing new, cutting-edge therapies for niche or previously untreatable diseases, which frequently require sophisticated clinical trials. These companies have limited ability to conduct global clinical trials independently, and as a result, they typically seek a strategic partner that can provide the therapeutic experience and infrastructure required to deliver timely completion of complex, global clinical trials. In 2016, we estimate, based on industry sources, including analyst reports and management's knowledge, that small and mid-sized biopharmaceutical companies outsourced approximately 58% of their development expenditures, representing an estimated addressable CRO market of approximately $8 billion.

Biopharmaceutical companies have a variety of options for raising money to support the funding of their drug development, including raising private equity, raising public equity and partnering with large biopharmaceutical

companies to jointly develop drug candidates. We believe the level of capital raised for small and mid-sized biopharmaceutical companies over the last few years is sufficient to fund significant clinical trial activity for these companies going forward. We believe that companies that are progressing with good results through a clinical trial will be able to continue to fund those clinical trials with available cash and will have additional avenues to fund these programs as necessary, including partnerships with large biopharmaceutical companies.

Our Competitive Strengths

We believe we are well positioned to capitalize on positive trends in the CRO industry based on our key competitive strengths set forth below:

Disciplined and Integrated Full-Service Model. Since our founding in 1992, we have focused on building and executing our disciplined, full-service operating model to provide clinical development services to the biotechnology and pharmaceutical industries. At the center of our differentiated operating model is our full-service focused, end-to-end approach to delivering clinical development services. We partner with customers from the beginning of the clinical trial process and holistically navigate all subsequent components of the process. While many CROs engage in functional or partial outsourcing services as a significant component of their business model, we take a disciplined approach and do not typically provide such piecemeal services. We believe that a full-service approach delivers greater efficiency, better quality and, ultimately, higher value for our customers.

In executing our operating model, we have demonstrated durable success across multiple therapeutic areas. We embed therapeutic leads, each of whom holds a Doctor of Philosophy, or Ph.D., a Doctor of Medicine, or M.D., or other doctorate level degrees into every aspect of the project, and our customers rely on this expertise throughout the entire clinical process. By clearly communicating and aligning our expectations with those of our customers at the beginning of an engagement, we tend to develop a close working relationship that is built on a level of trust that results in us being granted greater control over the clinical trial process. We have developed and consistently utilize effective standard operating procedures, or SOPs, that we believe result in high-quality and timely clinical development outcomes for our customers. Our operating model utilizes our proprietary ClinTrak clinical trial management software, or ClinTrak, which is customized and streamlined to our SOPs. We house our key decision-makers, our internally-developed technology and our corporate infrastructure in our corporate headquarters in Cincinnati, Ohio. This centralization allows us to maintain highly integrated, standardized and flexible operations, while preserving our operating philosophy and extending our global reach, resulting in a disciplined business model and attractive financial performance.

High-Science Approach with Deep Therapeutic Expertise. Customers generally seek a CRO with extensive therapeutic expertise in their focus areas. Our therapeutic expertise encompasses areas that are among the largest, most complex and fastest growing in pharmaceutical development, including Oncology, Cardiology, Metabolic Disease, Endocrinology, CNS and AVAI, as well as Medical Devices. Our core therapeutic expertise covers the therapeutic areas where a majority of all drugs are currently in development, as identified by Citeline Pharma R&D Annual Review 2016, an industry publication.

We leverage the insights of our senior leaders who have specific therapeutic expertise to employ a high-science approach to our projects. Because we believe that therapeutic expertise plays a significant role in CRO selection, we focus heavily on hiring and training our therapeutic leads in order to maximize therapeutic insights to inform clinical trial design and execution. In clinical trial execution, our therapeutic leads are embedded into every aspect of the process from start to finish. Our scientific and medical staff is fundamental to delivering high-quality trial execution and enabling timely completion of complex processes.

Attractive and Diversified Customer Base. We have a strong track record of serving our core customer base of small and mid-sized biopharmaceutical companies, which we believe represents an attractive growth opportunity. We believe outsourced development expenditures in our core customer base will continue to grow. Small and mid-sized biopharmaceutical companies, many of which are now well capitalized, have firmly established themselves at the forefront of medical innovation and the search for new therapies for previously untreatable diseases, which require increasingly complex clinical trials. CROs are integral to the clinical development process for these customers, providing regulatory and therapeutic expertise, complex clinical trial design, broader geographic

coverage, access to diverse population pools and consistent and reliable data systems and procedures, since these customers often lack the infrastructure and global breadth required for efficient and high-quality trial execution.

In addition, we have a highly diversified customer base comprising many of the largest global biopharmaceutical companies, as well as high-growth small and mid-sized biopharmaceutical companies. For the year ended December 31, 2017, we generated 64%, 25% and 11% of our net service revenue from small biopharmaceutical companies, mid-sized biopharmaceutical companies and large pharmaceutical companies, respectively. For the years ended December 31, 2017 and 2016, our largest customer accounted for 5.3% and 6.0% of our net service revenue, respectively, and our top 10 customers represented 32.2% and 37.0% of our net service revenue, respectively.

Partner of Choice for Biopharmaceutical Customers. Based on our extensive operating history and therapeutic experience, we believe that we have established a reputation as a partner of choice to our core customer segment of small and mid-sized biopharmaceutical companies. Acting as incubators of pharmaceutical development, small and mid-sized biopharmaceutical companies are responsible for a number of innovative drug candidates currently being developed to address unmet medical needs. Many of these drug candidates are being developed for niche and severe indications with relatively small patient populations, which require increasingly complex clinical trials. These biopharmaceutical customers, sometimes new to the clinical development process, seek to partner with us based on our differentiated approach and expertise to execute trials in a timely and efficient manner.

Global Platform with Scalable Infrastructure. We believe that we are one of the leading CROs with the scale and therapeutic expertise necessary to effectively conduct global clinical trials. We began our disciplined international expansion in 2004 and have since increased the breadth and depth of our international footprint significantly. We now offer our services through a highly skilled staff of approximately 2,500 employees across 35 countries as of December 31, 2017. As clinical trials become increasingly global, our platform provides our customers with broad access to diverse markets and patient populations, as well as local regulatory expertise and market knowledge, which can reduce the time and cost of these trials, while also helping to optimize the commercialization potential for new therapies.

Highly Regarded, Experienced and Committed Management Team. We are led by a dedicated and experienced senior management team with significant industry experience and knowledge focused on clinical development. We were founded in 1992 by Dr. August J. Troendle, an industry pioneer, and we continue today as a founder-led enterprise with Dr. Troendle retaining a significant ownership stake in Medpace. Our management team has been responsible for developing our scientifically-driven, disciplined operating model, building our global platform and realizing our significant organic growth in revenue and earnings. Our senior management team has an average tenure with Medpace of 13 years, including four senior managers with over 20 years with us, and brings a healthy balance of significant experience with Medpace, regulators and other companies in the industry, including public companies.

Our Growth Strategy

Key elements of our growth strategy include:

Continued Focus on Organic Growth. Our strong organic growth has been the result of consistently reinvesting our positive cash flow to support our therapeutic capabilities, service offerings and global expansion. We intend to continue to emphasize preserving our unique culture and operating philosophy as we grow our scientific capabilities and clinical trial expertise by further investing in human capital. In addition to leveraging our operating model, we intend to continue to selectively hire employees to strengthen and expand our expertise in high-growth therapeutic areas, including Oncology, CNS and AVAI. We methodically look to hire employees early in their careers and thoroughly train them to excel in our disciplined operating model, while instilling within them our corporate culture and philosophy. We apply this same training and standardization globally in order to maintain consistency and minimize inefficiencies in our operations. From 2012 through 2017, we successfully organically grew our business from approximately 1,000 employees to approximately 2,500 employees and organically grew our net service revenue from $177.4 million to $386.5 million. We intend to continue to utilize our disciplined organic growth model and robust cash flows to drive future revenue growth.

Leverage Our Experience and Reputation in the Attractive Clinical Development Market. Our customers value the knowledge and therapeutic expertise we have developed from a long history of successfully executing clinical trials. Given the rapid emergence of new therapies and resulting evolution of commercial priorities among many biopharmaceutical companies, we believe consistently maintaining the necessary infrastructure and human capital required to retain clinical and therapeutic expertise internally is not the most cost-effective solution for these companies. As the regulatory landscape adapts to greater clinical trial complexity, we believe that biopharmaceutical companies will increasingly engage CROs with the requisite global resources as well as therapeutic and regulatory expertise to assume full responsibility of the clinical trial process. Based on our successful execution of clinical trials across many therapeutic areas in multiple countries, as well as our focus on closely partnering with our customers through all aspects of the clinical trial process, we believe we have developed a strong reputation in the industry as a leading CRO. We believe that this reputation positions us to continue capturing additional share of the attractive clinical development market as the industry increasingly recognizes the benefits of our operating model.

Deepen Existing and Develop New Relationships with Our Core Customer Segment. We look to continue to deepen our long-standing relationships with existing customers through new engagements and expand our relationships with new small and mid-sized biopharmaceutical customers. As a strategic partner of choice, we clearly communicate and align our expectations with our customers at the beginning of an engagement to develop a close working relationship that is built on trust. We believe this trust, supported by our high-quality execution and frequent dialogue with our customers' key decision makers, positions us to be awarded additional business in existing and new therapies, allowing us to grow alongside our customers and leading to an increasingly significant, and growing, contribution from repeat business.

While our successes to date have built a substantial customer base, we believe that there is opportunity for continued growth and penetration in our core customer segment. We place our therapeutic leads alongside our sales team to actively participate in the procurement of new customers whose portfolios align with our therapeutic expertise, which we believe further differentiates us from our competitors.

Pursue Selective and Complementary Bolt-On Acquisitions. We intend to evaluate selective targeted acquisitions to augment our organic growth and expand our current capabilities and service offerings. Our acquisition strategy is driven by our comprehensive commitment to serve customer needs. While we are continuously assessing the market for attractive opportunities, we do so selectively with a focus on targeting opportunities to acquire and integrate complementary and strategic, non-transformative acquisitions within the CRO sector in order to strengthen our competitive position and provide enhanced value to our customers.

Position Ourselves to Increase Our Presence Among Large Pharmaceutical Companies as These Customers Adopt and Appreciate the Full-Service Approach. Given the growing pressures large pharmaceutical companies are facing, including complex clinical development and regulatory processes, these companies seek solutions beyond simply outsourcing clinical development. These companies are seeking strategic partnerships that provide more holistic clinical development services and also the expertise that CRO partners offer. Given our differentiated operating model, we believe larger pharmaceutical companies will be increasingly appreciative of our proven approach to clinical development and expertise.

Our Services

We provide a full suite of services supporting the entire clinical development process from Phase I to Phase IV. We offer these services across a wide range of therapeutic areas.

Our comprehensive suite of clinical development services includes, but is not limited to, the following:

Medical Affairs

The medical affairs group consists of therapeutic leads who provide strategic direction for study design and planning, train operational staff, work with primary investigators, provide medical monitoring and meet with regulatory agencies. Our customers rely on our expertise throughout the entire clinical trial process with therapeutically-focused physicians fully engaged throughout the study. We believe this depth of therapeutic

leadership and engagement on each project results in a close working relationship with customers built on a level of trust that results in us being granted greater control over the clinical trial process.

Clinical Trial Management

Our team of clinical trial managers are responsible for leading all aspects of study execution. The clinical trial manager, or CTM, drives accountability across the functional team members and is responsible for successful operational execution. The CTM serves as the primary contact for the customer. Experience and therapeutic expertise are main factors when assigning CTMs to projects.

ClinTrak is integrated with our SOPs, allowing the CTMs to access real-time study metrics. ClinTrak is constantly evaluated and enhanced with our processes.

Study Feasibility

We have a dedicated feasibility team consisting of clinical experts who are an integrated part of the project team. Our feasibility team is able to analyze a specific protocol, using many data sources to determine countries and sites that are most appropriate for the study.

Study Start-Up

Our global Study Start-Up staff is well-versed in all aspects of clinical trial start up activities, including study documentation submission processes to independent Institutional Review Boards, or IRBs, ethics committees and to ex-US competent authorities. Our study start-up team includes fully dedicated budget and legal associates to ensure focused negotiations and execution of site contracts.

Clinical Monitoring

Our clinical monitoring group consists of highly experienced clinical research associates, or CRAs. With their experience and training, our CRAs are able to provide unparalleled site management services that includes both in-house and onsite monitoring. Their knowledge of local regulations and laws, in addition to Good Clinical Practice, or GCP, and International Council on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use, or ICH, guidelines ensure compliance and data quality. Our CRAs report into a global matrix structure to ensure consistent training, oversight and management. Each CRA receives comprehensive, hands-on training in an individualized curriculum consisting of in-house and field-based training, supplemented with clinical research department core rotations and ongoing study-specific training.

Global Regulatory Affairs

Our Global Regulatory Affairs department has a strong track record of providing expert strategic, operational, and tactical regulatory guidance, as well as creating thorough, scientifically-grounded regulatory compliant documentation to regulatory agencies around the globe. Members of this team bring a long tenure of regulatory experience and scientific knowledge to each project. The group, led by former government officials and experienced drug development subject matter experts, provides comprehensive international support at each stage of the drug and biologics development processes. They have particular expertise within the areas of advanced therapeutics, accelerated development pathways, pediatrics, and rare diseases. The group also has a dedicated publishing function that has full electronic and paper publishing capabilities to support all types of international regulatory submissions.

Medical Writing

Medical writers work closely with Medpace’s medical experts, biostatisticians, and other members of the study team to develop study protocols, clinical and statistical study reports, and integrated submission documents according to regulatory guidelines. Members of Medpace’s medical writing group possess substantial scientific knowledge and experience as well as strong communication skills. This skill set and collaborative approach coupled with a thorough

quality control document review process, allow Medpace to produce high-quality, submission-ready documents for each contracted project.

Biometrics

We provide customers with high-quality data collected during clinical trials that is the foundation of a successful clinical trial and forms the backbone of regulatory submissions, including New Drug Applications. We use global GCP-compliant SOPs, combined with continuous quality control, to ensure that data is consistent, efficient, and comprehensive.

Data Management: Our data management team develops detailed specifications for the collection, organization, validation, analysis and quality control of clinical trial data ensuring the most cost-effective, secure and regulatory compliant process.

Biostatistics: Our experienced team of biostatisticians provides trial design consulting, statistical methodology recommendations, programming expertise and reporting accuracy necessary to deliver clinical trials efficiently and on time. We offer comprehensive data analysis plans, thoroughly tested and validated customized programs, interpretation of study results, integrated efficacy and safety analysis for regulatory submissions, adaptive design and statistical support throughout the clinical trial.

Pharmacovigilance

Our safety and pharmacovigilance group collects, evaluates, analyzes and reports safety information. We provide global adverse event management, physician reviewed safety narrative writing and custom safety surveillance. Monitored by licensed physicians who are trained to provide oversight and to analyze and evaluate the emerging safety profile of the compound, we have designed our process to ensure safety and expedite approvals.

Core Laboratory

Our core laboratory services include both imaging services and cardiovascular core laboratory services. We partner with imaging experts from major academic and clinical institutions involved in research to provide image reading in a secure environment utilizing identical software and workstations integrated into ClinTrak allowing for prompt turnaround and oversight. Our imaging experts have clinical trial experience utilizing imaging modalities such as CT, MRI, PET/CT, 3D volumetric analysis, ultrasound, DEXA, angiography, endoscopy and photography. Our cardiovascular core laboratory provides state-of-the-art standardized electrocardiogram services and data analysis to support clinical trials.

Laboratories

Central Laboratory. Through our Central Laboratory, we provide comprehensive, full-service capabilities globally in four locations, including Cincinnati, Ohio; Leuven, Belgium; Beijing, China; and Singapore. The Central Laboratory has longstanding core competency in specialized esoteric testing, including biomarkers for efficacy in addition to standard assay offerings. Data consistency and harmonization are maintained utilizing global SOPs and reference ranges, identical analytic platforms, methodologies, reagent systems, calibrator and quality control programs, within a strict framework compliant with GCP requirements and regulatory guidelines to ensure laboratory data reflect the impact of the investigational compound and not differences in testing practices.

Bioanalytical Laboratory. Through our Bioanalytical Laboratory we provide highly scientific and value-added testing of biological samples using proprietary methods. Working in a Good Laboratory Practice compliant setting following FDA and European Medicines Agency, or EMA, guidelines, the Bioanalytical Laboratory delivers method transfer, development, validation, sample analysis and metabolite screening and identification of pre-clinical and clinical biological samples with expertise in developing proprietary, highly scientific, esoteric and sensitive tests. Areas of specific bioanalytical expertise include advanced mass spectrometry and immunoassay technologies for bioanalytical analysis and all bioanalytical aspects for small and large molecules. Our Bioanalytical Laboratory is located on our clinical research campus in Cincinnati, Ohio.

The majority of our laboratory services are performed as a component of a full-service clinical development arrangement with our customers. We also offer our laboratory services on a stand-alone basis, although this has historically represented an immaterial amount of our net service revenue. Regardless of the nature of the arrangement, our laboratory services are delivered consistently to our customers as a component of their clinical development activities.

Clinics

Our Clinics offering conducts studies in normal healthy volunteers, special populations, and patient populations over a spectrum of diseases including endocrine, cardiovascular and metabolic. Experience includes, but is not limited to: first-in-human, bioavailability/bioequivalence, single and multiple ascending dose, drug to drug interaction, food effect and device studies. Our 57,340 square-foot facility is located on our clinical research campus in Cincinnati, Ohio.

Quality Assurance

Our quality assurance team works closely with study teams to ensure compliance with protocols, SOPs and regulatory guidelines to ultimately protect research subject safety as well as the integrity and validity of study data. Our quality assurance team also provides services including regulatory training, internal system audits, SOP oversight, hosting of audits and regulatory inspections, as well as performs third party audits of critical vendors and investigative sites on behalf of our customers.

Customers

We have a well-diversified, attractively-positioned customer base that includes small biopharmaceutical companies, mid-sized biopharmaceutical companies and large pharmaceutical companies. We have conducted trials for many of the world’s leading pharmaceutical, biotechnology and medical device companies.

For the year ended December 31, 2017, we generated 64%, 25% and 11% of our net service revenue from small biopharmaceutical companies, mid-sized biopharmaceutical companies and large pharmaceutical companies, respectively.

For the years ended December 31, 2017 and 2016, our largest customer accounted for 5.3% and 6.0% of our net service revenue, respectively, and our top 10 customers represented 32.2% and 37.0% of our net service revenue, respectively.

We have in the past and may in the future enter into arrangements with our customers or other drug, biologic or medical device companies in which we take on payment risk by making strategic investments in our customers or other drug companies, providing flexible payment terms or fee financing to customers or other companies, or entering into other risk sharing arrangements on trial execution. We expect that the use of such arrangements will be very limited, and they are not a part of our core growth strategy.

Net New Business Awards and Backlog

New business awards represent the value of anticipated future net service revenue that has been awarded during the period that is recognized in backlog. This value is recognized upon the signing of a contract or receipt of a written pre-contract confirmation from a customer that confirms an agreement in principle on budget and scope. New business awards also include contract amendments, or changes in scope, where the customer has provided written authorization for changes in budget and scope or has approved us to perform additional work as of the measurement date. Awards may not be recognized as backlog after consideration of a number of factors, including whether (i) the relevant net service revenue is expected only after a pending regulatory hurdle, which might result in cancellation of the study, (ii) the customer funding needed for commencement of the study is not believed to have been secured or (iii) study timelines are uncertain or not well defined timeline. In addition, study amounts that extend beyond a three-year timeline are not included in backlog. The number and amount of new business awards can vary

significantly from period to period, and an award's contractual duration can range from several months to several years based on customer and project specifications.

Cancellations arise in the normal course of business and are reflected when we receive written confirmation from the customer to cease work on a contractual agreement. The majority of our customers can terminate our contracts without cause upon 30 days' notice. Similar to new business awards, the number and amount of cancellations can vary significantly period over period due to timing of customer correspondence and study-specific circumstances.

Net new business awards represent gross new business awards received in a period offset by total cancellations in that period. Net new business awards were $426.1 million, $427.0 million and $359.5 million for the years ended December 31, 2017, 2016 and 2015, respectively.

Backlog represents anticipated future net service revenue from net new business awards that have commenced, but have not been completed. Reported backlog will fluctuate based on new business awards, changes in scope to existing contracts, cancellations, net service revenue recognition on existing contracts and foreign exchange adjustments from non-U.S. dollar denominated backlog. As of December 31, 2017, our backlog increased by $40.5 million, or 8.4%, to $524.4 million compared to $483.9 million as of December 31, 2016. Our backlog as of December 31, 2015 was approximately $429.7 million. Included within backlog as of December 31, 2017 is approximately $285 million to $295 million that we expect to convert to net service revenue in 2018, with the remainder expected to convert to net service revenue in years after 2018.

Backlog and net new business award metrics may not be reliable indicators of our future period net service revenue as they are subject to a variety of factors that may cause material fluctuations from period to period. These factors include, but are not limited to, changes in the scope of projects, cancellations and duration and timing of services provided. No assurance can be given that we will be able to realize the net service revenue that is included in backlog. See "Item 1A. Risk Factors—Risks Relating to Our Business—Our backlog may not convert to net service revenue at our historical conversion rates," and "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—New Business Awards, Cancellations and Backlog" of Parts I and II, respectively, of this Annual Report on Form 10-K for more information.

Sales and Marketing

We employ an integrated sales and marketing team to sell our services to biotechnology, pharmaceutical and medical device companies.

We have an experienced and highly trained global team of professional business development representatives and business development support staff focused on securing business from both new and existing customers, through a consultative and strategic sales approach. We embed our medical and scientific experts from the beginning of the sales process when we first engage potential customers, and they remain embedded across the lifecycle of the sale and throughout the life of the project, program or partnership.

As part of its sales strategy, our business development team focuses on a customer segmentation model. Our team targets and engages customers in our addressable market, matches customer characteristics with therapeutic fit and maintains a mindset of full-service outsourcing. Our structured and disciplined approach facilitates strong account evaluation, which results in increased focus by the sales team, the development of effective and productive territories, the management of sales force effectiveness and the creation of a process whereby both marketing and sales operate under the same guiding principles.

We are able to consult collaboratively with our customers and help optimize timely completion of their clinical trials and programs, in part, because we engage our therapeutic experts from the beginning of the sales process and involve our regulatory affairs experts and highly trained operations team throughout the clinical trial process. Our sales team is then able to take the study design, regulatory plan and execution plan discussed up front and carry that through to the proposal and provide a final concept during one-on-one customer discussions and final CRO evaluations.

Our marketing team supports the business development function in three key areas, generating brand awareness through customized campaigns and web-site development, conference planning and lead generation through market research and business intelligence analysis. The marketing team is set up in two mirrored teams, one team to address our therapeutic strategy and tactics, and the second team to monitor and address market environment across our lines of business. All of our sales and marketing data are housed within a third party customer relationship management tool that provides us the analytics we need to make sales planning and sales management decisions.

Segment and Geographic Information

We operate in one reportable segment and have operations in the North America, Europe, Africa, the Middle East, Asia-Pacific, and Latin America. See Note 3 “Summary of Significant Accounting Policies” to our consolidated financial statements for further information regarding our reportable segment. See Note 16 “Entity Wide Disclosures” to our consolidated financial statements for geographic information including revenues and long-lived assets attributed to our country of domicile and foreign countries (including any individual foreign country if material).

Competition

We compete primarily against other full-service CROs as well as services provided by in-house research and development, or R&D, departments of biopharmaceutical companies. Our major CRO competitors include Laboratory Corporation of America Holdings, ICON plc, Syneos Health, Inc., PAREXEL International Corporation, Pharmaceutical Product Development, LLC, PRA Health Sciences, Inc., IQVIA Holdings Inc. and numerous specialty and regional CROs.

We generally compete on the basis of a number of factors, including experience within specific therapeutic areas, quality of staff and services, reliability, range of provided services, ability to recruit principal investigators and patients into studies expeditiously, ability to organize and manage large-scale, global clinical trials, global presence with strategically located facilities, speed to completion, price and overall value. We believe we compete effectively with our competitors across these factors, particularly due to our full-service operating model, our deep therapeutic expertise in areas that are among the largest, most complex and fastest growing in pharmaceutical development, our global platform and our experienced and committed management team. However, some of our competitors have greater financial resources and a wider range of service offerings over a greater geographic area than we do, which could put us at a competitive disadvantage with respect to these competitors.

The CRO industry remains fragmented, with several hundred smaller, narrowly focused service providers and a small number of full-service companies with global capabilities. We believe there are significant barriers to others becoming a global provider offering a broad range of services and products including the cost and experience necessary to develop strong therapeutic areas, expertise to manage complex clinical programs, infrastructure to support large global programs, ability to deliver high-quality services and expertise required to prepare regulatory submissions in numerous jurisdictions.

Government Regulation

Development of Drugs, Biologics and Medical Devices

The development of drugs, biologics and medical devices is highly regulated in the United States and other countries. Our services are subject to varying regulatory requirements designed to ensure the quality and integrity of the pre-clinical and clinical trial process. In the United States, the FDA has primary authority to regulate these activities, in addition to the approval process, and the subsequent manufacturing, safety, labeling, storage, record keeping and marketing for these products, which are the responsibility of our customers. Before a marketing application for a drug is ready for submission to regulatory authorities, the candidate drug must often undergo rigorous testing in clinical trials. In the United States, these trials must be conducted in accordance with the Federal Food, Drug, and Cosmetic Act, its implementing regulations, and other federal and state requirements that require the drug to be tested and studied in certain ways prior to approval. The FDA has similar authority and requirements with respect to the clinical testing of biological products and medical devices. Before a human clinical trial may begin in the United States, the manufacturer or sponsor of the clinical product candidate must file an Investigational

New Drug Application, or IND, with the FDA, which contains, among things, the results of pre-clinical tests, manufacturer information and other analytical data. A separate submission to an existing IND must also be made for each successive clinical trial conducted during product development. Each clinical trial must be conducted pursuant to, and in accordance with, an effective IND. Each human clinical trial we conduct is subject to the oversight of an IRB, which is an independent committee that has the regulatory authority to review, approve and monitor a clinical trial for which the IRB has responsibility. The FDA and IRB receive reports on the progress of each phase of clinical testing and may require the modification, suspension, or termination of clinical trials if, among other things, an unreasonable risk is presented to patients or if the design of the trial is insufficient to meet its stated objective. In addition, information about certain clinical trials must be made publicly available on the federal government website, www.clinicaltrials.gov.

In the United States, GCP regulations govern the design, conduct, performance, monitoring, auditing, recording, analysis, and reporting of clinical trials. In order to comply with GCP and other requirements, we must, among other things:

- ☐ comply with specific requirements governing the selection of qualified principal investigators and clinical research sites;
- ☐ obtain specific written commitments from principal investigators;
- ☐ obtain IRB review and approval and supervision of the clinical trials by an independent review board or ethics committee;
- ☐ obtain a favorable opinion from regulatory agencies to commence a clinical trial;
- ☐ verify that appropriate patient informed consents are obtained before the patient participates in a clinical trial;
- ☐ ensure that adverse drug reactions resulting from the administration of a drug or biologic during a clinical trial are medically evaluated and reported in a timely manner;
- ☐ monitor the validity and accuracy of data;
- ☐ monitor drug or biologic accountability at clinical research sites; and
- ☐ verify that principal investigators and clinical trial staff maintain records and reports and permit appropriate governmental authorities access to data for review.

Clinical trials conducted outside the United States are subject to the laws and regulations of the country where the trials are conducted. These laws and regulations may or may not be similar to the laws and regulations administered by the FDA and other laws and regulations regarding the protection of patient safety and privacy and the control of clinical trial pharmaceuticals, medical devices or other clinical trial materials. Within the EU, these requirements are enforced by the EMA and requirements may vary slightly from one member state to another. In Canada, clinical trials are regulated by the Health Products and Food Branch of Health Canada as well as provincial regulations. Similar requirements also apply in other jurisdictions, including countries outside the EU and countries in Asia and Latin America where we operate or where our customers may intend to apply for marketing authorization. Clinical trials conducted outside the United States also may be subject to FDA regulation if the clinical trials are conducted pursuant to an IND or an Investigational Device Exemption for a product candidate that will seek FDA approval or clearance. In addition, clinical trial sponsors follow ICH E6 guidelines as a principle for GCP.

The clinical trial customer and the parties conducting the clinical trials share in responsibilities to ensure that all applicable legal and regulatory requirements are fulfilled. Many of the functions we regularly perform in the conduct of clinical trials subject us directly to regulations (e.g., compliance with GCP), and in some circumstances, we will take on legal and regulatory responsibility either through a transfer of obligations to us from our clinical trial customers or our acting as local legal representative for certain of our clinical trial customers. We may be subject to regulatory action if we fail to comply with these requirements. Failure to comply with certain regulations may also result in the termination of ongoing research and disqualification of data collected during the clinical trials. For example, violations of GCP could result, depending on the nature of the violation and the type of product involved, in the issuance of a warning letter, suspension or termination of a clinical trial, refusal of the FDA to approve clinical trial or marketing applications or withdrawal of such applications, injunction, seizure of investigational

products, civil penalties, criminal prosecutions or debarment from assisting in the submission of new drug applications. See “Item 1A. Risk Factors—Risks Relating to Our Business—If we fail to perform our services in accordance with contractual requirements, government regulations and ethical considerations, we could be subject to significant costs or liability and our reputation could be adversely affected” of Part I of this Annual Report on Form 10-K.

We monitor our clinical trials to test for compliance with applicable laws and regulations in the United States and the foreign jurisdictions in which we operate. We have adopted SOPs that are designed to satisfy regulatory requirements and serve as a mechanism for controlling and enhancing the quality of our clinical trials. In the United States, our procedures were developed to ensure compliance with GCP and associated requirements.

Health Information Privacy

The confidentiality of personal health information, including patient-specific information collected during clinical trials, is heavily regulated in the United States and other countries. The U.S. Department of Health and Human Services has promulgated rules under the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and their implementing regulations, including the Privacy and Security Rules, or collectively, HIPAA, that govern the use, handling and disclosure of personally identifiable medical information. These regulations also establish procedures for the exercise of an individual’s rights and the methods permissible for de-identification of health information. HIPAA applies to “covered entities,” which include certain types of healthcare providers, as well as service providers to covered entities which access protected health information, known as “business associates.” Two of our subsidiaries, Medpace Clinical Pharmacology, LLC and C-MARC, LLC, are covered entities under HIPAA. Further, many investigators with whom we are involved in clinical trials are also directly subject to HIPAA as covered entities. There are instances where we may be considered a business associate of a covered entity investigator, and we have signed business associate agreements with some investigators. If we are determined to be a business associate, we would be directly liable for any breaches of protected health information and other HIPAA violations. We are also liable contractually under any business associate agreements we have signed with covered entities. In addition, we are also subject to privacy legislation in Canada under the federal Personal Information Protection and Electronic Documents Act, the Act Respecting the Protection of Personal Information in the Private Sector and the Personal Health Information Protection Act and privacy legislation in the EU under the 95/46/EC Privacy Directive on the protection and free movement of personal data, as replaced by the General Data Protection Regulation from early 2018 onwards. See “Item 1A. Risk Factors—Risks Relating to Our Industry—Current and proposed laws and regulations regarding the protection of personal data could result in increased risks of liability or increased cost to us or could limit our service offerings” of Part I of this Annual Report on Form 10-K.

Health Industry Arrangements

The conduct of pre-clinical and clinical trials may be subject to laws and regulations that are intended to prevent the misuse of government healthcare program funding. In the United States, these laws include, among others, the False Claims Act, which prohibits submitting or causing the submission of false statements or improper claims for government healthcare program payments; and the Anti-Kickback statute, which prohibits paying, offering to pay or receiving payment with the intent to induce the referral of services or items that are covered under a federal healthcare program. Violations of these laws and regulations may incur administrative, civil, and criminal penalties.

Employee Safety and Workplace Conditions

Most of our employees are office based and subject to health and safety regulations covering offices, with which we comply. In addition to its comprehensive regulation of safety in the workplace, the U.S. Occupational Safety and Health Administration has established extensive requirements relating to workplace safety for healthcare employers whose workers might be exposed to blood-borne pathogens such as HIV and the hepatitis B virus, which apply to our clinic and laboratories. Furthermore, certain employees might have to receive initial and periodic training to ensure compliance with applicable hazardous materials regulations and health and safety guidelines. We are subject to similar regulations with respect to our laboratories in Belgium, Singapore and China.

Environmental Regulation and Liability

We are subject to various laws and regulations relating to the protection of the environment and human health and safety in the countries in which we do business, including laws and regulations governing the management and disposal of hazardous substances and wastes, the cleanup of contaminated sites and the maintenance of a safe workplace. Our operations include the use, generation and disposal of hazardous materials and medical wastes. We may, in the future, incur liability under environmental statutes and regulations for contamination of sites we own or operate (including contamination caused by prior owners or operators of such sites), the off-site disposal of hazardous substances and for personal injuries or property damage arising from exposure to hazardous materials from our operations. We believe that we have been and are in substantial compliance with all applicable environmental laws and regulations and that we currently have no liabilities under such environmental requirements that could reasonably be expected to materially harm our business, results of operations or financial condition.

Intellectual Property

We develop and use a number of proprietary methodologies, analytics, systems, technologies and other intellectual property in the conduct of our business. We rely upon a combination of confidentiality policies, nondisclosure agreements and other contractual arrangements to protect our trade secrets, and copyright and trademark laws to protect other intellectual property rights. We have obtained or applied for trademarks and copyright protection in the United States and in a number of foreign countries. Our material trademarks include Medpace and ClinTrak. Although the duration of trademark registrations varies from country to country, trademarks generally may be renewed indefinitely so long as they are in use and/or their registrations are properly maintained, and so long as they have not been found to have become generic. Although we believe the ownership of trademarks is an important factor in our business and that our success does depend in part on the ownership thereof, we rely primarily on the innovative skills, technical competence and marketing abilities of our employees. We do not have any material licenses, franchises or concessions.

Employees

As of December 31, 2017 we had approximately 2,500 employees worldwide. None of our employees are currently covered by a collective bargaining agreement specific to our company. We believe our overall relations with our employees are good. As of December 31, 2016 and 2015, we had approximately 2,500 and 2,000 employees, respectively.

The success of our business depends upon our ability to attract and retain qualified professional, scientific and technical staff. The level of competition among employers in the United States and overseas for skilled personnel, particularly for those with Ph.D., M.D. or equivalent degrees or training, is high. We believe that our brand recognition and our multinational presence are advantages in attracting qualified candidates. We also believe that the wide range of clinical trials in which we participate allows us to offer broad experience to clinical researchers. In addition, our disciplined and centralized approach to hiring and training has fostered, and we believe will continue to foster, strong employee loyalty and a low turnover rate.

Liability and Insurance

We may be liable to our customers for any failure to conduct their clinical trials properly according to the agreed-upon protocol and contract. If we fail to conduct a clinical trial properly in accordance with the agreed-upon procedures, we may have to repeat a clinical trial or a particular portion of the services at our expense, reimburse the customer for the cost of the services and/or pay additional damages.

At our Phase I clinic, we study the effects of drugs on healthy volunteers. In addition, in our clinical business we, on behalf of our customers, contract with physicians who render professional services, including the administration of the substance being tested to participants in clinical trials, many of whom are seriously ill and are at great risk of further illness or death as a result of factors other than their participation in a trial. As a result, we could be held liable for bodily injury, death, pain and suffering, loss of consortium or other personal injury claims and medical expenses arising from a clinical trial. In addition, we sometimes engage the services of vendors necessary for the conduct of a clinical trial, such as laboratories or medical diagnostic specialists. Because these vendors are engaged

as subcontractors, we are responsible for their performance and may be held liable for damages if the subcontractors fail to perform in the manner specified in their contract.

To reduce our potential liability, and as a requirement of the GCP regulations, informed consent is required from each volunteer and patient. In addition, our customers provide us with contractual indemnification for all of our service related contracts. These indemnities generally do not, however, protect us against certain of our own actions such as those involving negligence or misconduct. Our business, financial condition and operating results could be harmed if we were required to pay damages or incur defense costs in connection with a claim that is not indemnified, that is outside the scope of an indemnity or where the indemnity, although applicable, is not honored in accordance with its terms.

We maintain professional liability insurance in amounts we believe to be appropriate. This insurance provides coverage for vicarious liability due to negligence of the investigators who contract with us, as well as claims by our customers that a clinical trial was compromised due to an error or omission by us. If our insurance coverage is not adequate, or if insurance coverage does not continue to be available on terms acceptable to us, our business, financial condition and operating results could be materially harmed.

Available Information

We are subject to the informational requirements of the Exchange Act and, in accordance therewith, file reports, including annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission, or the SEC. Copies of our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and our Proxy Statements for our annual meetings of stockholders, and any amendments to those reports, as well as Section 16 reports filed by our insiders, are available free of charge on our website as soon as reasonably practicable after we file the reports with, or furnish the reports to the SEC. Our website address is http://www.medpace.com, and our investor relations website is located at investor.medpace.com. Information on our website is not incorporated by reference herein. Our SEC filings are also available for reading and copying at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site (http://www.sec.gov) containing reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with the other information included in this Annual Report on Form 10-K. The occurrence of any of the following risks may materially and adversely affect our business, financial condition, results of operations and future prospects. In these circumstances, the market price of our common stock could decline. Other events that we do not currently anticipate or that we currently deem immaterial may also affect our business, prospects, financial condition and results of operations.

Risks Relating to Our Business

The potential loss, delay or non-renewal of our contracts, or the non-payment by our customers for services that we have performed, could adversely affect our results.

We experience termination, cancellation and non-renewals of contracts by our customers in the ordinary course of business, and the number and dollar value of cancellations can vary significantly from year to year.

The time between when a clinical trial is awarded and when it goes to contract is typically several months, and prior to a new business award going to contract, our customers can cancel the award without notice. Moreover, once an award goes to contract, most of our customers for clinical trial services can terminate our contracts without cause upon 30 days' notice. Our customers may delay, terminate or reduce the scope of our contracts for a variety of reasons beyond our control, including, but not limited to:

- ☐ decisions to forego or terminate a particular clinical trial;
- ☐ lack of available financing, budgetary limits or changing priorities;
- ☐ actions by regulatory authorities;
- ☐ changes in law;
- ☐ production problems resulting in shortages of the drug being tested;
- ☐ failure of the drug being tested to satisfy safety requirements or efficacy criteria;
- ☐ unexpected or undesired clinical results;
- ☐ insufficient investigator recruitment or patient enrollment in a trial;
- ☐ decisions to downsize product development portfolios;
- ☐ dissatisfaction with our performance, including the quality of data provided and our ability to meet agreed upon schedules;
- ☐ shift of business to another CRO or internal resources;
- ☐ product withdrawal following market launch; or
- ☐ shut down of our customers' manufacturing facilities.

As a result, contract terminations, delays and modifications are a regular part of our business. In the event of termination, our contracts often provide for payment to us of fees for services provided up to the point of termination and for close-out activities for winding down the clinical trial, and reimbursement of all non-cancellable expenses. These payments may not be sufficient for us to maintain our profit margins, and termination or non-renewal may result in lower resource utilization rates, including with respect to personnel who we are not able to place on another customer engagement. Historically, cancellations and delays have negatively impacted our operating results.

Clinical trials can be costly and for the year ended December 31, 2017, 64% and 25% of our net service revenue was derived from small biopharmaceutical companies and mid-sized biopharmaceutical companies, respectively, which may have limited access to capital. In addition, we provide services to our customers before they pay us for some of our services. There is a risk that we may initiate a clinical trial for a customer, and the customer subsequently becomes unwilling or unable to fund the completion of the trial. In such a situation, notwithstanding the customer's ability or willingness to pay for or otherwise facilitate the completion of the trial, we may be legally or ethically bound to complete or wind down the trial at our own expense.

Because the contracts included in our backlog are generally terminable without cause, we do not believe that our backlog as of any date is necessarily a meaningful predictor of future results. In addition, we may not realize the full benefits of our backlog of contractually committed services if our customers cancel, delay or reduce their commitments under our contracts with them. Thus, the loss or delay of a large contract or the loss or delay of multiple contracts could adversely affect our net service revenue and profitability. In addition, the terminability of our contracts puts increased pressure on our quality control efforts, since not only can our contracts be terminated by customers as a result of poor performance, but any such termination may also affect our ability to obtain future contracts from the customer involved and others.

Our backlog may not convert to net service revenue at our historical conversion rates.

Backlog represents anticipated future net service revenue from net new business awards that have commenced, but have not been completed. Reported backlog will fluctuate based on new business awards, changes in scope to

existing contracts, cancellations, revenue recognition on existing contracts and foreign exchange adjustments from non-U.S. dollar denominated backlog. Our backlog as of December 31, 2017 was approximately $524.4 million. Once work begins on a project, net service revenue is recognized over the duration of the project. Projects may be terminated or delayed by the customer or delayed by regulatory authorities for reasons beyond our control. To the extent projects are delayed, the timing of our net service revenue could be adversely affected. Moreover, in the event that a customer cancels a contract, we often would be entitled to receive payment for services provided up to the point of cancellation and for close-out activities for winding down the clinical trial, and reimbursement of all non-cancellable expenses. Typically, however, we have no contractual right to the full amount of the future net service revenue reflected in our backlog in the event of a contract cancellation or subsequent changes in scope that reduce the value of the contract. The duration of the projects included in our backlog, and the related net service revenue recognition, generally range from a few months to several years. Our backlog may not be indicative of our future net service revenue, and we may not realize all of the anticipated future net service revenue reflected in our backlog. A number of factors may affect the realization of our net service revenue from backlog, including:

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

Fluctuations in our reported backlog levels also result from the fact that we may receive a small number of relatively large projects in any given reporting period that may be included in our backlog. Because of these large projects, our backlog in that reporting period may reach levels that may not be sustained in subsequent reporting periods. Additionally, although an increase in backlog will generally result in an increase in net service revenue over time, an increase in backlog at a particular point in time does not necessarily correspond directly to an increase in net service revenue during any particular period, or at all. The extent to which contracts in backlog will result in net service revenue depends on many factors, including, but not limited to, delivery against project schedules, scope changes, contract terminations and the nature, duration and complexity of the contracts, and can vary significantly over time.

As we increasingly compete for and enter into large contracts that are more global in nature, there can be no assurance about the rate at which our backlog will convert into net service revenue. A decrease in this conversion rate would mean that the rate of net service revenue recognized on contracts may be slower than what we have experienced in the past, which could impact our net service revenue and results of operations on a quarterly and annual basis. The revenue recognition on larger, more global projects could be slower than on smaller, less global projects for a variety of reasons, including, but not limited to, an extended period of negotiation between the time the project is awarded to us and the actual execution of the contract, as well as an increased timeframe for obtaining the necessary regulatory approvals. Additionally, delayed projects will remain in backlog and will not generate revenue at the rate originally expected. Thus, the relationship of backlog to realized revenues is indirect and may vary significantly over time.

Additionally, if small and mid-sized biopharmaceutical companies become less able to access capital in the future, we may see a decrease in backlog conversion to net service revenue and net new business awards due to project delays or cancellations. These companies have contributed materially to our historical net service revenue. If they cannot commit the same or a greater level of capital to our services going forward, our results of operations may suffer.

Our operating results have historically fluctuated between fiscal quarters and years and may continue to fluctuate in the future, which may adversely affect the market price of our stock.

Our operating results have fluctuated in previous quarters and years and may continue to vary significantly from quarter to quarter and year to year and are influenced by a variety of factors, such as:

- ☐ timing of contract amendments for changes in scope that could affect the value of a contract and potentially impact the amount of net new business awards and net service revenue from quarter to quarter;
- ☐ commencement, completion, execution, postponement or termination of large contracts;
- ☐ contract terms for the billing and recognition of revenue milestones;

- ☐ progress of ongoing contracts and retention of customers;
- ☐ timing of and charges associated with completion of acquisitions and other events;
- ☐ changes in the mix of services delivered, both in terms of geography and type of services;
- ☐ customer disputes or other issues that may impact the revenue we are able to recognize or the collectability of our related accounts receivable; and
- ☐ exchange rate fluctuations.

Our operating results for any particular quarter or year are not necessarily a meaningful indicator of future results and fluctuations in our quarterly or yearly operating results could negatively affect the market price and liquidity of shares of our common stock.

Our operating margins could decrease due to increased pricing pressure or other pressures.

Historically, we have been able to generate the operating margins that we do because of our disciplined, full-service operating model. However, we operate in a highly competitive environment, and, if we experience increased levels of competitive pricing pressure, our operating margins may decrease. In addition, we may adapt our operating model to achieve greater levels of growth or in response to investor demands. Such changes could result in lower operating margins.

If we fail to perform our services in accordance with contractual requirements, government regulations and ethical considerations, we could be subject to significant costs or liability and our reputation could be adversely affected.

We contract with biopharmaceutical companies to perform a wide range of services to assist them in bringing new drugs to market. Our services include monitoring clinical trials, data and laboratory analysis, electronic data capture, patient recruitment and other related services. Such services are complex and subject to contractual requirements, government regulations, and ethical considerations. For example, we are subject to regulation by the FDA, and comparable foreign regulatory authorities relating to our activities in conducting pre-clinical studies and clinical trials. Before clinical trials begin in the United States, a drug is tested in pre-clinical trials that must comply with Good Laboratory Practice and other requirements. An applicant must file an IND, which must become effective before human clinical testing may begin. Further, an independent IRB, for each medical center proposing to participate in the clinical trial must review and approve the protocol for the clinical trial. Once initiated, clinical trials must be conducted pursuant to and in accordance with the applicable IND conditions, the requirements of the relevant IRBs, the Federal Food, Drug, and Cosmetic Act and its implementing regulations, including GCP, and other requirements. We are also subject to regulation by the Drug Enforcement Administration, or DEA, which regulates the distribution, recordkeeping, handling, security, and disposal of controlled substances. If we fail to perform our services in accordance with these requirements, regulatory authorities may take action against us or our customers. Such actions may include injunctions or failure of such regulatory authority to grant marketing approval of our customers' products, imposition of clinical holds or delays, suspension or withdrawal of approvals, rejection of data collected in our clinical trials, license revocation, product seizures or recalls, operational restrictions, civil or criminal penalties or prosecutions, damages or fines. Customers may also bring claims against us for breach of our contractual obligations, and patients in the clinical trials and patients taking drugs approved on the basis of those trials may bring personal injury claims against us. Any such action could have a material adverse effect on our business, financial condition, results of operations, cash flows or reputation.

Such consequences could arise if, among other things, the following occur:

Improper performance of our services. The performance of clinical development services is complex and time-consuming. For example, we may make mistakes in conducting a clinical trial that could negatively impact or obviate the usefulness of results of the trial or cause the results of the trial to be reported improperly. If the trial results are compromised, we could be subject to significant costs or liability, which could have an adverse impact on our ability to perform our services and our reputation would be harmed. As examples:

- ☐ non-compliance generally could result in the termination of ongoing clinical trials or the disqualification of data for submission to regulatory authorities;
- ☐ non-compliance could compromise data from a particular trial, such as failure to verify that adequate informed consent was obtained from patients, which could require us to repeat the trial under the terms of our contract at no further cost to our customer, but at a potentially substantial cost to us; and
- ☐ breach of a contractual term could result in liability for damages or termination of the contract.

The services we provide in connection with large clinical trials can cost tens of millions of dollars, and while we endeavor to contractually limit our exposure to such risks, improper performance of our services could have a material adverse effect on our financial condition, damage our reputation and result in the cancellation of current contracts by the affected customer or other current customers or failure to obtain future contracts from the affected customer or other current or potential customers.

Investigation of customers. From time to time, one or more of our customers are investigated by regulatory authorities or enforcement agencies with respect to regulatory compliance of their clinical trials, programs or the marketing and sale of their drugs. In these situations, we have often provided services to our customers with respect to the clinical trials, programs or activities being investigated, and we are called upon to respond to requests for information by the authorities and agencies. There is a risk that either our customers or regulatory authorities could claim that we performed our services improperly or that we are responsible for clinical trial or program compliance. If our customers or regulatory authorities make such claims against us, we could be subject to significant costs in defending our activities and potential damages, fines or penalties. In addition, negative publicity regarding regulatory compliance of our customers' clinical trials, programs or products could have an adverse effect on our business and reputation.

Insufficient customer funding to complete a clinical trial. As noted above, clinical trials can cost tens of millions of dollars. There is a risk that we may initiate a clinical trial for a customer, and then the customer becomes unwilling or unable to fund the completion of the trial. In such a situation, notwithstanding the customer's ability or willingness to pay for or otherwise facilitate the completion of the trial, we may be ethically bound to complete or wind down the trial at our own expense.

Interactive voice/web response service malfunction. We develop and maintain our own, and also use third-parties to run, interactive voice/web response systems. These systems automatically manage the randomization of patients in a given clinical trial to different treatment arms and regulate the supply of investigational drugs. An error in the design, programming or validation of these systems could lead to inappropriate assignment or dosing of patients which could give rise to patient safety issues, invalidation of the trial or liability claims against us. Furthermore, negative publicity associated with such a malfunction could have an adverse effect on our business and reputation. Additionally, errors in randomization may require us to repeat the trial at no further cost to our customer, but at a substantial cost to us.

In addition to the above U.S. laws and regulations, we must comply with the laws of all countries where we do business, including laws governing clinical trials in the jurisdiction where the trials are performed. Failure to comply with applicable requirements could subject us to regulatory risk, liability and potential costs associated with redoing the trials, which could damage our reputation and adversely affect our operating results.

We bear financial risk if we underprice our fixed-fee contracts or overrun cost estimates, and our financial results can also be adversely affected by failure to receive approval for change orders or delays in documenting change orders.

The majority of our Phase I–IV contracts are fixed-fee contracts. We bear the financial risk if we initially underprice our contracts or otherwise overrun our cost estimates. In addition, contracts with our customers are subject to change orders, which we commonly experience and which occur when the scope of work we perform needs to be modified from that originally contemplated by our contract with the customer. Modifications can occur, for example, when there is a change in a key trial assumption or parameter, a significant change in timing or a change in staffing needs. Furthermore, we may be unable to successfully negotiate changes in scope or change orders on a timely basis or at all, which could require us to incur cost outlays ahead of the receipt of any additional revenue. In addition, under US GAAP, we cannot recognize additional revenue anticipated from change orders until appropriate documentation is received by us from the customer authorizing the change. However, if we incur additional expense in anticipation of receipt of that documentation, we must recognize the expense as incurred. Such underpricing, significant cost overruns or delay in documentation of change orders could have a material adverse effect on our business, results of operations, financial condition or cash flows.

If we are unable to successfully execute our growth strategies, our results of operations or financial condition could be adversely affected.

Our key growth strategies include: continued organic growth, continued maintenance of industry-leading margins (compared to our public competitors), increasing capture of the high-growth clinical development market, deepening existing and developing new relationships with our core customer segment, pursuing selective and complementary bolt-on acquisitions and increasing our capture of the large pharmaceutical company market. Though we will strive to meet these goals, we may not have or adequately build the competencies necessary to achieve our objectives. In addition, we may not receive market acceptance for our services and we may face increased competition. If we are unable to successfully continue our organic growth, continue to maintain our margins, increase our capture of the clinical development market, deepen existing and develop new relationships with our core customer segment, pursue complementary and non-transformative acquisitions or attract additional large pharmaceutical company customers, our future business, reputation, results of operations and financial condition could be adversely affected.

If we lose the services of key personnel or are unable to recruit experienced personnel, our business could be adversely affected.

Our success substantially depends on the collective performance, contributions and expertise of our senior management team, including Dr. August J. Troendle, our Chief Executive Officer and founder, and other key personnel including qualified management, professional, scientific and technical operating staff. There is significant competition for qualified personnel in the biopharmaceutical services industry, particularly for those with higher educational degrees, such as a medical or nursing degree, a Ph.D., or an equivalent degree, and our industry generally tends to experience relatively high levels of employee turnover. If any of our key employees were to join a competitor or to form a competing company, some of our customers might choose to use the services of that competitor or new company instead of our own. Furthermore, customers or other companies seeking to develop in-house capabilities may hire some of our senior management or other key employees. The departure of any key contributor, the payment of increased compensation to attract and retain qualified personnel or our inability to continue to identify, attract and retain qualified personnel or replace any departed personnel in a timely fashion may impact our ability to grow our business and compete effectively in our industry and may negatively affect our business, financial condition, results of operations, cash flows or reputation.

Our business depends on the continued effectiveness and availability of our information systems, including the information systems we use to provide our services to our customers, such as ClinTrak, and failures of these systems may materially limit our operations.

Due to the global nature of our business and our reliance on information systems to provide our services, we intend to increase our use of web-enabled and other integrated information systems in delivering our services. We already provide access to such an information system, ClinTrak, to certain of our customers in connection with the services we provide to them. As the breadth and complexity of our information systems continue to grow, we will

increasingly be exposed to the risks inherent in the development, integration and ongoing operation of evolving information systems, including:

- ☐ disruption, impairment or failure of data centers, telecommunications facilities or other key infrastructure platforms;
- ☐ security breaches of, cyberattacks on and other failures or malfunctions in our critical application systems or their associated hardware; and
- ☐ excessive costs, excessive delays or other deficiencies in systems development and deployment.

The materialization of any of these risks may impede the processing of data, the delivery of databases and services and the day-to-day management of our business and could result in the corruption, loss or unauthorized disclosure of proprietary, confidential or other data. While we have disaster recovery plans in place, they might not adequately protect us in the event of a system failure. Despite any precautions we take, damage from fire, floods, hurricanes, power loss, telecommunications failures, computer viruses, information system security breaches and similar events at our facilities or at those of our third party provider that backs up our data centers could result in interruptions in the flow of data to our servers and from our servers to our customers. Corruption or loss of data may result in the need to repeat a trial at no cost to the customer, but at significant cost to us, or result in the termination of a contract or damage to our reputation. Moreover, regulatory authorities may impose requirements on the use of electronic records and signatures for regulatory purposes. For example, FDA's regulations at 21 CFR Part 11 establish the criteria pursuant to which the FDA will consider electronic records and signatures to be trustworthy, reliable, and generally equivalent to paper records and handwritten signatures. Any failures to comply with those regulatory requirements could impact our customers' ability to rely on the data contained in those electronic records in our systems or result in the FDA's rejection of the data. Additionally, in order for our information systems to continue to be effective going forward, we periodically need to upgrade our technology systems and increase our capacity to keep pace with technological developments and our growth as a company. Significant delays in system enhancements or inadequate performance of new or upgraded systems once completed could damage our reputation and harm our business. Our operations also may suffer if we are unable to effectively manage the implementation of and adapt to new technology systems. Any such shortcoming may require us to make substantial further investments in our IT platform, which could adversely affect our financial results. Finally, long-term disruptions in the infrastructure caused by events such as natural disasters, the outbreak of war, the escalation of hostilities and acts of terrorism, particularly involving cities in which we have offices, could adversely affect our business. As our business continues to expand globally, these types of risks may be further increased by instability in the geopolitical climate of certain regions, underdeveloped and less stable utilities and communications infrastructure and other local and regional factors. Although we carry property and business interruption insurance, our coverage might not be adequate to compensate us for all losses that may occur.

Unauthorized disclosure of sensitive or confidential data, whether through system failure or breaches or employee negligence, fraud or misappropriation, could damage our reputation and cause us to lose customers. Similarly, unauthorized access to or through our information systems or those we develop for our customers, whether by our employees or third parties, including a cyberattack by computer programmers and hackers who may develop and deploy viruses, worms or other malicious software programs, could result in negative publicity, significant remediation costs, legal liability and damage to our reputation and could have a material adverse effect on our results of operations. In addition, our liability insurance might not be sufficient in type or amount to adequately cover us against claims related to security breaches, cyberattacks and other related breaches.

If the security of confidential information used in connection with our services is breached or otherwise subject to unauthorized access, our reputation and business may be materially harmed.

Our services require us to collect, store, use, and transmit significant amounts of confidential information, including personally identifiable information, and other critical data. We employ a range of information technology solutions, controls, procedures, and processes designed to protect the confidentiality, integrity, and availability of our critical assets, including our data and information technology systems. While we engage in a number of measures aimed to protect against security breaches and to minimize problems if a data breach were to occur, our information technology systems and infrastructure may be vulnerable to damage, compromise, disruption, and shutdown due to attacks or breaches by hackers or due to other circumstances, such as error or malfeasance by employees or third

party service providers or technology malfunction. The occurrence of any of these events, as well as a failure to promptly remedy these events should they occur, could compromise our systems, and the information stored in our systems could be accessed, publicly disclosed, lost, stolen, or damaged. Any such circumstance could adversely affect our ability to attract and maintain customers, cause us to suffer negative publicity, and subject us to legal claims and liabilities or regulatory penalties. In addition, unauthorized parties might alter information in our databases, which would adversely affect both the reliability of that information and our ability to market and perform our services. Techniques used to obtain unauthorized access or to sabotage systems change frequently, are constantly evolving and generally are difficult to recognize and react to effectively. We may be unable to anticipate these techniques or to implement adequate preventive or reactive measures. Several recent, highly publicized data security breaches at other companies have heightened consumer awareness of this issue and may embolden individuals or groups to target our systems or those of our strategic partners or enterprise customers.

Our business could be harmed if we are unable to manage our growth effectively.

We believe that sustained growth places a strain on operational, human and financial resources. To manage our growth, we must continue to improve our operating and administrative systems and to attract and retain qualified management, professional, scientific and technical operating personnel. We believe that maintaining and enhancing both our systems and personnel at reasonable cost are instrumental to our success. We cannot assure you that we will be able to enhance our current technology or obtain new technology that will enable our systems to keep pace with developments and the needs of our customers. The nature and pace of our growth introduces risks associated with quality control and customer dissatisfaction due to delays in performance or other problems. In addition, foreign operations involve the additional risks of assimilating differences in foreign business practices, hiring and retaining qualified personnel and overcoming language barriers. Failure to manage growth effectively could have a material adverse effect on our business.

Our customer or therapeutic area concentration may have a material adverse effect on our business, financial condition, results of operations or cash flows.

Although we did not have any customer that represented 10% or more of our net service revenue during the year ended December 31, 2017, we derive a significant portion of our revenues from a limited number of large customers. For the year ended December 31, 2017, we derived 32.2% and 5.3% of our net service revenue from our top 10 customers and our largest customer, respectively. In addition, approximately 45.5% and 6.3% of our backlog, as of December 31, 2017, was concentrated among our top 10 customers and our largest customer by backlog concentration, respectively. Moreover, 6.3% of our backlog, as of December 31, 2017, was concentrated with our largest customer by net service revenue. If any large customer decreases or terminates its relationship with us, our business, financial condition, results of operations or cash flows could be materially adversely affected. Also, consolidation in our actual or potential customer base results in increased competition for important market segments and fewer available customer accounts.

Additionally, conducting multiple clinical trials for different sponsors in a single therapeutic class, involving similar drugs, biologics or medical devices, may adversely affect our business if some or all of the trials are terminated because of new scientific information or regulatory decisions that affect the products as a class. Moreover, even if these trials are not terminated, they may compete with each other, thereby limiting our potential revenue going forward.

Our business is subject to international economic, political and other risks that could negatively affect our results of operations and financial condition.

We have significant operations in foreign countries, including, but not limited to, countries in Europe, Latin America, Asia, the Middle East and Africa, that may require complex arrangements to deliver services on global contracts for our customers. For the year ended December 31, 2017, 7.6% of our revenue was denominated in currencies other than the U.S. dollar. As a result, we are subject to heightened risks inherent in conducting business internationally, including the following:

- ☐ conducting a single trial across multiple countries is complex, and issues in one country, such as a failure to comply with local regulations or restrictions, may affect the progress of the trial in the other

countries, for example, by limiting the amount of data necessary for a trial to proceed, resulting in delays or potential cancellation of contracts, which in turn may result in loss of revenue;

- ☐ the United States or other countries could enact legislation or impose regulations or other restrictions, including unfavorable labor regulations or tax policies, which could have an adverse effect on our ability to conduct business in or expatriate profits from those countries;
- ☐ tax rates in certain foreign countries may exceed those in the United States and foreign earnings may be subject to withholding requirements or the imposition of tariffs, exchange controls or other restrictions, including restrictions on repatriation;
- ☐ certain foreign countries are expanding or may expand their regulatory framework with respect to patient informed consent, protection and compensation in clinical trials, and privacy, which could delay or inhibit our ability to conduct trials in such jurisdictions or which could materially increase the risks associated with performing trials in such jurisdictions;
- ☐ certain foreign countries are expanding or may expand their banking regulations that govern international currency transactions, particularly cross-border transfers, which may inhibit our ability to transfer funds into or within a jurisdiction, impeding our ability to pay our principal investigators, vendors and employees, thereby impacting our ability to conduct trials in such jurisdictions;
- ☐ the regulatory or judicial authorities of foreign countries may not enforce legal rights and recognize business procedures in a manner to which we are accustomed or would reasonably expect;
- ☐ we may have difficulty complying with a variety of laws and regulations in foreign countries, some of which may conflict with laws in the United States;
- ☐ potential violations of existing or newly adopted local laws or anti-bribery laws, such as the United States Foreign Corrupt Practices Act, or FCPA, and the UK Bribery Act of 2010, may cause a material adverse effect on our business, financial condition, results of operations, cash flows or reputation;
- ☐ changes in political and economic conditions, including inflation, may lead to changes in the business environment in which we operate, as well as changes in foreign currency exchange rates;
- ☐ foreign governments may enact currency exchange controls that may limit the ability to fund our operations or significantly increase the cost of maintaining operations;
- ☐ customers in foreign jurisdictions may have longer payment cycles, and it may be more difficult to collect receivables in foreign jurisdictions; and
- ☐ natural disasters, pandemics or international conflict, including terrorist acts, could interrupt our services, endanger our personnel or cause project delays or loss of trial materials or results.

These risks and uncertainties could negatively impact our ability to, among other things, perform large, global projects for our customers. Furthermore, our ability to deal with these issues could be affected by applicable U.S. laws and the need to protect our assets. In addition, we may be more susceptible to these risks as we enter and continue to target growth in emerging countries and regions, including Asia, Eastern Europe and Latin America, which may be subject to a relatively higher risk of political instability, economic volatility, crime, corruption and social and ethnic unrest, all of which are exacerbated in many cases by a lack of an independent and experienced judiciary and uncertainties in how local law is applied and enforced. The materialization of any such risks could have an adverse impact on our financial condition, results of operations, cash flows or reputation.

Due to the global nature of our business, we may be exposed to liabilities under the Foreign Corrupt Practices Act and various other anti-corruption laws, and any allegation or determination that we violated these laws could have a material adverse effect on our business.

We are required to comply with the FCPA, UK Bribery Act of 2010 and other U.S. and foreign anti-corruption laws, which prohibit companies from engaging in bribery including corruptly or improperly offering, promising, or providing money or anything else of value to foreign officials and certain other recipients. In addition, the FCPA imposes certain books, records and accounting control obligations on public companies and other issuers. We operate in parts of the world in which corruption can be common and compliance with anti-bribery laws may conflict with local customs and practices. Our global operations face the risk of unauthorized payments or offers

being made by employees, consultants, sales agents and other business partners outside of our control or without our authorization. It is our policy to implement safeguards (including mandatory training) to prohibit these practices by our employees and business partners with respect to our operations. However, irrespective of these safeguards, or as a result of monitoring compliance with such safeguards, it is possible that we or certain other parties may discover or receive information at some point that certain employees, consultants, sales agents, or other business partners may have engaged in corrupt conduct for which we might be held responsible. Violations of the FCPA or other foreign anti-corruption laws may result in restatements of, or irregularities in, our financial statements as well as severe criminal or civil sanctions, and we may be subject to other liabilities, which could negatively affect our business, operating results and financial condition. In some cases, companies that violate the FCPA may be debarred by the U.S. government and/or lose their U.S. export privileges. Changes in anti-corruption laws or enforcement priorities could also result in increased compliance requirements and related costs which could adversely affect our business, financial condition and results of operations. In addition, the U.S. or other governments may seek to hold us liable for FCPA violations or violations of other anti-corruption laws committed by companies in which we invest or that we acquired or will acquire.

In the past, we have had net losses and we may report net losses in the future, which could negatively impact our ability to achieve or sustain profitability.

In the past, we have had net losses and we cannot assure you that we will achieve or sustain profitability on a quarterly or annual basis in the future. For the years ended December 31, 2017, 2016 and 2015, our net income (loss) was $39.1 million, $13.4 million and $(8.7) million, respectively. If we cannot maintain profitability, the value of our stock price may be impacted.

Our effective income tax rate may fluctuate, which may adversely affect our operations, earnings and earnings per share.

Our effective income tax rate is influenced by our projected profitability in the various taxing jurisdictions in which we operate. The global nature of our business increases our tax risks. In addition, for various reasons, revenue authorities in many of the jurisdictions in which we operate are known to have become more active in their tax collection activities. Changes in the distribution of profits and losses among taxing jurisdictions may have a significant impact on our effective income tax rate, which in turn could have an adverse effect on our net income and earnings per share. The application of tax laws in various taxing jurisdictions, including the United States, is subject to interpretation, and tax authorities in various jurisdictions may have diverging and sometimes conflicting interpretations of the application of tax laws. Changes in tax laws or tax rulings, in the United States or other tax jurisdictions in which we operate, could materially impact our effective tax rate.

Factors that may affect our effective income tax rate include, but are not limited to:

- ☐ the requirement to exclude from our quarterly worldwide effective income tax calculations losses in jurisdictions where no income tax benefit can be recognized;
- ☐ actual and projected full year pre-tax income, including differences between actual and anticipated income before taxes in various jurisdictions;
- ☐ changes in tax laws, or in the interpretation or application of tax laws, in various taxing jurisdictions;
- ☐ audits or other challenges by taxing authorities;
- ☐ the establishment of valuation allowances against a portion or all of certain deferred income tax assets if we determined that it is more likely than not that future income tax benefits will not be realized; and
- ☐ changes in the relative mix and size of clinical trials and staffing levels in various tax jurisdictions.

These changes may cause fluctuations in our effective income tax rate that could adversely affect our results of operations and cause fluctuations in our earnings and earnings per share.

On December 22, 2017, President Trump signed into law the “Tax Cuts and Jobs Act” (TCJA) that significantly reforms the Internal Revenue Code of 1986, as amended. The TCJA, among other things, includes changes to U.S.

federal tax rates, imposes significant additional limitations on the deductibility of interest, allows for the expensing of capital expenditures, and puts into effect the migration from a “worldwide” system of taxation to a territorial system. We continue to examine the impact this tax reform legislation may have on our business. The impact of this tax reform on holders of our common stock is uncertain and could be adverse. This Annual Report on Form 10-K does not discuss any such tax legislation or the manner in which it might affect purchasers of our common stock. We urge our stockholders to consult with their legal and tax advisors with respect to such legislation and the potential tax consequences of investing in our common stock.

Governmental authorities may question our intercompany transfer pricing policies or change their laws in a manner that could increase our effective tax rate or otherwise harm our business.

As a U.S. company doing business in international markets through subsidiaries, we are subject to foreign tax and intercompany pricing laws, including those relating to the flow of funds between the parent and subsidiaries. Tax authorities in the United States and in foreign markets closely monitor our corporate structure and how we account for intercompany fund transfers. If tax authorities challenge our corporate structure, transfer pricing mechanisms or intercompany transfers, our operations may be negatively impacted and our effective tax rate may increase. Tax rates vary from country to country and if regulators determine that our profits in one jurisdiction should be increased, we might not be able to fully utilize all foreign tax credits that are generated, which would increase our effective tax rate. Additionally, the Organization for Economic Cooperation and Development, or OECD, has issued certain proposed guidelines regarding base erosion and profit sharing. Once these guidelines are formally adopted by the OECD, it is possible that separate taxing jurisdictions may also adopt some form of these guidelines. In such case, we may need to change our approach to intercompany transfer pricing in order to maintain compliance under the new rules. Our effective tax rate may increase or decrease depending on the current location of global operations at the time of the change. Finally, we might not always be in compliance with all applicable customs, exchange control, Value Added Tax and transfer pricing laws despite our efforts to be aware of and to comply with such laws. In such case, we may need to adjust our operating procedures and our business could be adversely affected.

If we are unable to recruit suitable investigators and enroll patients for our customers’ clinical trials, our clinical development business may suffer.

The recruitment of investigators and patients for clinical trials is essential to our business. Investigators are typically located at hospitals, clinics or other sites and supervise the administration of the investigational drug, biologic or device to patients during the course of a clinical trial. Patients typically include people from the communities in which the clinical trials are conducted. Our clinical development business could be adversely affected if we are unable to attract suitable and willing investigators or patients for clinical trials on a consistent basis. For example, if we are unable to engage investigators to conduct clinical trials as planned or enroll sufficient patients in clinical trials, we may need to expend additional funds to obtain access to resources or else be compelled to delay or modify the clinical trial plans, which may result in additional costs to us. These considerations might result in our being unable to successfully achieve our projected development timelines, or potentially even lead to the termination of ongoing clinical trials or development of a product.

Our clinical development services could subject us to potential liability that may adversely affect our results of operations and financial condition.

Our business involves the testing of new drugs, biologics and medical devices on patients in clinical trials. Our involvement in the clinical trial and development process creates a risk of liability for personal injury to or death of patients, particularly for those with life-threatening illnesses, resulting from adverse reactions to the products administered during testing or after regulatory approval. For example, we may be sued in the future by individuals alleging personal injury due to their participation in clinical trials and seeking damages from us under a variety of legal theories. If we are required to pay damages or incur defense costs in connection with any personal injury claim that is outside the scope of indemnification agreements we have with our customers, if any indemnification agreement is not performed in accordance with its terms or if our liability exceeds the amount of any applicable indemnification limits or available insurance coverage, our business, financial condition, results of operations, cash flows or reputation could be materially and adversely affected. We might also not be able to obtain adequate insurance or indemnification for these types of risks at reasonable rates in the future.

We also contract with institutions and physicians to serve as investigators in conducting clinical trials. Investigators are typically located at hospitals, clinics or other sites and supervise the administration of the investigational products to patients during the course of a clinical trial. If the investigators or study staff commit errors or make omissions during a clinical trial that result in harm to trial patients, or patients suffer harm with a delayed onset after a clinical trial is completed and the product has obtained regulatory approval, claims for personal injury or products liability damages may result. Additionally, if the investigators engage in fraudulent or negligent behavior, trial data may be compromised, which may require us to repeat the clinical trial or subject us to liability or regulatory action. We do not believe we are legally responsible for the medical care rendered by such third party investigators, and we would vigorously defend any claims brought against us. However, it is possible we could be found liable for claims with respect to the actions of third party investigators and the institutions at which clinical trials may be conducted.

Some of our services involve direct interaction with clinical trial patients and operation of a Phase I clinical facility, which could create potential liability that may adversely affect our results of operations and financial condition.

We operate a facility where Phase I clinical trials are conducted, which ordinarily involve testing an investigational drug, biologic or medical device on a limited number of individuals to evaluate its safety, determine a safe dosage range and identify side effects. Failure to operate such a facility and clinical trials in accordance with FDA, DEA and other applicable regulations could result in disruptions to our operations. Additionally, we face risks associated with adverse events resulting from the administration of such drugs, biologics and medical devices and the professional malpractice of medical care providers. We also directly employ nurses and other trained employees who assist in implementing the testing involved in our clinical trials, such as drawing blood from subjects. Any professional malpractice or negligence by such investigators, nurses or other employees could potentially result in liability to us in the event of personal injury to or death of a subject in clinical trials. This liability, particularly if it were to exceed the limits of any indemnification agreements and insurance coverage we may have, may adversely affect our financial condition, results of operations and reputation.

Our insurance may not cover all of our indemnification obligations and other liabilities associated with our operations.

We maintain insurance designed to provide coverage for ordinary risks associated with our operations and our ordinary indemnification obligations, which we believe to be customary for our industry. The coverage provided by such insurance may not be adequate for all claims we may make or may be contested by our insurance carriers. If our insurance is not adequate or available to pay liabilities associated with our operations, or if we are unable to purchase adequate insurance at reasonable rates in the future, our business, financial condition, results of operations or cash flows may be materially adversely impacted.

Exchange rate fluctuations may have a material adverse effect on our business, financial condition, results of operations or cash flows.

For the year ended December 31, 2017, approximately 7.6% of our revenue was denominated in currencies other than U.S. dollars, and 28.6% of our operational costs, including, but not limited to, salaries, wages and other employee benefits were denominated in foreign currencies. Of these exposures, 89.0% of our revenue denominated in foreign currencies, and 49.6% of our operational costs denominated in foreign currencies, were Euro denominated. Because a large portion of our net service revenue and expenses are denominated in currencies other than the U.S. dollar and our financial statements are reported in U.S. dollars, changes in foreign currency exchange rates could significantly affect our financial condition, results of operations and cash flows.

The revenue and expenses of our foreign operations are generally denominated in local currencies and translated into U.S. dollars for financial reporting purposes. Accordingly, exchange rate fluctuations will affect the translation of foreign results into U.S. dollars for purposes of reporting our consolidated results.

We are subject to foreign currency transaction risk for fluctuations in exchange rates during the period of time between the consummation and cash settlement of a transaction. We earn revenue from our service contracts over a period of several months and, in some cases, over several years. Accordingly, exchange rate fluctuations during such periods may affect our profitability with respect to such contracts.

Additionally, the majority of our global contracts are denominated in U.S. dollars or Euros, while the currency used to fund our operating costs in foreign countries is denominated in various different currencies. Fluctuations in the exchange rates of the currencies we use to contract with our customers and the currencies in which we incur cost to complete those contracts can have a significant impact on our results of operations.

We may limit these risks through exchange rate fluctuation provisions stated in our service contracts. We have not, however, mitigated all of our foreign currency transaction risk, and we may experience fluctuations in financial results from our operations outside the United States and foreign currency transaction risk associated with our service contracts.

Our relationships with existing or potential customers who are in competition with each other may adversely impact the degree to which other customers or potential customers use our services, which may adversely affect our results of operations.

The biopharmaceutical industry is highly competitive, with companies each seeking to persuade payors, providers and patients that their drug therapies are more cost-effective than competing therapies marketed or being developed by competing firms. In addition to the adverse competitive interests that biopharmaceutical companies have with each other, these companies also have adverse interests with respect to drug selection, coverage and reimbursement with other participants in the healthcare industry, including payors and providers. Biopharmaceutical companies also compete to be first to the market with new drug therapies. We regularly provide services to biopharmaceutical companies who compete with each other, and we sometimes provide services to such customers regarding competing drugs in development. Our existing or future relationships with our biopharmaceutical customers may deter other biopharmaceutical customers from using our services or, in certain instances, may result in our customers seeking to place limits on our ability to serve their competitors and other industry participants. In addition, our further expansion into the broader healthcare market may adversely impact our relationships with biopharmaceutical customers, and such customers may elect not to use our services, reduce the scope of services that we provide to them or seek to place restrictions on our ability to serve customers in the broader healthcare market with interests that are adverse to theirs. Any loss of customers or reductions in the level of revenues from a customer could have a material adverse effect on our business, financial condition, results of operations or cash flows.

If we are unable to successfully integrate potential future acquisitions, our business, financial condition, results of operations and cash flows could be adversely affected.

We anticipate that a portion of our future growth may come from targeted acquisitions to expand our current capabilities and service offerings. The success of any acquisition will depend upon, among other things, our ability to effectively integrate acquired personnel, operations, products and technologies into our business and to retain the key personnel and customers of our acquired businesses. In addition, we may be unable to identify suitable acquisition opportunities or obtain any necessary financing on commercially acceptable terms. We may also spend time and money investigating and negotiating with potential acquisition targets but not complete the transaction. Any acquisition could involve other risks, including, among others, the assumption of additional liabilities and expenses, difficulties and expenses in connection with integrating the acquired companies and achieving the expected benefits, issuances of potentially dilutive securities or interest-bearing debt, loss of key employees of the acquired companies, transaction expenses, diversion of management's attention from other business concerns and, with respect to the acquisition of international companies, the inability to overcome differences in international business practices, language and customs. Our failure to successfully integrate potential future acquisitions could have an adverse effect on our business, financial condition, results of operations and cash flows.

We have a significant amount of goodwill and intangible assets on our balance sheet, and our results of operations may be adversely affected if we fail to realize the full value of our goodwill and intangible assets.

Our balance sheet reflects goodwill and intangibles assets of $661.0 million and $98.7 million, respectively, as of December 31, 2017. Collectively, goodwill and intangibles assets represented 79.9% of our total assets as of December 31, 2017. Our goodwill was recorded in connection with Cinven's acquisition of us in 2014. In accordance with US GAAP, goodwill and indefinite lived intangible assets are not amortized, but are subject to a periodic impairment evaluation. We assess the realizability of our indefinite lived intangible assets and goodwill annually and conduct an interim evaluation whenever events or changes in circumstances, such as operating losses

or a significant decline in earnings associated with the acquired business or asset, indicate that these assets may be impaired. In addition, we review long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets might not be recoverable. If indicators of impairment are present, we evaluate the carrying value in relation to estimates of future discounted cash flows. Our ability to realize the value of the goodwill and intangible assets will depend on the future cash flows of our businesses. The carrying amount of the goodwill could be impaired if there is a downturn in our business or our industry or other factors that affect the fair value of our business, in which case a charge to earnings would become necessary. If we are not able to realize the value of the goodwill and intangible assets, we may be required to incur material charges relating to the impairment of those assets. For example, in conjunction with the 2015 fourth quarter annual assessment of goodwill, we determined that goodwill related to our Clinics reporting unit was impaired and we recognized an impairment charge of $9.3 million, which represented 100% of the goodwill that had been allocated to this reporting unit. Such impairment charges in the future could materially and adversely affect our business, financial condition, results of operations and cash flows.

Our ability to utilize our net operating loss carryforwards or certain other tax attributes may be limited.

Under Sections 382 and 383 of the U.S. Internal Revenue Code of 1986, as amended, if a corporation undergoes an “ownership change” (generally defined as a greater than 50 percentage point change, by value, in the aggregate stock ownership of certain shareholders over a three-year period), the corporation’s ability to use its pre-change net operating loss carryforwards to offset its future taxable income and other pre-change tax attributes may be limited. We have experienced at least one ownership change in the past. We may experience additional ownership changes in the future. In addition, future changes in our stock ownership (including future sales by Cinven) could result in additional ownership changes. Any such ownership changes could limit our ability to use our net operating loss carryforwards to offset any future taxable income and other tax attributes. State and foreign tax laws may also impose limitations on our ability to utilize net operating loss carryforwards and other tax attributes.

Our operations involve the use and disposal of hazardous substances and waste which can give rise to liability that could adversely impact our financial condition.

We conduct activities that have involved, and may continue to involve, the controlled use of hazardous materials and the creation of hazardous substances, including medical waste and other highly regulated substances. As a result, our operations pose the risk of accidental contamination or injury caused by the release of these materials and/or the creation of hazardous substances, including medical waste and other highly regulated substances. In the event of such an accident, we could be held liable for damages and cleanup costs which, to the extent not covered by existing insurance or indemnification, could harm our business. In addition, other adverse effects could result from such liability, including reputational damage resulting in the loss of additional business from certain customers.

The failure of third parties to provide us critical support services could materially adversely affect our business, financial condition, results of operations, cash flows or reputation.

We depend on third parties for support services vital to our business. Such support services include, but are not limited to, laboratory services, third-party transportation and travel providers, technology providers, freight forwarders and customs brokers, drug depots and distribution centers, suppliers or contract manufacturers of drugs for patients participating in clinical trials and providers of licensing agreements, maintenance contracts or other services. In addition, we also rely on third-party CROs and other contract clinical personnel for clinical services either in regions where we have limited resources, or in cases where demand cannot be met by our internal staff. The failure of any of these third parties to adequately provide us critical support services could have a material adverse effect on our business, financial condition, results of operations, cash flows or reputation.

We have only a limited ability to protect our intellectual property rights, and these rights are important to our success.

Our success depends, in part, upon our ability to develop, use and protect our proprietary methodologies, analytics, systems, technologies and other intellectual property. Existing laws of the various countries in which we provide services or solutions offer only limited protection of our intellectual property rights, and the protection in some countries may be very limited. We rely upon a combination of trade secrets, confidentiality policies, nondisclosure,

invention assignment and other contractual arrangements, and copyright, trademark and trade secret laws, to protect our intellectual property rights. These laws are subject to change at any time and certain agreements may not be fully enforceable, which could further restrict our ability to protect our innovations. Our intellectual property rights may not prevent competitors from independently developing services similar to or duplicative of ours. Further, the steps we take in this regard might not be adequate to prevent or deter infringement or other misappropriation of our intellectual property by competitors, former employees or other third parties, and we might not be able to detect unauthorized use of, or take appropriate and timely steps to enforce, our intellectual property rights. Enforcing our rights might also require considerable time, money and oversight, and we may not be successful in enforcing our rights.

The results of the United Kingdom's referendum on withdrawal from the European Union may have a negative effect on global economic conditions, financial markets and our business.

In June 2016, a majority of voters in the United Kingdom elected to withdraw from the European Union, or the EU, in a national referendum. The referendum was advisory, and the terms of any withdrawal are subject to a negotiation period that could last at least two years after the government of the United Kingdom formally initiates a withdrawal process. Nevertheless, the referendum has created significant uncertainty about the future relationship between the United Kingdom and the EU, including with respect to the laws and regulations that will apply as the United Kingdom determines which EU laws to replace or replicate in the event of a withdrawal. The referendum has also given rise to calls for the governments of other EU member states to consider withdrawal. These developments, or the perception that any of them could occur, have had and may continue to have a material adverse effect on global economic conditions and the stability of global financial markets, and may significantly reduce global market liquidity and restrict the ability of key market participants to operate in certain financial markets. Any of these factors could depress economic activity and restrict our access to capital, which could have a material adverse effect on our business, financial condition and results of operations and reduce the price of our common stock.

Potential future investments in our customers' businesses or products could have a negative impact on our financial results.

We have in the past and may in the future enter into arrangements with our customers or other drug, biologic or medical device companies in which we take on payment risk by making strategic investments in our customers or other drug companies, providing flexible payment terms or fee financing to customers or other companies, or entering into other risk sharing arrangements on trial execution. Our financial results would be adversely affected if the amount realized from any such risk sharing arrangement was less than the value of our services under the contract related to such arrangement.

Our operations might be affected by the occurrence of a natural disaster or other catastrophic event.

We depend on our customers, investigators, laboratories and other facilities for the continued operation of our business. Although we have contingency plans in place for natural disasters or other catastrophic events, these events, including terrorist attacks, pandemic flu, hurricanes, floods and ice and snow storms, could nevertheless disrupt our operations or those of our customers, investigators and collaboration partners, which could also affect us. Even though we carry business interruption insurance policies and typically have provisions in our contracts that protect us in certain events, we might suffer losses as a result of business interruptions that exceed the coverage available under our insurance policies or for which we do not have coverage. Any natural disaster or catastrophic event affecting us or our customers, investigators or collaboration partners could have a significant negative impact on our operations and financial performance.

Risks Relating to Our Industry

Outsourcing trends in the biopharmaceutical industry and changes in aggregate expenditures and R&D budgets could adversely affect our operating results and growth rate.

Our revenues depend on the level of R&D expenditures, size of the drug development pipelines and outsourcing trends of the biopharmaceutical industry, including the amount of such R&D expenditures that is outsourced and subject to competitive bidding among CROs. Accordingly, economic factors and industry trends that affect

biopharmaceutical companies affect our business. For example, if biopharmaceutical companies become less able to access capital in the future, they may commit less capital to our services going forward. Also, biopharmaceutical companies continue to seek long-term strategic collaborations with global CROs with favorable pricing terms. Many of our competitors seek out these collaborations, while we generally do not. If our competitors can successfully enter into these collaborations, it may reduce the share of the biopharmaceutical outsourcing business that we might otherwise be positioned to capture.

In addition, if the biopharmaceutical industry reduces its outsourcing of clinical trials or such outsourcing fails to grow at projected or expected rates, or at all, our business, financial condition, results of operations and cash flows could be materially and adversely affected. We may also be negatively impacted by consolidation and other factors in the biopharmaceutical industry, which may slow decision making by our customers, result in the delay or cancellation of existing projects, cause reductions in overall R&D expenditures or lead to increased pricing pressures. Further, in the event that one of our customers combines with a company that is using the services of one of our competitors, the combined company could decide to use the services of that competitor or another provider. All of these events could adversely affect our business, financial condition, cash flows or results of operations.

We face intense competition in many areas of our business and, if we do not compete effectively, our business may be harmed.

The CRO industry is highly competitive. We often compete for business with other CROs as well as internal development departments at some of our customers, some of which could be considered large CROs in their own right. We also compete with universities and teaching hospitals. Some of these competitors have greater financial resources and a wider range of service offerings over a greater geographic area than we do. If we do not compete successfully, our business will suffer. The industry is highly fragmented, with numerous smaller specialized companies and a handful of full-service companies with global capabilities similar to ours. Increased competition has led to price and other forms of competition, such as acceptance of less favorable contract terms, which could adversely affect our operating results. In recent years, our industry has experienced consolidation. This trend is likely to produce more competition from the resulting larger companies. Further, certain of our key competitors are private and, therefore, they do not contend with the cost pressures of being a public company. We compete with both large CROs and mid-sized CROs, and have increasingly faced more competition from larger CROs. Our ability to continue to grow and perform effectively will directly impact our success against our competitors. In addition, there are few barriers to entry for smaller specialized companies considering entering the industry. Because of their size and focus, small CROs might compete effectively against larger companies such as us, especially in lower cost geographic areas, which could have a material adverse effect on our business.

We may be affected by healthcare reform and potential additional regulatory reforms, which may adversely impact the biopharmaceutical industry or otherwise reduce the need for our services or negatively impact our profitability.

Numerous government bodies are considering or have adopted various healthcare reforms and may undertake, or are in the process of undertaking, efforts to control growing healthcare costs through legislation, regulation and voluntary agreements with healthcare providers and biopharmaceutical companies, including many of our customers. By way of example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the Affordable Care Act, was signed into law, which, among other things, expanded, over time, health insurance coverage, imposed health industry cost containment measures, enhanced remedies against healthcare fraud and abuse, added new transparency requirements for healthcare and health insurance industries, imposed new taxes and fees on pharmaceutical and medical device manufacturers, added new requirements for certain applicable drug and device manufacturers to disclose payments to physicians, including principal investigators, and imposed additional health policy reforms, any of which may significantly impact the biopharmaceutical industry. We are uncertain as to the full effects of these reforms on our business and are unable to predict what legislative proposals, if any, will be adopted in the future. If regulatory cost containment efforts limit the profitability of new drugs, our customers may reduce their R&D expenditures, which could reduce the business they outsource to us. Similarly, if regulatory requirements for product testing are relaxed or harmonized across jurisdictions, or simplified drug approval procedures are adopted, the demand for our services could decrease. The result of the recent presidential election in the United States has added to the uncertainty regarding healthcare policies and regulations as the new presidential administration and U.S. Congress have called for the repeal of the Affordable Care Act.

Government bodies may also adopt healthcare legislation or regulations that are more burdensome than existing regulations. For example, product safety concerns and recommendations by the Drug Safety Oversight Board could change the regulatory environment for drug products, and new or heightened regulatory requirements may increase our expenses or limit our ability to offer some of our services. Additionally, new or heightened regulatory requirements may have a negative impact on the ability of our customers to conduct industry sponsored clinical trials, which could reduce the need for our services. These developments and the lack of clarity regarding future healthcare policies and regulations have created significant uncertainty that could adversely affect our business, financial condition, cash flows or results of operations.

Consolidation in the biopharmaceutical industry could lead to a reduction in our revenues.

The biopharmaceutical and CRO industries are currently undergoing a period of increased merger activity. Several large biopharmaceutical companies have recently completed mergers and acquisitions that will consolidate the outsourcing trends and R&D expenditures into fewer companies, and many larger and medium sized biopharmaceutical companies have been acquiring smaller biopharmaceutical companies. As a result of this and future consolidations, our customer diversity may decrease and our business may be adversely affected.

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

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

Laws and regulations regarding the protection of personal data could result in increased risks of liability or increased cost to us or could limit our service offerings.

The confidentiality, collection, use and disclosure of personal data, including clinical trial patient-specific information, are subject to governmental regulation generally in the country in which the personal data was collected or used. For example, U.S. federal regulations under the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and their implementing regulations, including the Privacy and Security Rules, or collectively, HIPAA, generally require individuals' written authorization, in addition to any required informed consent, before protected health information may be used for research and such regulations specify standards for de-identifications and for limited data sets. We may also be subject to applicable state privacy and security laws and regulations in states in which we operate. Two of our subsidiaries, Medpace Clinical Pharmacology, LLC and C-MARC, LLC, are covered entities under HIPAA. Further, because of amendments to the HIPAA Privacy and Security Rules that were promulgated on January 25, 2013, known as the Omnibus Final Rule, service providers to covered entities under HIPAA, known as business associates, are now directly subject to HIPAA. There are some instances where we may be a HIPAA "business associate" of a "covered entity," meaning that we may be directly liable for any breaches of protected health information and other HIPAA violations. We are also liable contractually under any business associate agreements we have signed with covered entities. If we are determined to be a business associate, we would be subject to HIPAA's enforcement scheme, which, as amended, can result in up to $1.5 million in annual civil penalties for each HIPAA violation. A single breach incident can result in multiple violations of the HIPAA standards, meaning that penalties could be in excess of $1.5 million. In addition, the Federal Civil Penalties Inflation Adjustment Improvement Act of 2015 required all federal agencies to adjust their civil monetary penalties to inflation, no later than August 1, 2016. As a result, the minimum annual penalties for each HIPPA violation which occurs later than February 17, 2009 is now $1.7 million.

HIPAA also authorizes state attorneys general to file suit on behalf of their residents for violations. Courts are able to award damages, costs and attorneys' fees related to violations of HIPAA in such cases. While HIPAA does not create a private right of action allowing individuals to file suit against us in civil court for violations of HIPAA, its standards have been used as the basis for duty of care cases in state civil suits such as those for negligence or recklessness in the misuse or breach of protected health information. In addition, HIPAA mandates that the Secretary of the U.S. Department of Health and Human Services conduct periodic compliance audits of HIPAA covered entities and their business associates for compliance with the HIPAA privacy and security standards, and Phase two of these audits, focusing on business associates has begun.

In the EU, personal data includes any information that relates to an identified or identifiable natural person with health information carrying additional obligations, including obtaining the explicit consent from the individual for collection, use or disclosure of the information. In addition, we are subject to EU rules with respect to export of such data out of the EU. Such data export rules are constantly changing, for example, following a decision of the European Court of Justice in October 2015, transferring personal data to U.S. companies like us that had certified as a member of the EU-U.S. Safe Harbor Scheme was declared invalid and the other methods to permit transfer are now under review. In July 2016, the European Commission approved the EU-U.S. Privacy Shield, which replaces the U.S. Safe Harbor Scheme. The United States, the EU and its member states, and other countries where we have operations, such as Singapore and Russia, continue to issue new privacy and data protection rules and regulations that relate to personal data and health information. Failure to comply with certain certification/registration and annual re-certification/registration provisions associated with these data protection and privacy regulations and rules in various jurisdictions, or to resolve any serious privacy or security complaints, could subject us to regulatory sanctions, criminal prosecution or civil liability. Federal, state and foreign governments may propose or have adopted additional legislation governing the collection, possession, use or dissemination of personal data, such as personal health information, and personal financial data as well as security breach notification rules for loss or theft of such data. Additional legislation or regulation of this type might, among other things, require us to implement new security measures and processes or bring within the legislation or regulation de-identified health or other personal data, each of which may require substantial expenditures or limit our ability to offer some of our services. Additionally, if we violate applicable laws, regulations or duties relating to the use, privacy or security of personal data, we could be subject to civil liability or criminal prosecution, be forced to alter our business practices and suffer reputational harm. The laws in the EU are under reform and from early 2018 onwards, we will be subject to the requirements of the General Data Protection Regulation, or GDPR, because we are processing data in the EU. The GDPR increases the deadline for data breach notifications, imposes additional obligations when we process personal data on behalf of our customers, including in relation to security measures, and increases administrative burdens on companies processing personal data. If we do not comply with our obligations under the GDPR we could be exposed to significant fines of up to 20 million EUR or up to 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher.

The biopharmaceutical industry has a history of patent and other intellectual property litigation, and we might be involved in costly intellectual property lawsuits.

The biopharmaceutical industry has a history of intellectual property litigation, and these lawsuits will likely continue in the future. Accordingly, even without wrongdoing on our part, we may face patent infringement suits by companies that have patents for similar business processes or other suits alleging infringement of their intellectual property rights. Legal proceedings relating to intellectual property could be expensive, take significant time and divert management's attention from other business concerns, regardless of the outcome of the litigation. If we do not prevail in an infringement lawsuit brought against us, we might have to pay substantial damages, and we could be required to stop the infringing activity or obtain a license to use technology on unfavorable terms. Further, our customers could be similarly exposed to intellectual property suits and the resulting economic and operational strain defending such claims could negatively impact such customers' ability to fund or continue ongoing clinical trials on which we are working.

Actions by regulatory authorities or customers to limit the scope of or withdraw an approved drug, biologic or medical device from the market could result in a loss of revenue.

Government regulators have the authority, after approving a drug, biologic or medical device, to limit its indication for use by requiring additional labeled warnings or to withdraw the product's approval for its approved indication based on safety or other concerns. Similarly, customers may act to voluntarily limit the availability of approved products or withdraw them from the market after we begin our work. If we are providing services to customers for products that are limited in availability or withdrawn, we may be required to narrow the scope of or terminate our services with respect to such products, which would prevent us from earning the full amount of net service revenue anticipated under the related service contracts.

If we do not keep pace with rapid technological changes, our services may become less competitive or obsolete.

The biopharmaceutical industry generally, and drug development and clinical research more specifically, are subject to rapid technological changes. Our current competitors or other businesses might develop technologies or services that are more effective or commercially attractive than, or render obsolete, our current or future technologies and services. If our competitors introduce superior technologies or services and if we cannot make enhancements to remain competitive, our competitive position would be harmed. If we are unable to compete successfully, we may lose customers or be unable to attract new customers, which could lead to a decrease in our revenue and have a material adverse effect on our financial condition.

Circumstances beyond our control could cause the CRO industry to suffer reputational or other harm that could result in an industry-wide reduction in demand for CRO services, which could harm our business.

Demand for our services may be affected by perceptions of our customers regarding the CRO industry as a whole. For example, other CROs could engage in conduct that could render our customers less willing to do business with us or any CRO. Likewise, a widely reported injury to clinical trial participants could result in negative perceptions of clinical trial activity, thereby adversely impacting our industry. One or more CROs could engage in or fail to detect malfeasance, such as inadequately monitoring sites, producing inaccurate databases or analysis, falsifying patient records, and performing incomplete lab work, or take other actions that would reduce the confidence of our customers in the CRO industry. As a result, the willingness of biopharmaceutical companies to outsource R&D services to CROs could diminish and our business could thus be harmed materially by events outside our control.

Risks Relating to Our Indebtedness

Our indebtedness could adversely affect our financial condition and prevent us from fulfilling our debt obligations and may otherwise restrict our activities.

Our Senior Secured Credit Facilities (as defined below) consist of a $165.0 million Senior Secured Term Loan Facility maturing in December 2021, or the Senior Secured Term Loan Facility, and a $150.0 million Senior Secured Revolving Credit Facility maturing in December 2021, or the Senior Secured Revolving Credit Facility, and, together with the Senior Secured Term Loan Facility, the Senior Secured Credit Facilities. At December 31, 2017, we had $152.6 million of outstanding indebtedness under our Senior Secured Term Loan Facility and $70.0 million of borrowings outstanding under our Senior Secured Revolving Credit Facility. In addition, we had up to $80.0 million of additional borrowing capacity available under our Senior Secured Revolving Credit Facility. Our indebtedness could adversely affect our financial condition and thus make it more difficult for us to satisfy our obligations with respect to our Senior Secured Credit Facilities. If our cash flow is not sufficient to service our debt and adequately fund our business, we may be required to seek further additional financing or refinancing or dispose of assets. We might not be able to influence any of these alternatives on satisfactory terms or at all. Our indebtedness could also:

- ☐ increase our vulnerability to adverse general economic, industry or competitive developments;
- ☐ require us to dedicate a more substantial portion of our cash flows from operations to payments on our indebtedness, thereby reducing the availability of our cash flows to fund working capital, investments, acquisitions, capital expenditures, and other general corporate purposes;

- ☐ limit our ability to make required payments under our existing contractual commitments, including our existing long-term indebtedness;
- ☐ limit our ability to fund a change of control offer;
- ☐ require us to sell certain assets;
- ☐ restrict us from making strategic investments, including acquisitions or cause us to make non-strategic divestitures;
- ☐ limit our flexibility in planning for, or reacting to, changes in market conditions, our business and the industry in which we operate;
- ☐ place us at a competitive disadvantage compared to our competitors that have less debt;
- ☐ cause us to incur substantial fees from time to time in connection with debt amendments or refinancings;
- ☐ increase our exposure to rising interest rates because our borrowings are at variable interest rates; and
- ☐ limit our ability to borrow additional funds or to borrow on terms that are satisfactory to us.

For more information about our indebtedness, see “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Indebtedness” of Part II of this Annual Report on Form 10-K and Note 8 to our audited consolidated financial statements included in Item 8 of Part II of this Annual Report on Form 10-K.

Despite our current level of indebtedness, we may incur more debt and undertake additional obligations. Incurring such debt or undertaking such additional obligations could further exacerbate the risks to our financial condition.

Although the credit agreement governing the Senior Secured Credit Facilities contains restrictions on our incurrence of additional indebtedness, these restrictions are subject to a number of qualifications and exceptions and the indebtedness incurred in compliance with these restrictions could increase. To the extent new debt is added to our current debt levels, the risks to our financial condition would increase.

While the credit agreement governing the Senior Secured Credit Facilities also contains restrictions on our ability to make loans and investments, these restrictions are subject to a number of qualifications and exceptions, and the investments incurred in compliance with these restrictions could be substantial.

Covenant restrictions under our Senior Secured Credit Facilities may limit our ability to operate our business.

The agreement governing our Senior Secured Credit Facilities contains covenants that may restrict our ability to, among other things:

- ☐ create, incur or assume any lien upon any of our property, assets or revenue;
- ☐ make or hold certain investments;
- ☐ incur or assume any indebtedness;
- ☐ merge, dissolve, liquidate or consolidate with or into another person;
- ☐ make certain dispositions of property or other assets (including sale leaseback transactions);
- ☐ declare or make certain restricted payments, including dividends;
- ☐ enter into certain transactions with affiliates;
- ☐ prepay subordinated debt;
- ☐ enter into burdensome agreements;
- ☐ engage in any material line of business substantially different from our currently conducted business; or
- ☐ change our fiscal year.

In addition, we are required to report compliance with two financial covenants that are tested at the end of each fiscal quarter. We are required to maintain a ratio of consolidated funded indebtedness minus unrestricted cash and cash equivalents (in the aggregate not to exceed $50 million and to include not more than $25 million of foreign unrestricted cash and cash equivalents) to consolidated EBITDA for the most recent four fiscal quarter period not to exceed 4.00:1.00; provided that we shall be permitted to increase the ratio to 4.50:1.00 in connection with any permitted acquisition or any other acquisition consented to by the Administrative Agent and the Required Lenders (each as defined in the Senior Secured Credit Agreement) with total cash consideration in excess of $25 million. Such increase shall be applicable for the fiscal quarter in which such acquisition is consummated and the three consecutive test periods thereafter. We are also required to maintain a ratio of consolidated EBITDA to consolidated interest expense, in each case for the most recent four fiscal quarter period, of not less than 3.00:1.00. As of December 31, 2017, we were in compliance with all covenants under our Senior Secured Credit Agreement.

Although the covenants in our Senior Secured Credit Facilities are subject to various exceptions, we cannot assure you that these covenants will not adversely affect our ability to finance future operations or capital needs or to engage in other activities that may be in our best interest. In addition, in certain circumstances, our long-term debt requires us to maintain a specified financial ratio and satisfy certain financial condition tests, which may require that we take action to reduce our debt or to act in a manner contrary to our business objectives. A breach of any of these covenants could result in a default under our Senior Secured Credit Facilities. If an event of default under our Senior Secured Credit Facilities occurs, the lenders thereunder could elect to declare all amounts outstanding thereunder, together with accrued interest, to be immediately due and payable. In such case, we might not have sufficient funds to repay all the outstanding amounts. In addition, our Senior Secured Credit Facilities are secured by first priority security interests on substantially all of our assets, including the capital stock of certain of our subsidiaries. If an event of default under our Senior Secured Credit Facilities occurs, the lenders thereunder could exercise their rights under the related security documents. Any acceleration of amounts due under the Senior Secured Credit Facilities or the substantial exercise by the lenders of their rights under the security documents would likely have a material adverse effect on us.

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

Our ability to satisfy our debt obligations will depend upon, among other things:

- ☐ our future financial and operating performance, which will be affected by prevailing economic conditions and financial, business, regulatory and other factors, many of which are beyond our control; and
- ☐ the future availability of borrowings under our Senior Secured Credit Facilities, which depends on, among other things, our complying with the covenants in those facilities.

We cannot assure you that our business will generate sufficient cash flow from operations, or that future borrowings will be available to us under our Senior Secured Credit Facilities or otherwise, in an amount sufficient to fund our liquidity needs.

If our cash flows and capital resources are insufficient to service our indebtedness, we may be forced to reduce or delay capital expenditures, sell assets, seek additional capital or restructure or refinance our indebtedness. These alternative measures may not be successful and may not permit us to meet our scheduled debt service obligations. Our ability to restructure or refinance our debt will depend on the condition of the capital markets and our financial condition at such time. Any refinancing of our debt could be at higher interest rates and may require us to comply with more onerous covenants, which could further restrict our business operations. In addition, the terms of existing or future debt agreements, may restrict us from adopting some of these alternatives. In the absence of such operating results and resources, we could face substantial liquidity problems and might be required to dispose of material assets or operations to meet our debt service and other obligations. We may not be able to consummate those dispositions for fair market value or at all, and any proceeds that we could realize from any such dispositions may not be adequate to meet our debt service obligations then due.

Interest rate fluctuations may affect our results of operations and financial condition.

Because our debt is variable-rate debt, fluctuations in interest rates could have a material effect on our business. As a result, we may incur higher interest costs if interest rates increase. These higher interest costs could have a material adverse impact on our financial condition and the levels of cash we maintain for working capital.

We are dependent upon our lenders for financing to execute our business strategy and meet our liquidity needs. If our lenders are unable to fund borrowings under their credit commitments or we are unable to borrow, it could negatively impact our business.

During periods of volatile credit markets, there is risk that any lenders, even those with strong balance sheets and sound lending practices, could fail or refuse to honor their legal commitments and obligations under existing credit commitments, including but not limited to, extending credit up to the maximum permitted by a credit facility. If our lenders are unable to fund borrowings under their revolving credit commitments or we are unable to borrow (such as having insufficient capacity under our borrowing base), it could be difficult in such environments to obtain sufficient liquidity to meet our operational needs.

Risks Relating to Ownership of Our Common Stock

Cinven and our Chief Executive Officer and founder collectively control a substantial majority of our outstanding common stock and their interests may be different from or conflict with those of our other shareholders.

As of December 31, 2017, Cinven owned approximately 46.2% of the outstanding shares of our common stock and Dr. August J. Troendle, our Chief Executive Officer and founder, through his direct ownership of 1,221,416 shares of our common stock and his beneficial ownership of 9,145,510 shares of our common stock held by MPI, controls approximately 29.2% of the outstanding shares of our common stock. Upon a distribution of our common stock held by MPI, our Chief Executive Officer would receive approximately 76.0% of such distributed shares. Accordingly, both Cinven and Dr. Troendle are able to exert a significant degree of influence or actual control over our management and affairs and control all corporate actions requiring shareholder approval, irrespective of how our other shareholders may vote, including:

- ☐ subject to the Voting Agreement (as defined below), the election and removal of directors and the size of our board of directors, or the Board;
- ☐ any amendment of our articles of incorporation or bylaws; or
- ☐ the approval of mergers and other significant corporate transactions, including a sale of substantially all of our assets.

Moreover, Cinven's and Dr. Troendle's share ownership may also adversely affect the trading price for our common stock to the extent investors perceive disadvantages in owning shares of a company with controlling shareholders. In addition, Cinven is in the business of making investments in companies and may, from time to time, acquire interests in businesses that directly or indirectly compete with our business, as well as businesses that are significant existing or potential customers. Cinven may acquire or seek to acquire assets that we seek to acquire and, as a result, those acquisition opportunities may not be available to us or may be more expensive for us to pursue, and as a result, the interests of Cinven may not coincide and may even conflict with the interests of our other shareholders.

We are a "controlled company" within the meaning of the NASDAQ rules and, as a result, we qualify for, and rely on, exemptions from certain corporate governance requirements. Our shareholders do not have the same protections afforded to shareholders of companies that are subject to such requirements.

Substantially concurrently with the closing of our initial public offering, or the IPO, Cinven and Dr. August J. Troendle, our Chief Executive Officer and founder, entered into a voting agreement, or the Voting Agreement. Pursuant to the terms of the Voting Agreement, for so long as Cinven and Dr. Troendle collectively hold at least 40% of our outstanding voting shares, or the Voting Agreement is otherwise terminated in accordance with its terms, Cinven has agreed to vote its shares of our common stock in favor of the election of Dr. Troendle to our Board (so long as Dr. Troendle remains our Chief Executive Officer) upon his nomination by our Board and Dr. Troendle has

agreed to vote his shares of our common stock in favor of the election of the directors affiliated with Cinven upon their nomination by our Board; provided, that in the event that Cinven holds less than (a) 40% but greater than or equal to 25% of our voting shares then outstanding, Dr. Troendle shall be required to vote for two directors affiliated with Cinven, after giving effect to the directors then sitting on the Board, (b) 25% but greater than or equal to 10% of our voting shares then outstanding, Dr. Troendle shall be required to vote for one director affiliated with Cinven, after giving effect to the directors then sitting on the Board and (c) 10% of our voting shares then outstanding, Dr. Troendle shall not be required to vote for any directors affiliated with Cinven.

Because of the Voting Agreement and the aggregate voting power of Cinven and Dr. Troendle, we are considered 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 requirements that, within one year of the date of the listing of our common stock:

- ☐ we have a Board 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 with a written charter addressing the committee's purpose and responsibilities; and
- ☐ director nominations be made, or recommended to the full Board, by our independent directors or by a nominating and corporate governance committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities.

After we cease to be a "controlled company," we will be required to comply with the above-referenced requirements within one year.

We currently do not have a nominating and corporate governance committee. Accordingly, our shareholders do not have the same protections afforded to shareholders of companies that are subject to all of the corporate governance requirements of NASDAQ. Cinven and Dr. Troendle, however, are not subject to any contractual obligation to retain their controlling interest. There can be no assurance as to the period of time during which Cinven and Dr. Troendle will maintain their ownership of our common stock. As a result, there can be no assurance as to the period of time during which we will be able to avail ourselves of the controlled company exemptions.

Upon the sale of a sufficient number of shares by Cinven or Dr. Troendle, we will no longer be a controlled company, and we may have difficulties complying with the NASDAQ rules listed above. We intend to comply with these NASDAQ rules if we cease to be a controlled company. However, there can be no assurance that we will be able to comply with such rules before the end of the phase-in period for compliance.

Our anti-takeover provisions could prevent or delay a change in control of our company, even if such change in control would be beneficial to our shareholders.

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws, as well as provisions of Delaware law could discourage, delay or prevent a merger, acquisition or other change in control of our company, even if such change in control would be beneficial to our shareholders. These provisions include:

- ☐ authorizing the issuance of "blank check" preferred stock that could be issued by our Board to increase the number of outstanding shares and thwart a takeover attempt;
- ☐ establishing a classified Board so that not all members of our Board are elected at one time;
- ☐ the removal of directors only for cause;
- ☐ prohibiting the use of cumulative voting for the election of directors;
- ☐ limiting the ability of shareholders to call special meetings or amend our bylaws;

- ☐ requiring all shareholder actions to be taken at a meeting of our shareholders and not by written consent; and
- ☐ establishing advance notice and duration of ownership requirements for nominations for election to the Board or for proposing matters that can be acted upon by shareholders at shareholder meetings.

These provisions could also discourage proxy contests and make it more difficult for our shareholders to elect directors of their choosing and cause us to take other corporate actions our shareholders desire. 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.

In addition, the Delaware General Corporation Law, or the DGCL, to which we are subject, prohibits us, except under specified circumstances, from engaging in any mergers, significant sales of stock or assets or business combinations with any shareholder or group of shareholders who owns at least 15% of our common stock for three years following their becoming the owner of 15% of our common stock.

Cinven and our non-employee directors may acquire interests and positions that could present potential conflicts with our and our shareholders' interests.

Cinven and our non-employee directors make investments in companies and may, from time to time, acquire and hold interests in businesses that compete directly or indirectly with us. Cinven and our non-employee directors may also pursue, for their own accounts, acquisition opportunities that may be complementary to our business, and as a result, those acquisition opportunities might not be available to us. Our organizational documents contain provisions renouncing any interest or expectancy held by Cinven or by our non-employee directors in corporate opportunities. Accordingly, the interests of Cinven and our non-employee directors may supersede ours, causing Cinven or its affiliates or our non-employee directors and their affiliates to compete against us or to pursue opportunities instead of us, for which we have no recourse. Such actions on the part of Cinven or our non-employee directors and inaction on our part could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Full-time investment professionals of Cinven occupy three seats on our Board. Because Cinven could invest in entities that directly or indirectly compete with us, when conflicts arise between the interests of Cinven and the interests of our shareholders, these directors may not be disinterested.

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 common stock, which could depress the price of our common stock.

Our amended and restated certificate of incorporation authorizes us to issue one or more series of preferred stock. Our Board has 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 common stock. The potential issuance of preferred stock may delay or prevent a change in control of us, discourage bids for our common stock at a premium to the market price, and materially and adversely affect the market price and the voting and other rights of the holders of our common stock.

The provision of our amended and restated certificate of incorporation requiring exclusive venue in the Court of Chancery in the State of Delaware for certain types of lawsuits may have the effect of discouraging lawsuits against our directors and officers.

Our amended and restated certificate of incorporation requires, to the fullest extent permitted by law, that (i) any derivative action or proceeding brought on our behalf, (ii) 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, (iii) any action asserting a claim against us arising pursuant to any provision of the DGCL or our amended and restated certificate of incorporation or the bylaws or (iv) any action asserting a claim against us governed by the internal affairs doctrine will have to be brought only in the Court of Chancery in the State of Delaware. Although we believe this provision benefits us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers.

Failure to establish and maintain effective internal controls in accordance with Section 404 of the Sarbanes-Oxley Act could have a material adverse effect on our business and stock price.

As a public company, we are now required to comply with the rules of the U.S. Securities and Exchange Commission, or the SEC, implementing Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, and are therefore required to make a formal assessment of the effectiveness of our internal control over financial reporting for that purpose. We are required to comply with the SEC's rules implementing Sections 302 and 404 of the Sarbanes-Oxley Act, which require management to certify financial and other information in our quarterly and annual reports and provide an annual management report on the effectiveness of controls over financial reporting. As an emerging growth company, our independent registered public accounting firm is not required to formally attest to the effectiveness of our internal control over financial reporting pursuant to Section 404 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. 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.

To comply with the requirements of being a newly public company, we have undertaken various actions, and may need to take additional actions, such as implementing new internal controls and procedures and hiring additional accounting or internal audit staff. Testing and maintaining internal control can divert our management's attention from other matters that are important to the operation of our business. Additionally, when evaluating our internal control over financial reporting, we may identify material weaknesses that will cause us to be out of compliance with the requirements of Section 404. If we are unable to comply with the requirements of Section 404 or assert that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal control over financial reporting once we are no longer an emerging growth company, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock could be negatively affected, and we could become subject to investigations by NASDAQ, the SEC or other regulatory authorities, which could require additional financial and management resources.

We have incurred and will continue to incur significant costs as a result of operating as a public company, and our management will devote substantial time to new compliance initiatives.

As a publicly traded company, we have incurred and will continue to incur significant legal, accounting and other expenses that we were not required to incur prior to our IPO. Further, these costs may increase after we are no longer an "emerging growth company" as defined under the JOBS Act. In addition, compliance with new and changing laws, regulations and standards relating to corporate governance and public disclosure, including the Dodd-Frank Wall Street Reform and Customer Protection Act, or the Dodd-Frank Act, and the rules and regulations promulgated and to be promulgated thereunder, as well as under the Sarbanes-Oxley Act, and the rules and regulations of the SEC, has increased and will continue to increase our legal and financial compliance costs and make some activities more difficult, time-consuming or costly. For example, the Exchange Act requires us, among other things, to file annual, quarterly and current reports with respect to our business and operating results. Being a public company and being subject to new rules and regulations has made it more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to continue to obtain coverage. As such, we expect to continue to incur additional annual expenses of $3.0 million to $4.0 million related to operating as a public company. These factors may therefore strain our resources, divert management's attention, and affect our ability to attract and retain qualified members of our Board and adversely affect our operating margins.

Furthermore, the need to continue to establish the corporate infrastructure demanded of a public company may divert management's attention from implementing our growth strategy, which could prevent us from improving our business, results of operations and financial condition. 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 publicly traded company. However, the measures we take may not be sufficient to satisfy our obligations as a publicly traded company.

Our operating results and share price may be volatile, and the market price of our common stock may drop.

Our quarterly operating results have fluctuated, and 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. This market volatility, as well as general economic, market or political conditions, could subject the market price of shares of our common stock to wide price fluctuations regardless of our operating performance. The public market for our common stock is new and the trading price of shares of our common stock may fluctuate in response to various factors, including:

- ☐ market conditions in the broader stock market or in the healthcare sector;
- ☐ developments affecting biopharmaceutical companies generally or biopharmaceutical research and development outsourcing;
- ☐ actual or anticipated fluctuations in our quarterly financial and operating results;
- ☐ introduction of new products or services by us or our competitors;
- ☐ the public's reaction to our press releases, our other public announcements and our filings with the SEC;
- ☐ changes in, or failure to meet, earnings estimates or recommendations by research analysts who track our common stock or the stock of other companies in our industries;
- ☐ strategic actions by us, our customers or our competitors, such as acquisitions or restructurings;
- ☐ changes in accounting standards, policies, guidance, interpretations or principles;
- ☐ issuance of new or changed securities analysts' reports or recommendations or termination of coverage of our common stock by securities analysts;
- ☐ sales, or anticipated sales, of large blocks of our stock;
- ☐ the granting or exercise of employee stock options;
- ☐ volume of trading in our common stock;
- ☐ additions or departures of key personnel;
- ☐ regulatory or political developments;
- ☐ litigation and governmental investigations;
- ☐ changing economic conditions;
- ☐ defaults on our indebtedness;
- ☐ exchange rate fluctuations; and
- ☐ the other factors listed in this "Risk Factors" section.

These and other factors, many of which are beyond our control, may cause our operating results and the market price and demand for shares of our common stock to fluctuate substantially. While we believe that operating results for any particular quarter are not necessarily a meaningful indication of future results, fluctuations in our quarterly operating results could limit or prevent investors from readily selling their shares and may otherwise negatively affect the market price and liquidity of shares of our 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 have a material adverse effect on our business, financial condition, results of operations and cash flows.

Shares of our common stock may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. As of December 31, 2017, we had 35,466,510 shares of outstanding common stock. Outstanding shares of our common stock are freely tradable without restriction under the Securities Act, except for any shares of our common stock that are held or acquired by our directors, executive officers and other affiliates, as that term is defined in the Securities Act, which will be or are restricted securities under the Securities Act. Restricted securities may not be sold in the public market unless the sale is registered under the Securities Act or an exemption from registration is available.

We are also party to a registration rights agreement, or the Registration Rights Agreement, pursuant to which the shares of common stock held by Cinven and Dr. August J. Troendle, our Chief Executive Officer and founder, are eligible for resale, subject to certain limitations set forth therein.

In connection with the IPO, we filed a registration statement on Form S-8 under the Securities Act to register all shares of common stock issued or issuable under the 2016 Incentive Award Plan, which became effective upon filing. Accordingly, shares registered under such registration statement will be available for sale in the open market following the expiration of the applicable lock-up period. The registration statement on Form S-8 covers 6,000,000 shares of our common stock.

As shares are registered or otherwise sold pursuant to an exemption from registration under the Securities Act, our share price could drop significantly if the holders of these shares sell them or are perceived by the market as intending to sell them. These sales might also make it more difficult for us to sell securities in the future at a time and at a price that we deem appropriate.

In the future, we may also issue additional securities if we need to raise capital or make acquisitions, which could constitute a material portion of our then-outstanding shares of common stock.

Because we have no current plans to pay regular cash dividends on our common stock, our shareholders may not receive any return on investment unless they sell their common stock for a price greater than that which they paid for it.

We do not anticipate paying any regular cash dividends on our common stock for the foreseeable future. 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 continue to be, limited by covenants of existing and any future outstanding indebtedness we or our subsidiaries incur, including under our existing Senior Secured Credit Facilities. Therefore, any return on investment in our common stock is solely dependent upon the appreciation of the price of our common stock on the open market, which may not occur.

We are a holding company and rely on dividends and other payments, advances and transfers of funds from our subsidiaries to meet our obligations and pay any dividends.

We have no direct operations and no significant assets other than ownership of 100% of the capital stock of our subsidiaries. Because we conduct our operations through our subsidiaries, we depend on those entities for dividends and other payments to generate the funds necessary to meet our financial obligations, and to pay any dividends with respect to our common stock. Legal and contractual restrictions in our Senior Secured Credit Facilities and other agreements which may govern future indebtedness of our subsidiaries, as well as the financial condition and operating requirements of our subsidiaries, may limit our ability to obtain cash from our subsidiaries. The earnings from, or other available assets of, our subsidiaries might not be sufficient to pay dividends or make distributions or loans to enable us to pay any dividends on our common stock or other obligations. Any of the foregoing could materially and adversely affect our business, financial condition, results of operations and cash flows.

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

The trading market for shares of our common stock is 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. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our share price or trading volume to decline. Moreover, if one or more of the analysts who cover us downgrade our stock, or if our results of operations do not meet their expectations, our share price could decline.

We are an "emerging growth company" and as a result of the reduced disclosure and governance requirements applicable to emerging growth companies, our common stock may be less attractive to investors.

The JOBS Act provides that, so long as a company qualifies as an "emerging growth company," it will, among other things:

- ☐ be exempt from the provisions of Section 404(b) of the Sarbanes-Oxley Act requiring that its independent registered public accounting firm provide an attestation report on the effectiveness of its internal control over financial reporting;
- ☐ be exempt from the "say on pay" and "say on golden parachute" advisory vote requirements of the Dodd-Frank Act;
- ☐ be exempt from certain disclosure requirements of the Dodd-Frank Act relating to compensation of its executive officers and be permitted to omit the detailed compensation discussion and analysis from proxy statements and reports filed under the Exchange Act; and
- ☐ be exempt from any rules that may be adopted by the Public Company Accounting Oversight Board requiring mandatory audit firm rotations or a supplement to the auditor's report on the financial statements.

We currently take advantage of each of the exemptions described above. In connection with our IPO, we irrevocably elected not to take advantage of the extension of time to comply with new or revised financial accounting standards available under Section 107(b) of the JOBS Act. We could be an emerging growth company up to the last day of the fiscal year following the fifth anniversary of the completion of our IPO. We cannot predict if investors will find our common stock less attractive if we elect to rely on these exemptions, or if taking advantage of these exemptions would result in less active trading or more volatility in the price of our common stock.

Investment funds affiliated with Cinven pledged all of its owned shares of our common stock as collateral for borrowings under a credit agreement unaffiliated with Medpace.

On June 16, 2017, Cinven informed us that Medpace Limited Partnership ("MLP"), an entity formed by Cinven to hold all Cinven's equity interests in us, entered into a credit agreement (the "MLP Credit Agreement") with Credit Suisse AG, Cayman Islands Branch, and Morgan Stanley Bank, N.A., as lenders (together, the "Lenders"), Credit Suisse AG, Cayman Islands Branch, as administrative agent, and Credit Suisse Securities (USA) LLC, as calculation agent. Pursuant to the MLP Credit Agreement, MLP entered into a pledge agreement (the "MLP Pledge Agreement") with Credit Suisse Securities (USA) LLC, as secured party and Morgan Stanley Bank, N.A., as secured party (together, the "Secured Parties"). Pursuant to the MLP Pledge Agreement, MLP pledged all of its shares of the Company's common stock, $0.01 par value per share, to the Secured Parties.

On June 21, 2017 (the "MLP Funding Date"), MLP borrowed $150.0 million under the MLP Credit Agreement. Pursuant to the MLP Pledge Agreement, to secure any borrowings under the MLP Credit Agreement, MLP pledged 22,999,997 shares (collectively, the "MLP Pledged Shares") of the Company's common stock as of the MLP Funding Date. The MLP Pledged Shares represented approximately 46.2% of the Company's issued and outstanding Common Stock as of December 31, 2017. All of the MLP Pledged Shares were contributed to MLP from Cinven's Fifth Cinven Fund (No. 1) Limited Partnership, Fifth Cinven Fund (No. 2) Limited Partnership, Fifth Cinven Fund (No. 3) Limited Partnership, Fifth Cinven Fund (No. 4) Limited Partnership, Fifth Cinven Fund (No. 5) Limited

Partnership, Fifth Cinven Fund (No. 6) Limited Partnership, Fifth Cinven Fund FCP-SIF and Fifth Cinven Fund Co-Investment Partnership, which collectively own all of the equity interest in MLP.

The MLP Credit Agreement contains customary default provisions. In the event of a default under the MLP Credit Agreement by MLP, the Lenders and their affiliates and assignees may foreclose upon any and all MLP Pledged Shares and may seek recourse against MLP. The Company is not a party to the MLP Credit Agreement or the MLP Pledge Agreement and has no obligations thereunder, but has delivered a letter agreement to the Lenders in which it has, among other things, agreed, subject to applicable law and stock exchange rules, not to take any action intended to hinder or delay the exercise of any remedies by the Lenders under the MLP Credit Agreement or the MLP Pledge Agreement.

In the event of a foreclosure upon any or all of the MLP Pledged Shares, we may no longer be a controlled company, and we may have difficulties complying with certain NASDAQ rules that we take advantage of as a controlled company if we cease to be a controlled company. We intend to comply with these NASDAQ rules if we cease to be a controlled company. However, there can be no assurance that we will be able to comply with such rules before the end of the applicable phase-in period for compliance. See "Risk Factors—Risks Relating to Ownership of Our Common Stock—We are a "controlled company" within the meaning of the NASDAQ rules and, as a result, we qualify for, and rely on, exemptions from certain corporate governance requirements.

Our shareholders do not have the same protections afforded to shareholders of companies that are subject to such requirements" in Item 1A of Part I of this Annual Report on Form 10-K. Additionally, any foreclosure upon the MLP Pledged Shares could result in sales of a substantial amount of shares of our common stock in the public market, which could cause the market price of our common stock to drop significantly, even if our business is doing well. See "Risk Factors—Risks Relating to Ownership of Our Common Stock—Shares of our common stock may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well" in Item 1A of Part I of the Annual Report on Form 10-K. Moreover, the occurrence of a foreclosure, and a subsequent sale of all, or substantially all, of the MLP Pledged Shares could result in a change of control under our Senior Secured Credit Facilities, even when such change may not be in the best interest of our stockholders. Such sale of the MLP Pledged Shares may also result in another shareholder beneficially owning a significant amount of our common stock and being able to exert a significant degree of influence or actual control over our management and affairs. Such shareholder's interests may be different from or conflict with those of our other shareholders. See "Risk Factors—Risks Relating to Ownership of Our Common Stock—Cinven and our Chief Executive Officer and founder collectively control a substantial majority of our outstanding common stock and their interests may be different from or conflict with those of our other shareholders" in Item 1A of Part I of this Annual Report on Form 10-K.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

As of December 31, 2017, we had 39 leased commercial locations in 27 countries across North America, Europe, Asia/Pacific, South America and Africa. We also own lab and office space in Leuven, Belgium. Most of these facilities consist solely of office space; however, we have five laboratories located across four facilities and a logistics warehouse. Our principal executive offices are located on a corporate campus in Cincinnati, Ohio consisting of three buildings totaling approximately 332,000 square feet. The leases for the buildings in our Cincinnati site expire in 2022, 2026 and 2027, respectively. None of our leases are individually material to our business model and all have either options to renew or are located in major markets with what we believe are adequate opportunities to continue business operations on terms satisfactory to us.

Item 3. Legal Proceedings.

We are party to legal proceedings incidental to our business and may become subject to additional legal proceedings in the future. While the outcome of these matters could differ from management's expectations, we do not believe that the resolution of these matters, individually and in the aggregate, is reasonably likely to have a material adverse effect to our consolidated financial statements. Litigation is subject to inherent uncertainties. See Note 9 "Commitments, Contingencies and Guarantees—Legal Proceedings" to our consolidated financial statements included in Item 8 of Part II in this Annual Report on Form 10-K.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information for Common Stock

On August 11, 2016, our common stock began trading on the NASDAQ Global Select Market under the symbol "MEDP". Prior to that time, there was no public market for our common stock. The following table sets forth the high and low sales prices per share of our common stock as reported by the NASDAQ Global Select Market for the period indicated.

	High	Low
Fiscal Year 2017		
Fourth Quarter	$ 39.64	$ 31.70
Third Quarter	$ 33.50	$ 26.56
Second Quarter	$ 32.62	$ 21.76
First Quarter	$ 37.22	$ 26.01
Fiscal Year 2016		
Fourth Quarter	$ 38.94	$ 28.50
August 11, 2016 through September 30, 2016	$ 31.35	$ 26.51

Holders of Record

On February 23, 2018, there were approximately 45 shareholders of record of our common stock. Because many of the shares of our common stock are registered in "nominee" or "street" names, we believe that the total number of beneficial owners is considerably higher.

Dividend Policy

We have not paid any dividends to date, nor do we have current plans to pay any cash dividends on our common stock for the foreseeable future and instead intend to retain earnings, if any, for future operations, expansion and debt repayment. However, in the future, subject to the factors described below and our future liquidity and capitalization, we may change this policy and choose to pay dividends.

We are a holding company which does not conduct any business operations of our own. As a result, our ability to pay cash dividends on our common stock is dependent upon cash dividends and distributions and other transfers from our subsidiaries. The ability of our subsidiaries to pay dividends is currently restricted by the terms of our Senior Secured Credit Facilities and may be further restricted by any future indebtedness we or they incur.

In addition, under Delaware law, our Board may declare dividends only to the extent of our surplus (which is defined as total assets at fair market value minus total liabilities, minus statutory capital) or, if there is no surplus, out of our net profits for the then current and/or immediately preceding fiscal year.

Any future determination to declare dividends will be at the discretion of our Board and will take into account:

- ☐ restrictions in our debt instruments, including our Senior Secured Credit Facilities;
- ☐ general economic business conditions;
- ☐ our net income, financial condition and results of operations;
- ☐ our capital requirements;
- ☐ our prospects;
- ☐ the ability of our operating subsidiaries to pay dividends and make distributions to us;

- ☐ legal restrictions; and
- ☐ such other factors as our Board may deem relevant.

See “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Indebtedness” of Part II of this Annual Report on Form 10-K and Note 8 “Debt” to our audited consolidated financial statements in Item 8 of Part II on this Annual Report on Form 10-K for restrictions on our ability to pay dividends.

Recent Sales of Unregistered Securities

On January 10, 2017, an employee exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 1,851 shares of our common stock at a price of $16.21 per share for an aggregate purchase price of approximately $30,000.

On February 2, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 925 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $13,300 and 277 shares of our common stock at a price of $16.21 per share for an aggregate purchase price of approximately $4,500.

On February 10, 2017, an employee exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 1,000 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $14,400.

On February 15, 2017, an employee exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 1,851 shares of our common stock at a price of $16.21 per share for an aggregate purchase price of approximately $30,000.

On February 21, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 1,500 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $21,600 and 462 shares of our common stock at a price of $16.89 per share for an aggregate purchase price of approximately $7,800.

On February 28, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 2,555 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $36,800 and 832 shares of our common stock at a price of $16.21 per share for an aggregate purchase price of approximately $13,500.

On March 2, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 1,185 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $17,100 and 250 shares of our common stock at a price of $16.21 per share for an aggregate purchase price of approximately $4,100.

On April 1, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 8,154 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $117,500.

On April 5, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 370 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $5,300 and 1,851 shares of our common stock at a price of $18.23 per share for an aggregate purchase price of approximately $33,700.

On April 6, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 648 shares of our common stock at a price of $16.21 per share for an aggregate purchase price of approximately $10,500.

On May 2, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 11,648 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $167,800, 4,259 shares of our common stock at a price of $16.21 per share for an aggregate purchase price of approximately $69,000 and 2,222 shares of our common stock at a price of $16.88 per share for an aggregate purchase price of approximately $37,500.

On May 5, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 9,260 shares of our common stock at a price of $16.21 per share for an aggregate purchase price of approximately $150,100.

On May 24, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 2,777 shares of our common stock at a price of $16.21 per share for an aggregate purchase price of approximately $45,000.

On June 12, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 6,666 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $96,100 and 1,851 shares of our common stock at a price of $16.20 per share for an aggregate purchase price of approximately $30,000.

On June 23, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 8,334 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $120,100 and 1,851 shares of our common stock at a price of $16.20 per share for an aggregate purchase price of approximately $30,000.

On July 7, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 370 shares of our common stock at a price of $16.20 per share for an aggregate purchase price of approximately $6,000.

On July 19, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 1,852 shares of our common stock at a price of $18.23 per share for an aggregate purchase price of approximately $33,800.

On July 25, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 1,600 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $23,100.

On August 4, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 464 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $6,700.

On August 18, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 463 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $6,700 and 278 shares of our common stock at a price of $16.20 per share for an aggregate purchase price of approximately $4,500.

On September 5, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 50 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $700.

On September 25, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 4,167 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $60,000 and 1,852 shares of our common stock at a price of $16.20 per share for an aggregate purchase price of approximately $30,000.

On October 9, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 2,221 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $32,000.

On October 16, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 23,000 shares of our common stock at a price of $16.88 per share for an aggregate purchase price of approximately $388,200.

On October 20, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 450 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $6,500.

On November 2, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 250 shares of our common stock at a price of $16.20 per share for an aggregate purchase price of approximately $4,100.

On December 4, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 554 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $8,000.

On December 6, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 306 shares of our common stock at a price of $16.20 per share for an aggregate purchase price of approximately $5,000.

On December 12, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 473 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $6,800.

On December 18, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 1,850 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $26,700.

On December 19, 2017, employees exercised stock options granted under the 2014 Equity Incentive Plan to purchase a total of 4,008 shares of our common stock at a price of $14.41 per share for an aggregate purchase price of approximately $57,800.

The sales of the above securities were deemed to be exempt from registration under the Securities Act in reliance upon Rule 701 promulgated under Section 3(b) of the Securities Act as transactions pursuant to benefit plans and contracts relating to compensation as provided under Rule 701.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Share Repurchases

This table provides certain information with respect to our purchases of shares of the Company's common stock during the fourth fiscal quarter of 2017:

Issuer's Purchases of Equity Securities

Period	Total Number of Shares Purchased (a), (b)	Average Price Paid per Share (a), (b)	Total Number of Shares Purchased as Part of Publically Announced Plan (a)	Approximate Dollar Value of Share That May Yet Be Purchased Under the Plan (a)
October 1, 2017, through October 31, 2017	-	-	-	15,325,865
November 1, 2017, through November 30, 2017	-	-	-	-
December 1, 2017, through December 31, 2017	2,000,000	$ 30.16	-	-
Total	2,000,000		-	

(a) On May 1, 2017 the Company announced that its Board of Directors had authorized a share repurchase program ("2017 Repurchase Plan") of up to $50 million of the Company's common stock in the open market or negotiated transactions, at the discretion of our management. The 2017 Repurchase Plan was cancelled in November 2017.

(b) On November 30, 2017, the Company agreed to repurchase 2,000,000 shares of the Company's common stock from Cinven in connection with a Secondary Offering (as described in Note 1 of the Notes to the Consolidated Financial Statements) for aggregate consideration of approximately $60.3 million, representing a purchase price of $30.16 per share. The transaction closed on December 5, 2017.

Stock Performance Graph

The information included under the heading "Stock Performance Graph" is "furnished" and not "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities of that section, nor shall it be deemed to be "soliciting material" subject to Regulation 14A or incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act of 1934, as amended.

Our common stock is listed for trading on the NASDAQ under the symbol “MEDP.” The Stock Price Performance Graph set forth below compares the cumulative total shareholder return on our common stock for the period from August 11, 2016 through December 31, 2017, with the cumulative total return of the Nasdaq Composite Index and the Nasdaq Health Care Index over the same period. The comparison assumes $100 was invested on August 11, 2016 in the common stock of Medpace Holdings, Inc., in the Nasdaq Composite Index, and in the Nasdaq Health Care Index and assumes reinvestment of dividends, if any. The stock price performance of the following graph is not necessarily indicative of future stock price performance. Information used in the graph was obtained from the Nasdaq Stock Market, a source believed to be reliable, but we are not responsible for any errors or omissions in such information.

Equity Compensation Plans

The information required by Part II, Item 5 of the Annual Report on Form 10-K regarding equity compensation plans is incorporated herein by reference to “Part III, Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.”

Item 6. Selected Financial Data

The following tables set forth, for the periods and at the dates indicated, our selected historical consolidated financial data. We have derived the selected consolidated financial data as of December 31, 2017 and 2016, and for the Successor years ended December 31, 2017, 2016 and 2015 from our audited consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K. We have derived the selected consolidated financial data as of December 31, 2014 and for the Successor nine month period ended December 31, 2014, the Predecessor three month period ended March 31, 2014 and the Predecessor year ended December 31, 2013 from our audited consolidated financial statements not appearing elsewhere in this Annual Report on Form 10-K. Our historical results are not necessarily indicative of the results we may achieve in any future period.

On July 25, 2016, the Board approved, and made legally effective, a 1-for-1.35 reverse stock split of the Company’s common stock. All share, stock option and per share information presented in the consolidated financial statements have been adjusted to reflect the reverse stock split on a retroactive basis for all periods presented. There was no change in the par value of the Company’s common stock.

The accompanying consolidated statements of operations, cash flows and shareholders' equity are presented for two periods: “Predecessor” and “Successor”, which relate to the period preceding and succeeding, respectively, the

Change in Control as discussed in Note 2 of the Notes to Consolidated Financial Statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016. The Company refers to the operations of Medpace Holdings, Inc. and subsidiaries for both the Predecessor and Successor periods.

	SUCCESSOR				PREDECESSOR	
(in thousands except per share data)	YEAR ENDED DECEMBER 31, 2017	YEAR ENDED DECEMBER 31, 2016	YEAR ENDED DECEMBER 31, 2015	NINE MONTH PERIOD FROM APRIL 1, 2014 THROUGH DECEMBER 31, 2014	THREE MONTH PERIOD FROM JANUARY 1, 2014 THROUGH MARCH 31, 2014	YEAR ENDED DECEMBER 31, 2013
Consolidated Statements of Operations						
Service revenue, net	$ 386,462	$ 370,621	$ 320,101	$ 219,791	$ 70,250	$ 244,270
Reimbursed out-of-pocket revenue	49,690	50,961	38,958	28,708	7,679	28,620
Total revenue	436,152	421,582	359,059	248,499	77,929	272,890
Operating expenses:						
Direct costs, excluding depreciation and amortization	211,773	198,510	163,707	117,550	38,759	119,779
Reimbursed out-of-pocket expenses	49,690	50,961	38,958	28,708	7,679	28,620
Selling, general and administrative	63,357	61,507	56,998	29,465	10,203	35,109
Acquisition and integration	-	-	-	9,297	12,420	-
Impairment of goodwill	-	-	9,313	-	-	-
Depreciation	8,574	7,442	6,379	4,610	1,832	6,665
Amortization	37,900	50,672	63,142	56,422	5,199	23,854
Total operating expenses	371,294	369,092	338,497	246,052	76,092	214,027
Income from operations	64,858	52,490	20,562	2,447	1,837	58,863
Other (expense) income, net:						
Loss on extinguishment of debt	-	(10,726)	-	-	-	-
Miscellaneous (expense) income, net	(354)	(423)	(1,133)	(301)	1,213	(1,718)
Interest expense, net	(7,559)	(19,384)	(27,259)	(23,185)	(3,272)	(18,000)
Total other expense, net	(7,913)	(30,533)	(28,392)	(23,486)	(2,059)	(19,718)
Income (loss) before income taxes	56,945	21,957	(7,830)	(21,039)	(222)	39,145
Income tax provision (benefit)	17,823	8,532	843	(6,703)	1,014	14,301
Net income (loss)	$ 39,122	$ 13,425	$ (8,673)	$ (14,336)	$ (1,236)	$ 24,844
Net income (loss) per share attributable to common shareholders:						
Basic	$ 1.00	$ 0.38	$ (0.28)	$ (0.46)	$ (0.05)	$ 0.99
Diluted	$ 0.98	$ 0.37	$ (0.28)	$ (0.46)	$ (0.05)	$ 0.95
Weighted average common shares outstanding:						
Basic	39,056	35,690	31,346	30,869	25,047	25,204
Diluted	39,839	36,329	31,346	30,869	25,047	26,150
Cash Flow Data:						
Net cash provided by operating activities	$ 97,385	$ 91,732	$ 85,870	$ 61,995	$ 13,207	$ 97,704
Net cash used in investing activities	(12,237)	(13,422)	(6,432)	(905,992)	(827)	(4,472)
Net cash (used in) provided by financing activities	(97,828)	(58,008)	(116,489)	900,171	(17,968)	(95,851)

	SUCCESSOR				PREDECESSOR	
(in thousands)	YEAR ENDED DECEMBER 31, 2017	YEAR ENDED DECEMBER 31, 2016	YEAR ENDED DECEMBER 31, 2015	NINE MONTH PERIOD FROM APRIL 1, 2014 THROUGH DECEMBER 31, 2014	THREE MONTH PERIOD FROM JANUARY 1, 2014 THROUGH MARCH 31, 2014	YEAR ENDED DECEMBER 31, 2013
Other Financial Data:						
Backlog (at period end) (1)	524,402	483,918	429,659	394,023	386,047	359,341
Net new business awards (2)	426,082	426,960	359,538	231,918	97,220	291,577

(Amounts in thousands)	SUCCESSOR			
	AS OF DECEMBER 31, 2017	AS OF DECEMBER 31, 2016	AS OF DECEMBER 31, 2015	AS OF DECEMBER 31, 2014
Consolidated Balance Sheet Data				
Cash and cash equivalents	$ 26,485	$ 37,099	$ 14,880	$ 54,285
Restricted cash	7	308	2,857	1,104
Accounts receivable billed and unbilled, net:	83,079	79,767	65,088	65,248
Working capital	(62,735)	(35,355)	(39,296)	(319)
Total assets	950,717	979,105	984,041	1,096,912
Total long-term debt, net (including current portion)	221,611	163,642	377,941	491,773
Total liabilities	447,187	368,395	570,567	694,942
Total shareholders' equity	503,530	610,710	413,474	401,970
Total liabilities and shareholders' equity	950,717	979,105	984,041	1,096,912

(1) Backlog represents anticipated future net service revenue from net new business awards that have commenced, but have not been completed. However, because the contracts included in our backlog are generally terminable without cause, we do not believe that our backlog as of any date is necessarily a meaningful predictor of future results.

(2) Net new business awards are new business awards net of award modifications and cancellations that had been recognized in backlog during the period. New business awards represent the value of anticipated future net service revenue that has been awarded during the period that is recognized in backlog. This value is recognized upon the signing of a contract or receipt of a written pre-contract confirmation from a customer that confirms an agreement in principle on budget and scope. New business awards also include contract amendments, or changes in scope, where the customer has provided written authorization for changes in budget and scope or has approved us to perform additional work as of the measurement date. Awards may not be recognized as backlog after consideration of a number of factors, including whether (i) the relevant net service revenue is expected only after a pending regulatory hurdle, which might result in cancellation of the study, (ii) the customer funding needed for commencement of the study is not believed to have been secured or (iii) study timelines are uncertain or not well defined. In addition, study amounts that extend beyond a three-year timeline are not included in backlog. The number and amount of new business awards can vary significantly from period to period, and an award’s contractual duration can range from several months to several years based on customer and project specifications.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated financial statements and the notes thereto included elsewhere in this Annual Report on Form 10-K. This item and the related discussion contain forward-looking statements reflecting current expectations that involve risks and uncertainties. Actual results and the timing of events may differ materially from those indicated in such forward-looking statements. Important factors that may cause such differences include, but are not limited to, those discussed under the "Forward-Looking Statements" above and "Item IA. Risk Factors" in Part I of this Annual Report on Form 10-K.

Business Overview

We are one of the world's leading clinical contract research organizations, or CROs, by revenue, solely focused on providing scientifically-driven outsourced clinical development services to the biotechnology, pharmaceutical and medical device industries. Our mission is to accelerate the global development of safe and effective medical therapeutics. We differentiate ourselves from our competitors by our disciplined operating model centered on providing full-service Phase I-IV clinical development services and our therapeutic expertise. We believe this combination results in timely and cost-effective delivery of clinical development services for our customers. We believe that we are a partner of choice for small- and mid-sized biopharmaceutical companies based on our ability to consistently utilize our full-service, disciplined operating model to deliver timely and high-quality results for our customers.

We focus on conducting clinical trials across all major therapeutic areas, with particular strength in Cardiology, Metabolic Disease, Oncology, Endocrinology, Central Nervous System, or CNS, Antiviral and Anti-infective, or AVAI, as well as therapeutic expertise in Medical Devices. Our global platform includes approximately 2,500 employees across 35 countries, providing our customers with broad access to diverse markets and patient populations as well as local regulatory expertise and market knowledge.

Asset Acquisition

In May 2017, the Company acquired out of bankruptcy NephroGenex, Inc. ("Nephrogenex" or the "Debtor"), a publicly-held pharmaceutical company that had previously filed for relief under Chapter 11 of the United States Bankruptcy Code. The Company, which was the largest unsecured creditor of Nephrogenex, entered into an agreement through the bankruptcy process, to exchange its unsecured claim for 100% of the common stock in the post-bankruptcy, debt-free Debtor. The assets of the acquired Debtor consist primarily of tax attributes as well as in-process research and development and other intangible assets. An analysis by the Company determined that substantially all the fair value of the assets on the date of acquisition is captured in the tax attributes, as the intangible assets account for a relatively immaterial portion of the fair market value of the total assets received. The acquisition of the Debtor was accounted for as an asset purchase.

The Company allocated its consideration paid of $1.2 million, consisting of accounts receivable and unbilled receivables and transaction related costs, on a pro rata basis to the assets acquired based on their respective fair values. Acquired assets include intangible assets of $0.5 million, deferred tax assets of $22.2 million, consisting of tax effected net operating losses in the amount of $13.5 million, tax effected capitalized research and development expenses of $8.5 million and tax effected federal tax credits of $0.2 million, and deferred tax liabilities of $0.1 million. The excess amount of fair value received over consideration paid of $21.4 million was recorded as a Deferred credit in the consolidated balance sheets and will be recognized within income tax provision in proportion to the realization of the deferred tax assets and federal tax credits prospectively.

During the fourth quarter of the year ended December 31, 2017, the Deferred tax assets and related Deferred credit balances were revalued due primarily to the impact of tax reform. See Note 12 of the Notes to Consolidated Financial Statements for further discussion of the impact of tax reform on our consolidated financial statements.

How We Generate Revenue

Our revenue consists of net service revenue and reimbursed-out-of-pocket revenue.

Net Service Revenue

We earn customer fees through the performance of services detailed in our customer contracts. Contract scope and pricing is typically based on either a fixed-fee or unit-of-service model and our contracts can range in duration from a few months to several years. These contracts are individually priced and negotiated based on the anticipated project scope, including the complexity of the project and the performance risks inherent in the project. The majority of our contracts are structured with an upfront fee that is collected at the time of contract signing, and the balance of the fee is collected over the duration of the contract either through an arranged billing schedule or upon completion of certain performance targets or defined milestones. This payment structure is standard in the CRO industry.

Net service revenue, which is distinct from billing and cash receipt, is generally recognized based on the proportional performance methodology, which is determined by assessing the proportion of performance completed or delivered to date compared to total specific measures to be delivered or completed under the terms of the contract. The measures utilized to assess performance are specific to the service provided. Net service revenue for unit-of-service contracts is recognized as services are performed or delivered. Cancellation provisions in our contracts allow our customers to terminate a contract either immediately or according to advance notice terms specified within the applicable contract, which is typically 30 days. Contract cancellation may occur for various reasons, including, but not limited to, adverse patient reactions, lack of efficacy, or inadequate patient enrollment. Upon cancellation, we are entitled to fees for services rendered through the date of termination, including payment for subsequent services necessary to conclude the study or close out the contract. These fees are agreed upon with the customer and are realized as net service revenue when collection is reasonably assured. Changes in net service revenue from period to period are driven primarily by new business volume and task order execution activity, project cancellations, and the mix of active studies during a given period that can vary based on therapeutic area and or study life cycle stage.

Reimbursed Out-of-Pocket Revenue

Reimbursed out-of-pocket revenue consists primarily of expenses we incur in relation to projects that are reimbursed by our customers with no profit or mark-up. These expenses are defined in our contracts and generally include, but are not limited to, travel, meetings, printing, and shipping and handling fees. Such reimbursements received are included in revenue with the expenditures reflected as a separate component of operating expense. Certain fees paid to investigators and other disbursements in which we act as an agent on behalf of the study sponsor are reflected in the consolidated statements of operations with no resulting effect on our revenue or expenses.

Costs and Expenses

Our costs and expenses are comprised primarily of our direct costs, selling, general and administrative costs, depreciation and amortization and income taxes. In addition, as noted above, we also have reimbursed out-of-pocket expenditures that are directly offset by our reimbursed out-of-pocket revenue.

Direct Costs, Excluding Depreciation and Amortization

Direct costs, excluding depreciation and amortization, are primarily driven by labor and related employee benefits, but also include laboratory supplies and other expenses contributing to service delivery. The other costs of service delivery can include office rent, utilities, supplies and software license expenses, which are allocated between direct costs, excluding depreciation and amortization and selling, general and administrative expenses based on the estimated contribution among service delivery and support function efforts on a percentage basis. Direct costs, excluding depreciation and amortization exclude reimbursed out-of-pocket expenses. Direct costs, excluding depreciation and amortization are expensed as incurred and are not deferred in anticipation of contracts being awarded or finalization of changes in scope. Direct costs, excluding depreciation and amortization as a percentage of net service revenue can vary from period to period due to project labor efficiencies, changes in workforce, compensation/bonus programs and service mix.

Selling, General and Administrative

Selling, general and administrative expenses are primarily driven by compensation and related employee benefits, as well as rent, utilities, supplies, software licenses, professional fees (e.g., legal and accounting expenses), travel, marketing and other operating expenses.

Depreciation

Depreciation is provided on our property and equipment on the straight-line method at rates adequate to allocate the cost of the applicable assets over their estimated useful lives, which is three to five years for computer hardware, software, phone, and medical imaging equipment, five to seven years for furniture and fixtures and other equipment, and thirty to forty years for buildings. Leasehold improvements and deemed assets from landlord building construction are amortized on a straight-line basis over the shorter of the estimated useful life of the improvement or the associated remaining lease term.

Amortization

Amortization relates to finite-lived intangible assets recognized as expense using the straight-line method or using an accelerated method over their estimated useful lives, which range in term from 17 months to 15 years.

Income Tax Provision

Income tax provision consists of federal, state and local taxes on income in multiple jurisdictions. Our income tax is impacted by the pre-tax earnings in jurisdictions with varying tax rates and any related tax credits that may be available to us. Our current and future provision for income taxes will vary from statutory rates due to the impact of valuation allowances in certain countries, income tax incentives, certain non-deductible expenses, and other discrete items.

Key Performance Metrics

To evaluate the performance of our business, we utilize a variety of financial and performance metrics. These key measures include net new business awards and backlog.

Net New Business Awards and Backlog

New business awards represent the value of anticipated future net service revenue that has been awarded during the period that is recognized in backlog. This value is recognized upon the signing of a contract or receipt of a written pre-contract confirmation from a customer that confirms an agreement in principle on budget and scope. New business awards also include contract amendments, or changes in scope, where the customer has provided written authorization for changes in budget and scope or has approved us to perform additional work as of the measurement date. Awards may not be recognized as backlog after consideration of a number of factors, including whether (i) the relevant net service revenue is expected only after a pending regulatory hurdle, which might result in cancellation of the study, (ii) the customer funding needed for commencement of the study is not believed to have been secured or (iii) study timelines are uncertain or not well defined. In addition, study amounts that extend beyond a three-year timeline are not included in backlog. The number and amount of new business awards can vary significantly from period to period, and an award’s contractual duration can range from several months to several years based on customer and project specifications.

Cancellations arise in the normal course of business and are reflected when we receive written confirmation from the customer to cease work on a contractual agreement. The majority of our customers can terminate our contracts without cause upon 30 days’ notice. Similar to new business awards, the number and amount of cancellations can vary significantly period over period due to timing of customer correspondence and study-specific circumstances.

Net new business awards represent gross new business awards received in a period offset by total cancellations in that period. Net new business awards were $426.1 million, $427.0 million and $359.5 million for the years ended December 31, 2017, 2016 and 2015, respectively.

Backlog represents anticipated future net service revenue from net new business awards that have commenced, but have not been completed. Reported backlog will fluctuate based on new business awards, changes in the scope of existing contracts, cancellations, revenue recognition on existing contracts and foreign exchange adjustments from non-U.S. dollar denominated backlog. As of December 31, 2017, our backlog increased by $40.5 million, or 8.4%, to $524.4 million compared to $483.9 million as of December 31, 2016. Included within backlog as of December 31, 2017 was approximately $285 million to $295 million that we expect to convert to net service revenue in 2018, with the remainder expected to convert to net service revenue in years after 2018.

The effect of foreign currency adjustments on backlog was as follows: favorable foreign currency adjustments of $3.2 million for the year ended December 31, 2017; unfavorable foreign currency adjustments of $3.4 million for the year ended December 31, 2016; and unfavorable foreign currency adjustments of $3.6 million for the year ended December 31, 2015.

Backlog and net new business award metrics may not be reliable indicators of our future period revenue as they are subject to a variety of factors that may cause material fluctuations from period to period. These factors include, but are not limited to, changes in the scope of projects, cancellations, and duration and timing of services provided.

Exchange Rate Fluctuations

The majority of our contracts and operational transactions are U.S. dollar denominated. The Euro represents the largest foreign currency denomination of our contractual and operational exposure. As a result, a portion of our revenue and expenses is subject to exchange rate fluctuations. We have translated the Euro into U.S. dollars using the following average exchange rates based on data obtained from www.xe.com:

	Year Ended December 31,		
	2017	2016	2015
U.S. Dollars per Euro:	1.13	1.11	1.10

Results of Operations

Year Ended December 31, 2017 compared to Year Ended December 31, 2016

(Amounts in thousands, except percentages)	Year Ended December 31, 2017	2016	Change	% Change
Service revenue, net	$ 386,462	$ 370,621	$ 15,841	4.3%
Reimbursed out-of-pocket revenue	49,690	50,961	(1,271)	(2.5)%
Total revenue	436,152	421,582	14,570	3.5%
Direct costs, excluding depreciation and amortization	211,773	198,510	13,263	6.7%
Reimbursed out-of-pocket expenses	49,690	50,961	(1,271)	(2.5)%
Selling, general and administrative	63,357	61,507	1,850	3.0%
Depreciation	8,574	7,442	1,132	15.2%
Amortization	37,900	50,672	(12,772)	(25.2)%
Total operating expenses	371,294	369,092	2,202	0.6%
Income from operations	64,858	52,490	12,368	
Loss on extinguishment of debt	-	(10,726)	10,726	
Miscellaneous expense, net	(354)	(423)	69	
Interest expense, net	(7,559)	(19,384)	11,825	
Income before income taxes	56,945	21,957	34,988	
Income tax provision	17,823	8,532	9,291	
Net income	$ 39,122	$ 13,425	$ 25,697	

Service revenue, net and Reimbursed out-of-pocket revenue

For the year ended December 31, 2017 service revenue, net increased by $15.8 million to $386.5 million, from $370.6 million for the year ended December 31, 2016. The increase was primarily driven by strong activity within the Oncology, Metabolic, and other uncategorized therapeutic areas.

Reimbursed out-of-pocket revenue decreased by $1.3 million to $49.7 million for the year ended December 31, 2017, from $51.0 million for the year ended December 31, 2016. Reimbursed out-of-pocket revenues can fluctuate significantly from period to period based on the timing of program initiation or closeout, and these changes do not necessarily correlate to changes in net service revenue. The reimbursements were offset by an equal amount of reimbursed out-of-pocket expenses.

Direct costs, excluding depreciation and amortization and Reimbursed out-of-pocket expenses

Our direct costs, excluding depreciation and amortization increased by $13.3 million, to $211.8 million for the year ended December 31, 2017 from $198.5 million for the year ended December 31, 2016. The increase was primarily attributed to higher personnel costs of $9.3 million, laboratory costs of $2.8 million, office rents of $0.8 million and computer, software licenses and maintenance costs of $0.6 million in the year ended December 31, 2017, compared to the prior year, all to support the growth in project activities.

Selling, general and administrative

Selling, general and administrative expenses increased by $1.9 million, to $63.4 million for the year ended December 31, 2017 from $61.5 million for the year ended December 31, 2016. The increase was primarily driven by higher personnel costs of $2.5 million and professional service costs of $1.3 million in the year ended December 31, 2017, compared to the prior year, to support growth in project activities. This was offset by a reduction in bad debt expense of $2.1 million due primarily to net bad debt recoveries for the year ended December 31, 2017, compared to bad debt expense in the prior year.

Depreciation and Amortization

Depreciation and amortization expense decreased by $11.6 million, to $46.5 million for the year ended December 31, 2017 from $58.1 for the year ended December 31, 2016. The decrease in depreciation and amortization was primarily related to the amortization of our definite lived intangible assets, which are amortized on an accelerated basis.

Loss on extinguishment of debt

During the year ended December 31, 2016, in connection with entering into the Senior Secured Credit Facilities (as defined below), the Company recorded a loss on extinguishment of long-term debt of $10.7 million in the fourth quarter of 2016, of which $10.2 million related to unamortized loan origination fees from the credit agreement for our 2014 Senior Secured Credit Facilities (as defined below) and $0.5 million related to third party fees incurred during the fourth quarter of 2016. There was no extinguishment of long-term debt in the year ended December 31, 2017.

Miscellaneous expense, net

Miscellaneous expense, net decreased by $0.1 million to $0.4 million of expense for the year ended December 31, 2017 from $0.4 million of expense for the year ended December 31, 2016. These changes were mainly attributable to foreign exchange gains or losses that arise in connection with the revaluation of short-term inter-company balances between our domestic and international subsidiaries, gains or losses from foreign currency transactions, such as those resulting from the settlement of third-party accounts receivables and payables denominated in a currency other than the local currency of the entity making the payment and exit costs related to the previous headquarter lease.

Interest expense, net

Interest expense, net decreased by $11.8 million to $7.6 million for the year ended December 31, 2017 from $19.4 million for the year ended December 31, 2016. The decrease in interest expense, net for the year ended December 31, 2017 was related to the average lower outstanding balance under our Senior Secured Term Loan Facility (as defined below), as well as a lower effective interest rate as a result of the new credit agreement entered into in December 2016 (as described below).

Income tax provision

Income tax provision increased by $9.3 million, to $17.8 million for the year ended December 31, 2017 from $8.5 million for the year ended December 31, 2016. The overall effective tax rates for the years ended December 31, 2017 and 2016 were 31.3% and 38.9%, respectively. On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as “Tax Cuts and Jobs Act” (TCJA). The effective tax rate for 2017 decreased from 2016 primarily due to the impact from the TCJA. Excluding the impacts of the new federal tax reform legislation, our effective income tax rate in 2017 would have been an expense of 36.2%. The remaining difference was primarily attributable to the impact of state taxes, domestic and foreign uncertain tax positions and the tax impact associated with acquired tax attributes.

The 2017 TCJA significantly reforms the Internal Revenue Code of 1986, as amended. The TCJA, among other things, includes a reduction in the U.S. federal tax rate from 35% to 21%, allows for the expensing of capital expenditures and puts into effect the migration from a “worldwide” system of taxation to a territorial system. The provisional impact on the year ended December 31, 2017 effective tax rate from the TCJA was primarily attributable to a one-time transition tax of $0.6 million on unrepatriated earnings of foreign subsidiaries as well as a tax benefit of $3.4 million related to the revaluation of the Deferred Credit which was partially offset by the revaluation of our deferred tax assets and liabilities and other miscellaneous tax attributes due to the reduction of the U.S. corporate tax rate from 35% to 21%.

We are still evaluating the impact of the TCJA on our future effective tax rate, but at this time, we expect that the overall impact of the TCJA will decrease our effective tax rate compared to prior years.

Year ended December 31, 2016 compared to Year ended December 31, 2015

(Amounts in thousands, except percentages)	Year Ended December 31, 2016	2015	Change	% Change
Service revenue, net	$ 370,621	$ 320,101	$ 50,520	15.8%
Reimbursed out-of-pocket revenue	50,961	38,958	12,003	30.8%
Total revenue	421,582	359,059	62,523	17.4%
Direct costs, excluding depreciation and amortization	198,510	163,707	34,803	21.3%
Reimbursed out-of-pocket expenses	50,961	38,958	12,003	30.8%
Selling, general and administrative	61,507	56,998	4,509	7.9%
Impairment of goodwill	-	9,313	(9,313)	(100.0)%
Depreciation	7,442	6,379	1,063	16.7%
Amortization	50,672	63,142	(12,470)	(19.7)%
Total operating expenses	369,092	338,497	30,595	9.0%
Income from operations	52,490	20,562	31,928	
Loss on extinguishment of debt	(10,726)	-	(10,726)	
Miscellaneous expense, net	(423)	(1,133)	710	
Interest expense, net	(19,384)	(27,259)	7,875	
(Loss) income before income taxes	21,957	(7,830)	29,787	
Income tax provision	8,532	843	7,689	
Net (loss) income	$ 13,425	$ (8,673)	$ 22,098	

Service revenue, net and Reimbursed out-of-pocket revenue

For the year ended December 31, 2016 service revenue, net increased by $50.5 million to $370.6 million, from $320.1 million for the year ended December 31, 2015. The increase was primarily driven by strong activity within the Oncology and AVAI therapeutic areas.

Reimbursed out-of-pocket revenue increased by $12.0 million to $51.0 million for the year ended December 31, 2016, from $39.0 million for the year ended December 31, 2015. Reimbursed out-of-pocket revenues can fluctuate significantly from period to period based on the timing of program initiation or closeout, and these changes do not necessarily correlate to changes in net service revenue. The reimbursements were offset by an equal amount of reimbursed out-of-pocket expenses.

Direct costs, excluding depreciation and amortization and Reimbursed out-of-pocket expenses

Our direct costs, excluding depreciation and amortization increased by $34.8 million, to $198.5 million for the year ended December 31, 2016 from $163.7 million for the year ended December 31, 2015. The increase was primarily attributed to increases in employee related costs for additional personnel of $23.7 million, contracted services of $4.7 million, and laboratory costs of $2.3 million, all to support the growth in project activities.

Selling, general and administrative

Selling, general and administrative expenses increased by $4.5 million, to $61.5 million for the year ended December 31, 2016 from $57.0 million for the year ended December 31, 2015. The increase was primarily driven by an increase in bad debt of $3.0 million in the year ended December 31, 2016 compared to the prior year, primarily due to higher bad debt expense incurred in 2016 of approximately $1.3 million compared to 2015, and a net bad debt recovery in the year ended December 31, 2015 of $1.6 million that did not recur in 2016. The year ended December 31, 2015 also benefitted from a $1.1 million gain on litigation from the settlement of an employment matter. The costs for certain advisory and professional fees related to the IPO in 2016 resulted in increases in expenses of $0.9 million while charitable contributions increased $0.6 million for the year ended December 31, 2016 compared to the prior year. These increases were partially offset by a $1.4 million decrease in employee related costs for the year ended December 31, 2016 compared to the prior year. This decrease was the result of a $4.3 million one-time stock based compensation award to our Chief Executive Officer during the year ended December 31, 2015, partially offset by an increase in other employee related costs of $2.9 million for the year ended December 31, 2016.

Impairment of goodwill

There was no impairment of goodwill for the year ended December 31, 2016. During the year ended December 31, 2015, we determined that the fair value of our Clinics reporting unit did not exceed its carrying value resulting in a $9.3 million impairment of goodwill. This impairment was identified during the annual impairment assessment in the fourth quarter of 2015 when we updated our forecasted discounted cash flows to reflect operating results that lagged prior forecasted results.

Depreciation and Amortization

Depreciation and amortization expense decreased by $11.4 million, to $58.1 million for the year ended December 31, 2016 from $69.5 million for the year ended December 31, 2015. The decrease in depreciation and amortization was primarily related to the amortization of our definite lived intangible assets, which are amortized on an accelerated basis.

Loss on extinguishment of debt

During the year ended December 31, 2016, in connection with entering into the Senior Secured Credit Facilities (as defined below), the Company recorded a loss on extinguishment of long-term debt of $10.7 million in the fourth quarter of 2016, of which $10.2 million related to unamortized loan origination fees from the credit agreement for our 2014 Senior Secured Credit Facilities (as defined below) and $0.5 million related to third party fees incurred

during the fourth quarter of 2016. There was no extinguishment of long-term debt in the year ended December 31, 2015.

Miscellaneous expense, net

Miscellaneous expense, net decreased by $0.7 million to $0.4 million of expense for the year ended December 31, 2016 from $1.1 million of expense for the year ended December 31, 2015. These changes were mainly attributable to foreign exchange gains or losses that arise in connection with the revaluation of short-term inter-company balances between our domestic and international subsidiaries, and gains or losses from foreign currency transactions, such as those resulting from the settlement of third-party accounts receivables and payables denominated in a currency other than the local currency of the entity making the payment. Additionally, a $0.5 million gain was recognized during the year ended December 31, 2016 in connection with the settlement of certain liabilities related to a prior year change in control.

Interest expense, net

Interest expense, net decreased by $7.9 million to $19.4 million for the year ended December 31, 2016 from $27.3 million for the year ended December 31, 2015. The decrease in interest expense, net for the year ended December 31, 2016 was primarily related to the lower average outstanding balance under our Senior Secured Term Loan Facility (as defined below) and 2014 Senior Secured Term Loan Facility (as defined below) compared to the prior year. Additionally, our Senior Secured Term Loan Facility, which we entered into in the fourth quarter of 2016, has a lower rate of interest compared to the 2014 Senior Secured Term Loan Facility.

Income tax provision

Income tax provision increased by $7.7 million, to $8.5 million for the year ended December 31, 2016 from $0.8 million for the year ended December 31, 2015. The overall effective tax rates for the years ended December 31, 2016 and 2015 were 38.9% and negative 10.8%, respectively. The change in effective tax rates and the increase in income tax provision was primarily due to an increase in pre-tax book income coupled with relatively consistent year over year rate reconciliation drivers.

Liquidity and Capital Resources

We assess our liquidity in terms of our ability to generate cash to fund our operating, investing and financing activities. Our principal sources of liquidity are operating cash flows and funds available for borrowing under our Senior Secured Revolving Credit Facility (as defined below). As of December 31, 2017, we had cash and cash equivalents of $26.5 million, including less than $0.1 million of restricted cash, related to advanced payments received pursuant to certain sponsor contracts. Approximately $9.4 million of our cash and cash equivalents, none of which was restricted, was held by our foreign subsidiaries as of December 31, 2017.

On August 16, 2016, the Company completed its IPO of its common stock at a price of $23.00 per share. We issued and sold 8,050,000 shares of common stock in the IPO. The IPO raised net proceeds of approximately $173.6 million after deducting underwriting discounts and commissions. We used the proceeds from our IPO, combined with cash on hand, to repay $175.0 million of outstanding borrowings under our 2014 Senior Secured Term Loan Facility.

On December 8, 2016, the Company entered into a credit agreement (the “Senior Secured Credit Agreement”) consisting of a $165.0 million term loan (the “Senior Secured Term Loan Facility”) and a $150.0 million revolving credit facility (the “Senior Secured Revolving Credit Facility” and, together with the Senior Secured Term Loan Facility, the “Senior Secured Credit Facilities”). As of December 31, 2017, we had $80.0 million available for borrowing under our Senior Secured Revolving Credit Facility. Proceeds from the Senior Secured Term Loan Facility were used to repay and extinguish our obligations under the 2014 Senior Secured Credit Facilities as well as pay any fees, costs and expenses related thereto.

Our expected primary cash needs on both a short and long-term basis are for investment in operational growth, capital expenditures, payment of debt, share repurchases, selective strategic bolt-on acquisitions, other investments, and other general corporate needs. We have historically funded our operations and growth with cash flow from operations and borrowings under our credit facilities. We expect to continue expanding our operations through organic growth and potentially highly selective bolt-on acquisitions and investments. We expect these activities will be funded from existing cash, cash flow from operations and, if necessary, borrowings under our existing or future credit facilities or other debt. We have deemed that foreign earnings will be indefinitely reinvested and therefore we have not provided taxes on these earnings. While we do not anticipate the need to repatriate these foreign earnings for liquidity purposes given our cash flows from operations and available borrowings under existing and future credit facilities, we would incur taxes on these earnings if the need for repatriation due to liquidity purposes arises. We believe that our sources of liquidity and capital will be sufficient to finance our cash needs for the next 12 months and on a longer-term basis. However, we cannot assure you that our business will generate sufficient cash flow from operations, or that future borrowings will be available to us under our Senior Secured Credit Facilities or otherwise, in an amount sufficient to fund our liquidity needs. If our cash flows and capital resources are insufficient to service our indebtedness, we may be forced to reduce or delay capital expenditures, sell assets, seek additional capital or restructure or refinance our indebtedness. See “Item 1A. Risk Factors—Risks Relating to our Indebtedness—We may not be able to generate sufficient cash to service all of our indebtedness, and may be forced to take other actions to satisfy our obligations under our indebtedness that may not be successful” in Part I of this Annual Report on Form 10-K.

Cash Flows (Amounts in thousands)	Year Ended December 31, 2017	2016	2015
Net cash provided by operating activities	$ 97,385	$ 91,732	$ 85,870
Net cash used in investing activities	(12,237)	(13,422)	(6,432)
Net cash used in financing activities	(97,828)	(58,008)	(116,489)
Effect of exchange rates on cash, cash equivalents, and restricted cash	1,765	(632)	(601)
(Decrease) increase in cash, cash equivalents, and restricted cash	$ (10,915)	$ 19,670	$ (37,652)

Cash Flows from Operating Activities

Cash flows from operations are driven mainly by net income and net movement in accounts receivable and unbilled, net, advanced billings, pre-funded liabilities, accounts payable and accrued expenses. Accounts receivable and unbilled, net, advanced billings and pre-funded liabilities fluctuate on a regular basis as we perform our services, bill our customers and ultimately collect on those receivables. We attempt to negotiate payment terms in order to provide for payments prior to or soon after the provision of services, but this timing of collection can vary significantly on a period by period comparative basis.

Net cash flows provided by operating activities were $97.4 million for the year ended December 31, 2017 consisting of net income of $39.1 million. Adjustments to reconcile net income to net cash provided by operating activities were $45.4 million, primarily related to amortization of intangibles of $37.9 million, depreciation of $8.6 million, stock based compensation expense of $4.5 million, and deferred income tax provision of $3.2 million, offset by $8.8 million of amortization and adjustment of deferred credit. Changes in operating assets and liabilities provided $12.9 million in operating cash flows and were primarily driven by increased accounts payable of $4.8 million, increased advanced billings of $7.7 million, and increased pre-funded study costs of $5.3 million, offset by increased prepaid expenses and other current assets of $3.5 million.

Net cash flows provided by operating activities was $91.7 million for the year ended December 31, 2016 consisting of net income of $13.4 million. Adjustments to reconcile net income to net cash provided by operating activities were $71.2 million, primarily related to amortization of intangibles of $50.7 million, depreciation of $7.4 million, loss on extinguishment of debt of $10.7 million, and stock based compensation expense of $9.8 million, offset by $9.0 million of benefit from deferred taxes. Changes in operating assets and liabilities provided $7.1 million in

operating cash flows and were primarily driven by increased accrued expenses of $4.5 million primarily related to employee related costs, increased advanced billings of $14.7 million, offset by increased accounts receivable and unbilled services, net of $13.7 million, increased prepaid expenses and other current assets of $3.7 million, and a decrease in other assets and liabilities, net of $0.8 million.

Net cash provided by operating activities was $85.9 million for the year ended December 31, 2015, consisting of a net loss of $(8.7) million. Adjustments to reconcile net loss to net cash provided by operating activities were $90.9 million, primarily related to amortization of intangibles of $63.1 million, depreciation of $6.4 million, impairment of goodwill of $9.3 million and stock based compensation expense of $22.3 million, offset by a tax benefit of $12.7 million. Changes in operating assets and liabilities provided $3.7 million in operating cash flows and were driven primarily by an increase in pre-funded cash and a decrease in prepaid assets, partially offset by a decrease in advanced billings.

Cash Flow from Investing Activities

Net cash used in investing activities was $12.2 million for the year ended December 31, 2017 primarily consisting of property and equipment expenditures.

Net cash used in investing activities was $13.4 million for the year ended December 31, 2016 primarily consisting of property and equipment expenditures.

Net cash used in investing activities was $6.4 million for the year ended December 31, 2015 primarily consisting of property and equipment expenditures.

Cash Flow from Financing Activities

Net cash used in financing activities was $97.8 million in the year ended December 31, 2017, primarily related to $155.6 million in repurchases of common stock and $42.4 million in payments on our Senior Secured Credit Facilities, offset by $100.0 million in proceeds from the Senior Secured Revolving Credit Facility.

Net cash used in financing activities was $58.0 million for the year ended December 31, 2016 primarily related to $390.1 million in principal payments on our 2014 Senior Secured Term Loan Facility, offset by the IPO proceeds received of $173.6 million, and the proceeds from the issuance of debt, net of original issue discount of $164.5 million related to the Senior Secured Credit Facilities. The remaining activity consisted of rental payments on deemed landlord assets, payment of debt issuance costs, and the payment of common stock issuance costs.

Net cash used in financing activities was $116.5 million in the year ended December 31, 2015, primarily related to $116.1 million in principal payments on our 2014 Senior Secured Term Loan Facility.

Share Repurchases

In November 2017, the Board members who are not affiliated with Cinven (the “Disinterested Directors”) approved an agreement to repurchase 2,000,000 shares of the Company’s common stock from Cinven in connection with a Secondary Offering (as described in Note 1 of the Notes to the Consolidated Financial Statements) for aggregate consideration of approximately $60.3 million, representing a purchase price of $30.16 per share. The Company funded the repurchase with approximately $60.0 million in borrowings under the Senior Secured Revolving Credit Facility and cash on hand.

In August 2017, the Disinterested Directors of the Company approved a stock repurchase agreement with Medpace Limited Partnership, a Guernsey limited partnership (the “Limited Partnership” acting through its general partner, Medpace GP Limited, a Guernsey company, the “General Partner” and, the Limited Partnership acting through the General Partner, “Cinven”), pursuant to which the Company repurchased 2,000,000 shares of the Company’s common stock from Cinven for aggregate consideration of approximately $60.5 million, representing a purchase price of $30.27 per share. The Company funded the repurchase with cash on hand and $40.0 million in borrowings under our Senior Secured Revolving Credit Facility.

In April 2017, the Board of the Company authorized a share repurchase program with an authorized repurchase level of $50.0 million. The share repurchase program was cancelled in the fourth quarter of 2017. Repurchases under the repurchase program took place in the open market or negotiated transactions, at the discretion of the Company's management. During the year ended December 31, 2017, the Company repurchased 1,342,786 shares of its outstanding common stock for $34.7 million under this share repurchase program.

The Company has elected to constructively retire all repurchased shares with all amounts paid in excess of Common stock par value reflected within Accumulated deficit in the Company's consolidated balance sheets, except for 200,000 shares, which are reflected within treasury stock in the Company's consolidated balance sheets.

Indebtedness

On December 8, 2016 (the "Closing Date"), Medpace IntermediateCo, Inc., as borrower (the "Borrower"), and Medpace Acquisition, Inc., a wholly-owned subsidiary of the Company, as parent guarantor (the "Parent Guarantor"), entered into the Senior Secured Credit Agreement, which provides for the Senior Secured Term Loan Facility of $165.0 million and the Senior Secured Revolving Credit Facility of $150.0 million. The Senior Secured Term Loan Facility and Senior Secured Revolving Credit Facility expire in December 2021. Borrowings under the Senior Secured Credit Facilities were utilized to repay and extinguish our obligations under our existing senior secured term loan facility (the "2014 Senior Secured Term Loan Facility") and our existing senior secured revolving credit facility (the "2014 Senior Secured Revolving Credit Facility" and, together with the 2014 Senior Secured Term Loan Facility, the "2014 Senior Secured Credit Facilities"), as well as pay any related fees, costs and expenses.

The Senior Secured Credit Facilities are guaranteed by the Parent Guarantor and its material, direct or indirect wholly owned domestic subsidiaries, with certain exceptions, including where providing such guarantees is not permitted by law, regulation or contract or would result in adverse tax consequences. All of the obligations under the Senior Secured Credit Facilities are secured, subject to certain permitted liens and other exceptions, by substantially all of the assets of the Borrower and each guarantor, including, but not limited to, a perfected pledge of all of the capital stock of the Borrower and of each guarantor (other than the Parent Guarantor) and, subject to certain exceptions, perfected security interests in substantially all other tangible and intangible assets of the Borrower and each guarantor.

As of December 31, 2017, there was $152.6 million outstanding under the Senior Secured Term Loan Facility and $70.0 million in borrowings outstanding under the Senior Secured Revolving Credit Facility. In connection with entering into the Senior Secured Credit Facilities, the Company recorded a loss on extinguishment of long-term debt of $10.7 million during the fourth quarter of 2016, of which $10.2 million related to unamortized loan origination fees from the credit agreement for our 2014 Senior Secured Credit Facilities and $0.5 million related to third party fees incurred during the fourth quarter of 2016.

Borrowings under the Senior Secured Credit Facilities bear interest at a rate equal to, at our option, either (i) the adjusted Eurocurrency rate based on LIBOR for U.S. dollar deposits for loans denominated in dollars, EURIBOR for Euro deposits for loans denominated in Euros and the offer rate for any other currencies for loans denominated in such other currencies for the relevant interest period plus an applicable margin from 1.25% to 2.25% based on the total net leverage ratio from less than 1.50:1.00 to greater than 3.75:1:00, or (ii) an alternative base rate (determined by reference to the highest of (a) the prime commercial lending rate of the administrative agent, as established from time to time, (b) the Federal Funds Rate plus 0.50% and (c) the one-month adjusted Eurocurrency rate for loans in U.S. dollars plus 1.00%) plus an applicable margin from 0.25% to 1.25% based on the total net leverage ratio from less than 1.50:1.00 to greater than 3.75:1:00. The applicable margin as of December 31, 2017 was 1.25% for Eurocurrency loans and 0.25% for base rate loans. At our discretion, we may choose interest periods of one, two, three or six months, which determines the interest rate to be applied. Interest on the Eurocurrency rate loan continues to be payable at the end of the selected Eurocurrency term and interest on the base rate tranche of the Senior Secured Term Loan Facility is payable quarterly in conjunction with any required principal payments.

We also pay commitment fees on a quarterly basis at an annual rate of 0.375% of the unused borrowings under the Senior Secured Revolving Credit Facility for the first full fiscal quarter after the Closing Date, and thereafter at

0.50% if the total net leverage ratio is greater than or equal to 3.00:1.00, or 0.375% if the total net leverage ratio is less than 3.00:1.00.

The Senior Secured Term Loan Facility will amortize in quarterly installments in aggregate annual amounts equal to (i) 7.5% of the original principal amount of the Senior Secured Term Loan Facility during the first year after the Closing Date, (ii) 10.0% of the original principal amount of the Senior Secured Term Loan Facility during the second year after the Closing Date, (iii) 10.0% of the original principal amount of the Senior Secured Term Loan Facility during the third year after the Closing Date, (iv) 12.5% of the original principal amount of the Senior Secured Term Loan Facility during the fourth year after the Closing Date and (v) 15.0% of the original principal amount of the Senior Secured Term Loan Facility during the fifth year after the Closing Date. The first amortization payment was due on March 31, 2017 and the remaining balance of the original principal amount of the Senior Secured Term Loan Facility outstanding at maturity will be paid in a final balloon payment. The Senior Secured Revolving Credit Facility terminates on the fifth anniversary of the Closing Date and loans thereunder may be borrowed, repaid, and re-borrowed up to such date.

The following amounts are required to be prepaid in addition to quarterly installment payments and will be applied to repay the Senior Secured Term Loan Facility, subject to certain thresholds, carve-outs, exceptions and reinvestment rights: (a) to the extent that the net cash proceeds of non-ordinary course asset sales or other dispositions of property in a transaction or related transactions by the Borrower and its subsidiaries (including, without limitation, insurance and condemnation proceeds) exceeds $10 million in any fiscal year, 100% of such excess net cash proceeds; (b) 100% of the net cash proceeds of certain debt incurred by the Borrower and its restricted subsidiaries after the Closing Date; and (c) to the extent that net cash proceeds received by the Borrower and its restricted subsidiaries in connection with the disposition of any accounts receivable or related assets to a permitted receivables financing subsidiary exceeds $5 million at any time, 100% of such excess net cash proceeds. In addition to the mandatory payments above, the Borrower may voluntarily repay the outstanding Senior Secured Term Loan Facility without premium or penalty, subject to certain restrictions.

The Senior Secured Credit Facilities are subject to customary negative covenants that, among other things, limit the Borrower and its restricted subsidiaries to, subject to certain exceptions and carve outs:

- create, incur or assume any lien upon any of the property, assets or revenue;
- make or hold certain investments;
- incur or assume any indebtedness;
- merge, dissolve, liquidate or consolidate with or into another person;
- make certain dispositions of property or other assets (including sale leaseback transactions);
- declare or make certain restricted payments, including dividends;
- enter into certain transactions with affiliates;
- prepay subordinated debt;
- enter into burdensome agreements;
- engage in any material line of business substantially different from currently conducted business; or
- change fiscal year.

In addition, the Borrower is required to report compliance with two financial covenants that are tested at the end of each fiscal quarter. The Borrower is required to maintain a ratio of consolidated funded indebtedness minus unrestricted cash and cash equivalents (in the aggregate not to exceed $50 million and to include not more than $25 million of foreign unrestricted cash and cash equivalents) to consolidated EBITDA for the most recent four fiscal quarter period not to exceed 4.00:1.00; provided that the Borrower shall be permitted to increase the ratio to 4.50:1.00 in connection with any permitted acquisition or any other acquisition consented to by Administrative Agent and the Required Lenders (as defined in the Senior Secured Credit Agreement) with total cash consideration in excess of $25 million. Such increase shall be applicable for the fiscal quarter in which such acquisition is

consummated and the three consecutive test periods thereafter. The Borrower is also required to maintain a ratio of consolidated EBITDA to consolidated interest expense, in each case for the most recent four fiscal quarter period, of not less than 3.00:1.00. The Company was in compliance with all financial covenants as of December 31, 2017.

The Senior Secured Credit Facilities contain certain events of default, including, among others, non-payment of principal or interest, breach of the covenants, cross default and cross acceleration to certain other indebtedness, defaults on monetary judgment orders, certain ERISA events, certain bankruptcy and insolvency events, actual or asserted invalidity of any guarantee or security document and change in control.

As of December 31, 2017, we had total indebtedness of $222.6 million, of which $152.6 million was attributed to outstanding borrowings on the Senior Secured Term Loan Facility. There were $70.0 million in outstanding borrowings under the Senior Secured Revolving Credit Facility as of December 31, 2017. In addition, as of December 31, 2017, we had $0.3 million in letters of credit outstanding related to certain operating lease obligations, which are secured by the Senior Secured Revolving Credit Facility.

Contractual Obligations and Commercial Commitments

We have various contractual obligations, which are recorded as liabilities in our consolidated financial statements. Other items, such as operating lease obligations, are not recognized as liabilities in our consolidated financial statements but are required to be disclosed. The following table summarizes our future payments for all contractual obligations and commercial commitments for the years subsequent to the year ended December 31, 2017:

	Payments Due by Period				
Contractual Obligations (In thousands)	**Total**	**Less than 1 year**	**1-3 years**	**3-5 years**	**More than 5 years**
Long-term debt obligations	$ 222,625	$ 16,500	$ 37,125	$ 169,000	$ -
Interest on long-term debt	22,588	6,489	11,534	4,565	-
Operating lease obligations	27,763	7,005	9,839	7,655	3,264
Deemed landlord liabilities	39,750	3,852	7,925	8,131	19,842
Total	$ 312,726	$ 33,846	$ 66,423	$ 189,351	$ 23,106

The interest payments on long-term debt in the above table are based on interest rates in effect as of December 31, 2017.

We have recorded a tax liability for unrecognized benefits for uncertain tax positions of $5.9 million, which has not been included in the above table due to the uncertainties in the timing of settlement of the income tax positions.

We are a party to certain vendor contracts related to clinical services that if cancelled may require payments for services performed and potentially additional services required to protect safety of subjects. The value of these potential wind-down provisions is generally borne by our customers and is not practical to estimate.

Off-Balance Sheet Arrangements

Off-balance sheet arrangements refer to any transaction, agreement or other contractual arrangement to which an entity not consolidated under our entity structure exists, where we have an obligation arising under a guarantee contract, derivative instrument or variable interest or a retained or contingent interest in assets transferred to such an entity or similar arrangement that serves as credit, liquidity or market risk support for such assets. We have no off-balance sheet arrangements currently.

Critical Accounting Policies and Estimates

The preparation of financial statements in accordance with generally accepted accounting principles in the United States of America, or US GAAP, requires us to make a variety of decisions which affect reported amounts and related disclosures, including the selection of appropriate accounting principles and the assumptions on which to base accounting estimates. In reaching such decisions, we apply judgment based on our understanding and analysis

of the relevant circumstances, including our historical experience and other assumptions. Actual results could differ from our estimates. We are committed to incorporating accounting principles, assumptions and estimates that promote the representational faithfulness, verifiability, neutrality and transparency of the accounting information included in the financial statements.

Net Service Revenue Recognition

We generally enter into contracts with customers to provide services ranging in duration from a few months to several years. The contract terms generally provide for payments based on a fixed-fee or unit-of-service arrangement. Revenue on these arrangements is recognized when there is persuasive evidence of an arrangement, the service offering has been delivered to the customer, the arrangement consideration is determinable and the collection of the fees is reasonably assured.

A majority of our contracts provide for services based on a fixed-fee arrangement, in which revenue is recognized based on the proportional performance methodology. Under this methodology, revenue recognition is determined by assessing the proportion of performance completed or delivered to date compared to total specific measures to be delivered or completed under the terms of the arrangement. The measures utilized to assess performance are specific to the service provided, and the Company generally compares the ratio of hours completed to the total estimated hours necessary to complete the contract. A detailed project budget by hours is developed based on many factors, including, but not limited to, the scope of the work, the complexity of the study, the participating geographic locations and the Company's historical experience. We believe the reporting and estimation of hours is the best available measure of progress on many of the services provided and best reflects the pattern in which obligations to customers are fulfilled. To assist with the estimation of hours expected to complete a project, regular contract reviews for each project are performed in which performance to date is compared to the most current estimate to complete assumptions. The reviews include an assessment of effort incurred to date compared to expectations based on budget assumptions and other circumstances specific to the project. The total estimated hours necessary to complete a fixed-fee contract, based on these reviews, is updated and any revisions to the existing hours budget result in cumulative adjustments to the amount of revenue recognized in the period in which the revisions are identified. Because of the uncertainties inherent in estimating the hours necessary to fulfill contractual obligations, it is possible that estimates may change in the near term, resulting in a material change in revenue reported.

Fixed-fee contracts provide for pricing modifications upon scope of work changes. We recognize revenue related to work performed in connection with scope changes when the underlying services are performed, a binding contractual commitment has been executed with the customer and collectability is reasonably assured. If our customers do not agree to price renegotiation upon changes in our scope of work, we could be exposed to cost overruns and reduced contract profitability. Costs are not deferred in anticipation of contracts being awarded or amendments being finalized, but are expensed as incurred.

For unit-of–service arrangements, we recognize revenue in the period in which the unit is delivered. Service unit elements largely consist of various project management, consulting and analytical testing services.

Many contractual arrangements combine multiple service elements. For these contracts, arrangement consideration is allocated to identified units of accounting based on the relative selling price of each unit of account. The best evidence of selling price of a unit of accounting is vendor specific objective evidence, or VSOE, which is the price charged when the deliverable is sold separately. When VSOE is not available to determine selling price, management uses relative third party evidence, if available. When neither VSOE nor third party evidence of selling price exists, we use the best estimate of selling price considering all relevant information that is available without undue cost and effort.

Most contracts are terminable by the customer, either immediately or according to advance notice terms specified within the contracts. These contracts require payment of fees to us for services rendered through the date of termination and may require payment for subsequent services necessary to conclude the study or close out the contract. Final settlement amounts are typically subject to negotiation with the customer. These amounts are included in net service revenue when realization is reasonably assured. We occasionally enter into volume rebate arrangements with customers that provide for rebates if certain specified spending thresholds are met. These rebate

obligations are recorded as a reduction of revenue when it appears probable that the customer will earn the rebates and the related amount is estimable.

We record revenue net of any tax assessments by governmental authorities that are imposed and concurrent with specific revenue generating transactions.

Allowance for Doubtful Accounts

We grant credit terms to our customers prior to signing a service contract and monitor creditworthiness on an ongoing basis. We assess ongoing collectability by customer through a variety of performance indicators including age of billed receivable, billing type, knowledge of available funding and other information available through internal research. A large percentage of our customers are small biopharmaceutical companies that rely on funding from investors to finance their operations. This creates a heightened risk related to their creditworthiness. The Company maintains an allowance for doubtful accounts for accounts receivable specifically identified that are at risk of not being collected.

Uncollectible accounts receivable are written off only after all reasonable collection efforts have been exhausted. Moreover, in many cases the Company requires advance payment from its customers for a portion of the study contract price upon the signing of a service contract. These advance payments are deferred and recognized as revenue as services are performed.

Goodwill and Indefinite Lived Intangible Assets

Goodwill

Goodwill represents the excess of purchase price over the fair value of net assets acquired in business combinations. As a result of a prior year change in control, we recognized $670.3 million of goodwill that was allocated to and recorded at the reporting unit level. Our reporting units are Phase II-IV clinical research services, or Phase II-IV, Laboratories and Clinics.

The carrying value of goodwill is reviewed at least annually for impairment, or as indicators of potential impairment are identified, at the reporting unit level. We perform our annual goodwill impairment test during the fourth quarter each year, utilizing the quantitative two step model defined by accounting guidance which governs such assessments. The first step involves the comparison of each of our reporting unit carrying values, inclusive of assigned goodwill, to their respective estimated fair values. If a reporting unit carrying value exceeds estimated fair value, a second step requiring us to calculate the implied reporting unit goodwill fair value is performed. The implied fair value of goodwill is determined by performing a hypothetical purchase price allocation of reporting unit fair value to the reporting units identified assets and liabilities. The resulting implied goodwill fair value is compared to carrying value to determine the extent of impairment, if any exists. Reporting unit fair value is estimated using a combination of the income approach, a discounted cash flow analysis, and the market approach, utilizing the guideline company method. The reporting unit’s discounted cash flow analysis requires significant management judgment with respect to net service revenue, direct costs, excluding depreciation and amortization, selling, general and administrative expenses, capital expenditures and the selection and use of an appropriate discount rate. The projected revenue and expense assumptions and capital expenditures are based on our annual and long-term business plans. Discount rates reflect market-based estimates of the risks associated with the projected cash flows directly resulting from the use of those assets in operations.

In conjunction with the 2015 fourth quarter annual assessment of goodwill, we determined that goodwill related to our Clinics reporting unit was impaired and we recognized an impairment charge of $9.3 million, which represents 100% of the goodwill that had been allocated to this reporting unit. This impairment was identified during the annual impairment assessment in the fourth quarter of 2015 when we updated our forecasted discounted cash flows related to the reporting unit to reflect operating results that lagged prior forecasted results. For our Phase II-IV and Laboratories reporting units, the reporting units’ fair values substantially exceeded their respective carrying values including allocated goodwill. There was no indication of impairment related to goodwill based on the fourth quarter 2017 assessment.

This process is inherently subjective and dependent upon estimates and assumptions we make. In determining our expected future cash flows, we assume that we will continue to acquire and convert new business to contract, execute on these contracts with reasonable profit, collect customer receivables and thus generate positive cash flows. However, future declines in the operating results of these reporting units could indicate a need to reevaluate the fair value of these components under accounting guidance governing goodwill and may ultimately result in future impairment. We continue to monitor for any potential indicators of impairment.

Intangible Assets

The Company has an indefinite lived intangible asset related to its trade name valued at $31.6 million. The carrying value of the trade name asset is reviewed at least annually for impairment, or as indicators of potential impairment are identified. The Company performs its annual impairment test in the fourth quarter each year in conjunction with its annual assessment of goodwill. The assessment consists of comparing the carrying value of the indefinite lived intangible asset to its estimated fair value, utilizing the relief from royalty method, an income approach valuation. The relief from royalty method requires management judgment with respect to projected net service revenue, profitability and growth and the selection and use of an appropriate discount rate. There was no indication of impairment related to the trade name asset based on the fourth quarter 2017 assessment.

Our assessment of impairment charges on any assets classified currently as having indefinite lives could change in future periods if certain events were to occur, including, but not limited to, the following: a significant change in business results, an increase in our discount rates due to a change in our weighted average cost of capital, a decrease in growth rates, economic deterioration that is more severe or longer in duration than anticipated or another significant economic event.

Finite-lived intangible assets consist mainly of the value assigned to customer relationships, backlog and developed technologies. Finite-lived intangible assets are amortized straight-line or using an accelerated method over their estimated useful lives, which range in term from 17 months to 15 years. Amortization expense recognized related to finite lived intangible assets was $37.9 million, $50.7 million and $63.1 million, respectively, for the years ended December 31, 2017, 2016 and 2015.

Income Taxes

We are subject to income taxes in the United States and numerous foreign jurisdictions. Significant judgment is required in the forecasting of taxable income using historical and projected future operating results in determining our provision for income taxes and the related assets and liabilities. The provision for income taxes includes income taxes paid, currently payable and receivable, and deferred taxes.

We record deferred tax assets and liabilities based on temporary differences between the financial statement bases and tax bases of assets and liabilities. Deferred tax assets are recorded for tax benefit carryforwards using tax rates anticipated to be in effect in the year in which temporary differences are expected to reverse. If it does not appear more likely than not that the full value of a deferred tax asset will be realized, the Company records a valuation allowance against the deferred tax asset, with an offsetting charge to the Company’s income tax provision or benefit.

The recoverability of our deferred tax assets is estimated based on consideration of all available positive and negative evidence, including, but not limited to, our ability to generate a sufficient level of future taxable income, reversals of deferred tax liabilities (other than those with an indefinite reversal period), tax planning strategies and recent financial performance. The assessment of recoverability is performed on a jurisdiction by jurisdiction basis. Based on the analysis of the above factors, we determined that as of December 31, 2017 and 2016 a valuation allowance in the amount of $2.4 million and $1.0 million, respectively, was required relating to certain foreign operating loss carryforwards, U.S. operating loss carryforwards, a U.S. capital loss carryforward and U.S. state and local operating loss carryforwards. Differences in actual results compared to our estimates and changes in our assumptions could result in an adjustment to the valuation allowance in the future and would generally impact earnings or other comprehensive income depending on the nature of the respective deferred asset for which the valuation allowance exists.

We have recognized certain liabilities, including penalties and interest in the amount of $1.4 million as of the year ended December 31, 2017, within other long-term liabilities on the consolidated balance sheets. These relate to uncertain tax positions that are subject to various assumptions and judgment. Liabilities for these uncertain tax positions are assessed on a position by position basis. The calculation of these liabilities involves dealing with uncertainties in the application of complex tax regulations in both domestic and foreign jurisdictions. These positions may be subject to audit and review by tax authorities, and may result in future taxes, interest and penalties if we are unsuccessful in defending our positions. If the calculation of liability related to uncertain tax positions proves to be more or less than the ultimate assessment, a tax expense or benefit to expense, respectively would result.

As of December 31, 2017 and 2016, the Company's accounting position is that unremitted foreign earnings are indefinitely reinvested. The Company has accrued a provisional Transition Tax on the deemed repatriated earnings that were previously indefinitely reinvested. We will continue to monitor our assertion related to investment of foreign earnings and how this assertion may be impacted by the TCJA. See Note 12 of the Notes to Consolidated Financial Statements for further information regarding how this assertion could be impacted by the TCJA.

Stock Based Compensation

We have stock based compensation plans in which we issue stock based awards to employees and directors in the form of vested common shares, stock options, stock appreciation rights (SARs), restricted stock awards (RSAs), restricted stock units (RSUs), or other cash based or stock dividend equivalent awards. All of our currently outstanding awards are subject to equity classification pursuant to the terms of the award grants and based on accounting guidance which governs such transactions. Accounting guidance applicable to equity classified awards require all stock based compensation, including vested shares, grants of employee stock options and restricted stock to be recognized in the consolidated statements of operations based on their grant date fair values.

We estimate the fair value of our stock options utilizing the Black-Scholes-Merton option pricing model, which requires the input of highly subjective assumptions including: the expected stock price volatility, the calculation of the expected holding period of the award, the risk free interest rate and expected dividends on the underlying common stock. Due to the lack of Company specific historical and implied volatility data, we have based our estimate of expected volatility on the historical volatility of a group of peer companies that are most representative of our company. The historical volatility is calculated based on a period of time commensurate with the expected holding period assumption. The holding period represents the period that our option awards are expected to be outstanding. We use the simplified method as prescribed by accounting guidance governing such awards, to calculate the expected term for options granted to employees as we do not have sufficient historical evidence data to provide a reasonable basis upon which to estimate the expected holding period. This simplified method utilizes the mid-point between the vesting date and the date of the contractual term. The risk free rate is based on extrapolated rates of U.S. Treasury bonds whose terms are consistent with the expected holding period of the stock options. We have assumed a dividend yield of zero as we have not historically paid any dividends on our common stock.

All our stock based option awards are subject to service based vesting conditions. Compensation expense related to stock option awards to employees is recognized on a straight line basis based on the grant date fair value over the associated service period of the award, which is equal to the vesting term.

The following table summarizes the key weighted average assumptions used in the Black-Scholes-Merton option pricing model to calculate the fair value of options during the periods:

	Year Ended December 31,		
	2017	2016	2015
Expected holding period - years	5.4	3.6	4.2
Expected volatility	28.0%	30.2%	36.4%
Risk-free interest rate	2.0%	1.0%	1.2%
Expected dividend yield	0.0%	0.0%	0.0%

The assumptions used in the table above reflect both grant date inputs to arrive at the grant date fair values for stock options subject to equity-classified stock compensation accounting and reflect a fair value calculation for stock options outstanding in the period subject to liability-classified stock compensation accounting. As of December 31, 2017 all outstanding stock based awards were subject to equity classification through either modifications of the award terms and conditions that occurred during the year ended December 31, 2017, or based on terms and conditions applicable as of the grant date.

The weighted average grant date fair value of employee stock options granted was $8.54, $6.91 and $3.81 for the years ended December 31, 2017, 2016 and 2015.

Effect of Recent Accounting Pronouncements

Refer to Note 3 of the Notes to Consolidated Financial Statements for management's discussion of the effect of recent accounting pronouncements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Market risk is the potential loss arising from adverse changes in market rates and prices, such as foreign currency exchange rates, inflation, interest rates, and other relevant market rates or prices changes. We are exposed to market risk from changes in foreign currency exchange rates, interest rates, inflation rate and credit risk and we regularly evaluate our exposure to such changes.

Foreign Currency Risk

We have business operations globally, and accordingly, we are exposed to foreign currency fluctuations that can affect our financial results. For the years ended December 31, 2017 and 2016, approximately 7.6% and 9.2% of our revenue was derived from contracts denominated in currencies other than the U.S. dollar, whereas 28.6% and 25.3% of our operational costs, including, but not limited to, salaries, wages and other employee benefits, were derived in foreign currencies. Of these exposures, 89.0% and 91.7% of revenue denominated in foreign currencies and 49.6% and 46.6% of operational costs denominated in foreign currencies were Euro denominated. Our financial statements are reported in U.S. dollars and, accordingly, fluctuations in exchange rates will affect the translation of our revenues and expenses denominated in foreign currencies into U.S. dollars for purposes of reporting our consolidated financial results. We recalculated our reported pre-tax income for the years ended December 31, 2017 and 2016 using foreign exchange rates that were 10% higher and 10% lower than actual exchange rates utilized during the year. When utilizing foreign exchange rates 10% higher than actual exchange rates, our pre-tax income for the years ended December 31, 2017 and 2016 is positively impacted by approximately $5.2 million and $3.6 million, respectively. When utilizing foreign exchange rates 10% lower than actual exchange rates, our pre-tax income for the years ended December 31, 2017 and 2016 is negatively impacted by approximately $5.2 million and $3.6 million, respectively.

We are also subject to foreign currency transaction risk for fluctuations in exchange rates during the period of time between contract commencement and cash settlement for services that we provide in relation to the contract. This exposure may affect our contract and operational profitability. To mitigate our foreign currency risk exposure we provide for exchange rate fluctuation adjustments subject to certain thresholds within our contracts where contract currency varies from currencies where costs will be incurred to support delivery of the contract.

Interest Rates

We are primarily exposed to interest rate risk through our Senior Secured Credit Facilities. As of the year ended December 31, 2017, we had outstanding amounts related to the Senior Secured Credit Facilities of $221.6 million (net of an unamortized discount of $0.4 million and unamortized debt issuance costs of $0.6 million). As of the year ended December 31, 2016, we had outstanding amounts related to the Senior Secured Credit Facilities of $163.7 million (net of an unamortized discount of $0.5 million and unamortized debt issuance costs of $0.8 million). Both the Senior Secured Credit Facilities and the 2014 Senior Secured Credit Facilities are, or were, subject to variable interest rates. Each quarter-point increase or decrease in the applicable interest rate as of the year ended

December 31, 2017 and 2016 would change our interest expense by approximately $0.4 million and $0.8 million, respectively. The Senior Secured Credit Facilities are not subject to any interest rate caps or floors.

Credit Risk

Financial instruments that subject the Company to credit risk primarily consist of cash and cash equivalents, and accounts receivable and unbilled, net. The cash and cash equivalent balances are held and maintained with high-quality financial institutions with reputable credit ratings and, consequently, we believe that such funds are subject to minimal credit risk.

We generally do not require collateral or other securities to support customer receivables. In the years ended December 31, 2017 and 2016, credit losses have been immaterial and within our expectations. Moreover, in many cases we require advance payment from our customers for a portion of the study contract price upon the signing of a service contract which helps to mitigate credit risk. As of the years ended December 31, 2017 and 2016, there were no major customers accounting for more than 10% of our accounts receivable and unbilled, net.

Inflation

Our contracts that provide for services to be performed in excess of a year generally are based on inflation assumptions for the portion of the services to be performed beyond one year. We do not have significant operations in countries where the economy is considered highly inflationary, and do not believe in the near term that inflation will have a material adverse impact on us. However, if actual rates are greater than our inflation assumptions, inflation could have a material adverse effect on our operations or financial condition.

Item 8. Financial Statements and Supplementary Data.

Management's Report on Internal Control Over Financial Reporting

Management of Medpace Holdings, Inc. (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our consolidated financial statements for external reporting purposes in accordance with accounting principles generally accepted in the United States of America. Internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company, (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with accounting principles generally accepted in the United States of America, and that receipts and expenditures are being made only in accordance with authorizations of our management and directors, and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the consolidated financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements in the consolidated financial statements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2017. In making these assessments, management used the framework established by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control — Integrated Framework (2013). Based on management's assessment and the criteria in the COSO framework, management has concluded that the Company's internal control over financial reporting as of December 31, 2017 was effective.

As an emerging growth company, our independent registered public accounting firm is not required to formally attest to the effectiveness of our internal control over financial reporting pursuant to Section 404 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.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of
Medpace Holdings, Inc. and subsidiaries

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Medpace Holdings, Inc. and its subsidiaries (the “Company”) as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive Income (loss), shareholders’ equity, and cash flows for each of the three years in the period ended December 31, 2017, 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 as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with accounting principles generally accepted in the United States of America.

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. 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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the 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.

/s/ Deloitte & Touche LLP

Cincinnati, Ohio
February 27, 2018

We have served as the Company’s auditor since 2002.

MEDPACE HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(Amounts in thousands, except share amounts)

	As Of December 31,	
	2017	**2016**
ASSETS		
Current assets:		
Cash and cash equivalents	$ 26,485	$ 37,099
Restricted cash	7	308
Accounts receivable and unbilled, net (includes $1.0 million and $2.3 million with related parties at December 31, 2017 and 2016, respectively)	83,079	79,767
Prepaid expenses and other current assets	20,400	16,074
Total current assets	129,971	133,248
Property and equipment, net	48,739	43,805
Goodwill	660,981	660,981
Intangible assets, net	98,740	136,071
Deferred income taxes	6,343	97
Other assets	5,943	4,903
Total assets	$ 950,717	$ 979,105
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 16,674	$ 10,911
Accrued expenses	23,673	24,417
Pre-funded study costs (includes $1.0 million and $3.9 million with related parties at December 31, 2017 and 2016, respectively)	57,406	51,948
Advanced billings (includes $1.7 million and $7.6 million with related parties at December 31, 2017 and 2016, respectively)	73,756	65,668
Current portion of long-term debt	16,500	12,375
Other current liabilities	4,697	3,284
Total current liabilities	192,706	168,603
Long-term debt, net, less current portion	205,111	151,267
Deemed landlord liability, less current portion	26,602	28,527
Deferred income tax liability	560	12,030
Deferred credit	11,468	-
Other long-term liabilities	10,740	7,968
Total liabilities	447,187	368,395
Commitments and contingencies (see Note 9)		
Shareholders' equity:		
Preferred stock - $0.01 par-value; 5,000,000 shares authorized; 0 shares issued and outstanding at December 31, 2017 and 2016, respectively	-	-
Common stock - $0.01 par-value; 250,000,000 shares authorized at December 31, 2017 and 2016, respectively; 35,466,510 and 40,662,856 shares issued and outstanding at December 31, 2017 and 2016, respectively	355	407
Treasury stock - 200,000 shares at December 31, 2017	(6,030)	-
Additional paid-in capital	630,341	623,629
Accumulated deficit	(120,402)	(9,584)
Accumulated other comprehensive loss	(734)	(3,742)
Total shareholders' equity	503,530	610,710
Total liabilities and shareholders' equity	$ 950,717	$ 979,105

See notes to consolidated financial statements.

MEDPACE HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

(Amounts in thousands, except per share amounts)

	Year Ended December 31,		
	2017	**2016**	**2015**
Revenue:			
Service revenue, net (includes $11.1 million, $24.1 million and $24.0 million with related parties for the years ended December 31, 2017, 2016 and 2015, respectively)	$ 386,462	$ 370,621	$ 320,101
Reimbursed out-of-pocket revenue (includes $1.5 million, $5.4 million and $6.9 million with related parties for years ended December 31, 2017, 2016 and 2015, respectively)	49,690	50,961	38,958
Total revenue	436,152	421,582	359,059
Operating expenses:			
Direct costs, excluding depreciation and amortization	211,773	198,510	163,707
Reimbursed out-of-pocket expenses (includes $1.5 million, $5.4 million and $6.9 million with related parties for years ended December 31, 2017, 2016 and 2015, respectively)	49,690	50,961	38,958
Selling, general and administrative	63,357	61,507	56,998
Impairment of goodwill	-	-	9,313
Depreciation	8,574	7,442	6,379
Amortization	37,900	50,672	63,142
Total operating expenses	371,294	369,092	338,497
Income from operations	64,858	52,490	20,562
Other expense, net:			
Loss on extinguishment of debt	-	(10,726)	-
Miscellaneous expense, net	(354)	(423)	(1,133)
Interest expense, net	(7,559)	(19,384)	(27,259)
Total other expense, net	(7,913)	(30,533)	(28,392)
Income (loss) before income taxes	56,945	21,957	(7,830)
Income tax provision	17,823	8,532	843
Net income (loss)	$ 39,122	$ 13,425	$ (8,673)
Net income (loss) per share attributable to common shareholders:			
Basic	$ 1.00	$ 0.38	$ (0.28)
Diluted	$ 0.98	$ 0.37	$ (0.28)
Weighted average common shares outstanding:			
Basic	39,056	35,690	31,346
Diluted	39,839	36,329	31,346

See notes to consolidated financial statements.

MEDPACE HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Amounts in thousands)

	Year Ended December 31,		
	2017	**2016**	**2015**
Net income (loss)	$ 39,122	$ 13,425	$ (8,673)
Other comprehensive loss			
Foreign currency translation adjustments, net of taxes	3,008	(1,183)	(999)
Comprehensive income (loss)	$ 42,130	$ 12,242	$ (9,672)

See notes to consolidated financial statements.

MEDPACE HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(Amounts in thousands)

	Common Stock	Treasury Stock	Additional Paid-In Capital	(Accumulated Deficit) Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total
BALANCE — January 1, 2015	$ 313	$ -	$ 417,553	$ (14,336)	$ (1,560)	$ 401,970
Net loss				(8,673)		(8,673)
Stock issued	1		607			608
Foreign currency translation					(999)	(999)
Stock-based compensation expense	12		21,115			21,127
Stock options exercised			250			250
Tax benefit deficiency from stock-based compensation			(809)			(809)
BALANCE — December 31, 2015	$ 326	$ -	$ 438,716	$ (23,009)	$ (2,559)	$ 413,474
Net income				13,425		13,425
Foreign currency translation					(1,183)	(1,183)
Stock-based compensation expense	1		2,776			2,777
Stock options exercised			678			678
Issuance of common stock	80		173,498			173,578
Common stock issuance costs			(2,719)			(2,719)
Reclassification of liability classified stock options upon IPO			10,463			10,463
Tax effect of initial public offering related costs			192			192
Tax benefit from stock-based compensation			25			25
BALANCE — December 31, 2016	$ 407	$ -	$ 623,629	$ (9,584)	$ (3,742)	$ 610,710
Impact to Retained Earnings from adoption of ASU 2016-09			440	(440)		
BALANCE — January 1, 2017	407	-	624,069	(10,024)	(3,742)	610,710
Net income				39,122		39,122
Foreign currency translation					3,008	3,008
Stock-based compensation expense			4,463			4,463
Stock options exercised	1		1,811			1,812
Repurchases of common stock	(51)			(149,500)		(149,551)
Treasury stock purchases	(2)	(6,030)				(6,032)
Tax effect of initial public offering related costs			(2)			(2)
BALANCE — December 31, 2017	$ 355	$ (6,030)	$ 630,341	$ (120,402)	$ (734)	$ 503,530

See notes to consolidated financial statements.

MEDPACE HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(Amounts in thousands)

	Year Ended December 31,		
	2017	**2016**	**2015**
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income (loss)	$ 39,122	$ 13,425	$ (8,673)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation	8,574	7,442	6,379
Amortization	37,900	50,672	63,142
Stock-based compensation expense	4,463	9,815	22,324
Amortization of debt issuance costs and discount	662	2,576	2,687
Loss on extinguishment of debt	-	10,726	-
Deferred income tax provision (benefit)	3,237	(9,006)	(12,690)
Impairment of goodwill	-	-	9,313
Amortization and adjustment of deferred credit	(8,781)	-	-
Other	(673)	(1,019)	(242)
Changes in assets and liabilities:			
Accounts receivable and unbilled, net	(2,898)	(13,727)	337
Prepaid expenses and other current assets	(3,533)	(3,661)	(181)
Accounts payable	4,816	691	2,481
Accrued expenses	(1,313)	4,516	320
Pre-funded study costs	5,292	5,400	9,981
Advanced billings	7,735	14,723	(7,002)
Other assets and liabilities, net	2,782	(841)	(2,306)
Net cash provided by operating activities	97,385	91,732	85,870
CASH FLOWS FROM INVESTING ACTIVITIES:			
Property and equipment expenditures	(11,724)	(13,537)	(6,465)
Acquisition of intangibles	(569)	-	-
Other	56	115	33
Net cash used in investing activities	(12,237)	(13,422)	(6,432)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Payment for common stock issuance costs	-	(2,719)	-
Proceeds from stock option exercises	1,812	537	250
Repurchases of common stock	(155,583)	-	-
Excess tax benefit from stock-based compensation	-	25	-
Proceeds from issuance of debt, net of original issue discount	-	164,506	-
Payment of debt	(12,375)	(390,060)	(116,055)
Proceeds from revolving loan	100,000	-	-
Payments on revolving loan	(30,000)	-	-
Debt issuance costs	-	(1,802)	-
Payment of deemed landlord liability	(1,682)	(1,525)	(1,292)
Payment on debt extinguishment	-	(548)	-
Proceeds from common stock issued, net	-	173,578	608
Net cash used in financing activities	(97,828)	(58,008)	(116,489)
EFFECT OF EXCHANGE RATES ON CASH, CASH EQUIVALENTS, AND RESTRICTED CASH	1,765	(632)	(601)
(DECREASE) INCREASE IN CASH, CASH EQUIVALENTS, AND RESTRICTED CASH	(10,915)	19,670	(37,652)
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH — Beginning of period	37,407	17,737	55,389
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH — End of period	$ 26,492	$ 37,407	$ 17,737
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION—			
Cash paid during the period for income taxes	$ 17,180	$ 17,654	$ 10,552
Cash paid during the period for interest	$ 6,888	$ 16,895	$ 24,435
Acquisition of property and equipment—non-cash	$ 678	$ 1,687	$ 176

See notes to consolidated financial statements.

As of December 31, 2017 and 2016, and for the Years Ended December 31, 2017, 2016 and 2015

1. BASIS OF PRESENTATION

Description of Business

Medpace Holdings, Inc. together with its subsidiaries, ("Medpace" or the "Company"), a Delaware corporation, is a global provider of clinical research-based drug and medical device development services. The Company partners with pharmaceutical, biotechnology, and medical device companies in the development and execution of clinical trials. The Company's drug development services focus on full service Phase I-IV clinical development services and include development plan design, coordinated central laboratory, project management, regulatory affairs, clinical monitoring, data management and analysis, pharmacovigilance new drug application submissions, and post-marketing clinical support. The Company also provides bio-analytical laboratory services, clinical human pharmacology, imaging services, and electrocardiography reading support for clinical trials.

The Company's operations are principally based in North America, Europe, and Asia.

Share Repurchases

In November 2017, the Board members who are not affiliated with Cinven (the "Disinterested Directors") approved an agreement to repurchase 2,000,000 shares of the Company's common stock from Cinven in connection with the Secondary Offering (as described below) for aggregate consideration of approximately $60.3 million, representing a purchase price of $30.16 per share. The Company funded the repurchase with approximately $60.0 million in borrowings under the Senior Secured Revolving Credit Facility and cash on hand.

In August 2017, the Disinterested Directors of the Company approved a stock repurchase agreement with Medpace Limited Partnership, a Guernsey limited partnership (the "Limited Partnership" acting through its general partner, Medpace GP Limited, a Guernsey company, the "General Partner" and, the Limited Partnership acting through the General Partner, "Cinven"), pursuant to which the Company repurchased 2,000,000 shares of the Company's common stock from Cinven for aggregate consideration of approximately $60.5 million, representing a purchase price of $30.27 per share. The Company funded the repurchase with cash on hand and $40.0 million in borrowings under our Senior Secured Revolving Credit Facility.

In April 2017, the Board of the Company authorized a share repurchase program with an authorized repurchase level of $50.0 million. The share repurchase program was cancelled in the fourth quarter of 2017. Repurchases under the repurchase program took place in the open market or negotiated transactions, at the discretion of the Company's management. During the year ended December 31, 2017, the Company repurchased 1,342,786 shares of its outstanding common stock for $34.7 million under this share repurchase program.

The Company has elected to constructively retire all repurchased shares with all amounts paid in excess of Common stock par value reflected within Accumulated deficit in the Company's consolidated balance sheets, except for 200,000 shares, which are reflected within treasury stock in the Company's consolidated balance sheets.

Initial Public Offering

On August 11, 2016, the Company's common stock began trading on the NASDAQ Global Select Market ("NASDAQ") under the symbol "MEDP". On August 16, 2016, the Company completed its initial public offering ("IPO") of its common stock at a price to the public of $23.00 per share. The Company issued and sold 8,050,000 shares of common stock in the IPO, including 1,050,000 common shares issued pursuant to the full exercise of the underwriters' option to purchase additional shares. The IPO raised net proceeds of approximately $173.6 million after deducting underwriting discounts and commissions. As contemplated in the Company's prospectus filed pursuant to Rule 424(b) under the Securities Act of 1933, as amended (the "Securities Act"), with the Securities and Exchange Commission on August 11, 2016, the net proceeds from the IPO, along with cash on hand, were used to

repay $175.0 million of outstanding borrowings under the 2014 Senior Secured Term Loan Facility (as defined below) and $2.7 million of offering expenses.

Secondary Offering

During 2017, Cinven sold a total of 4,600,000 shares of the Company's common stock as part of a secondary offering. The Company incurred professional fees in connection with the secondary offering of $0.4 million during year ended December 31, 2017. The fees are included within operating expenses in the accompanying consolidated statement of operations. As of December 31, 2017, Cinven owned 46.2% of the Company's outstanding common stock.

2. ACQUISITION

In May 2017, the Company acquired out of bankruptcy NephroGenex, Inc. ("Nephrogenex" or the "Debtor"), a publicly-held pharmaceutical company that had previously filed for relief under Chapter 11 of the United States Bankruptcy Code. The Company, which was the largest unsecured creditor of Nephrogenex, entered into an agreement through the bankruptcy process, to exchange its unsecured claim for 100% of the common stock in the post-bankruptcy, debt-free Debtor. The assets of the acquired Debtor consist primarily of tax attributes as well as in-process research and development and other intangible assets. An analysis by the Company determined that substantially all the fair value of the assets on the date of acquisition is captured in the tax attributes, as the intangible assets account for a relatively immaterial portion of the fair market value of the total assets received. The acquisition of the Debtor was accounted for as an asset purchase.

The Company allocated its consideration paid of $1.2 million, consisting of accounts receivable and unbilled receivables and transaction related costs, on a pro rata basis to the assets acquired based on their respective fair values. Acquired assets include intangible assets of $0.5 million, deferred tax assets of $22.2 million, consisting of tax effected net operating losses in the amount of $13.5 million, tax effected capitalized research and development expenses of $8.5 million and tax effected federal tax credits of $0.2 million, and deferred tax liabilities of $0.1 million. The excess amount of fair value received over consideration paid of $21.4 million was recorded as a Deferred credit in the consolidated balance sheets and is recognized within income tax provision in proportion to the realization of the deferred tax assets and federal tax credits prospectively.

During the fourth quarter of the year ended December 31, 2017, the Deferred tax assets and related Deferred credit balances were revalued due primarily to the impact of tax reform. See Note 12 of the Notes to Consolidated Financial Statements for further discussion of the impact of tax reform on our consolidated financial statements.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation and Presentation

The accompanying consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America ("US GAAP") and include the accounts and operations of the Company and its subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ from these estimates.

Significant items that are subject to management estimates and assumptions include service revenue, net, allowances for doubtful accounts, acquisition purchase price allocations, long-lived asset impairment and useful lives, exit liabilities, stock-based compensation, uncertain income tax positions and contingencies.

Reportable Segments

The Company emphasizes its full service outsourcing model, providing services focused on the development, management and execution of clinical trials. As part of this full service approach, the Company utilizes centralized systems, customer interface technology, support functions and processes that cross service offerings and align resources to deliver efficient clinical trial services. Given the full service approach, the chief executive officer, who is the chief operating decision maker ("CODM") assesses the allocation of resources based on key metrics including revenue, backlog, and net awards by service offering and consolidated profitability and consolidated cash flows. Based on the Company's full service model, internal management and reporting structure, and key metrics used by the CODM to make resource allocation decisions, management has determined that the Company's operations consist of a single operating segment. Therefore, results of operations are presented as a single reportable segment.

Foreign Currencies

Assets and liabilities recorded in foreign currencies on foreign subsidiary financial statements are translated at the exchange rate on the balance sheet date, while equity accounts are translated at historical exchange rates. Revenue and expenses are recorded at average rates of exchange during the year. Translation adjustments are recorded to Accumulated other comprehensive loss in the consolidated statements of shareholders' equity and consolidated statements of comprehensive (loss) income.

Separately, net realized gains and losses on foreign currency transactions are included in Miscellaneous expense, net, on the consolidated statements of operations. Foreign currency transactions resulted in net losses of $1.0 million, $0.7 million and $1.3 million during the years ended December 31, 2017, 2016 and 2015, respectively.

Revenue Recognition

The Company generally enters into contracts with customers to provide services ranging in duration from a few months to several years. The contract terms generally provide for payments based on a fixed fee or unit-of-service arrangement. Revenue on these arrangements is recognized when there is persuasive evidence of an arrangement, the service offering has been delivered to the customer, the arrangement consideration is determinable and the collection of the fees is reasonably assured.

The Company recognizes revenue for services provided on fixed fee arrangements based on the proportional performance methodology, which is determined by assessing the proportion of performance completed or delivered to date compared to total specific measures to be delivered or completed under the terms of the arrangement. The measures utilized to assess performance are specific to the service provided, and the Company generally compares the ratio of hours completed to the total estimated hours necessary to complete the contract. A detailed project budget by hours is developed based on many factors, including but not limited to the scope of the work, the complexity of the study, the participating geographic locations, and the Company's historical experience. Management believes the reporting and estimation of hours is the best available measure of progress on many of the services provided and best reflects the pattern in which obligations to customers are fulfilled. To assist with the estimation of hours expected to complete a project, regular contract reviews for each project are performed in which performance to date is compared to the most current estimate to complete assumptions. The reviews include an assessment of effort incurred to date compared to expectations based on budget assumptions and other circumstances specific to the project. The total estimated hours necessary to complete a fixed-fee contract, based on these reviews, are updated and any revisions to the existing hours budget result in cumulative adjustments to the amount of revenue recognized in the period in which the revisions are identified.

Fixed-fee contracts provide for pricing modifications upon scope of work changes. The Company recognizes revenue related to work performed in connection with scope changes when the underlying services are performed, a binding contractual commitment has been executed with the customer and collectability is reasonably assured. Costs are not deferred in anticipation of contracts being awarded or amendments being finalized, but are expensed as incurred.

For unit-of-service arrangements, the Company recognizes revenue in the period in which the unit is delivered. Service unit elements largely consist of various project management, consulting and analytical testing services.

Many contractual arrangements combine multiple service elements. For these contracts, arrangement consideration is allocated to identified units of account based on the relative selling price of each unit of account. The best evidence of selling price of a unit of account is vendor specific objective evidence ("VSOE"), which is the price charged when the deliverable is sold separately. When VSOE is not available to determine selling price, management uses relative third party evidence, if available. When neither VSOE nor third party evidence of selling price exists, management uses its best estimate of selling price considering all relevant information that is available.

Most contracts are terminable by the customer, either immediately or according to advance notice terms specified within the contracts. These contracts require payment of fees to the Company for services rendered through the date of termination and may require payment for subsequent services necessary to conclude the study or close out the contract. Final settlement amounts are agreed upon with the customer and included in Service revenue, net when realization is reasonably assured.

The Company occasionally enters into volume rebate arrangements with customers that provide for rebates if certain specified spending thresholds are met. These rebate obligations are recorded as a reduction of revenue when it appears probable that the customer will earn the rebates and the related amount is estimable. Service revenue is presented net of rebates of $0.2 million, less than $0.1 million and $0.1 million in the consolidated statements of operations during the years ended December 31, 2017, 2016 and 2015, respectively.

The Company records revenue net of any tax assessments by governmental authorities that are imposed and concurrent with specific revenue generating transactions.

Concentration of Credit Risk

Financial instruments that subject the Company to credit risk primarily consist of cash and cash equivalents and accounts receivable. The cash and cash equivalent balances are held and maintained with financial institutions with reputable credit ratings and, consequently, the Company believes that such funds are subject to minimal credit risk.

The Company generally does not require collateral or other securities to support customer receivables. In the years ended December 31, 2017, 2016 and 2015, credit losses have been immaterial and within management's expectations. At December 31, 2017 and 2016, there were no customers accounting for more than 10% of the Company's accounts receivable.

Costs and Expenses

Direct costs, excluding depreciation and amortization, include direct labor and related employee benefits, laboratory supplies, and other expenses contributing to service delivery. Direct costs, excluding depreciation and amortization, are expensed as incurred and are not deferred in anticipation of contracts being awarded or finalization of changes in scope. Selling, general and administrative includes administrative payroll and related employee benefits, sales and marketing expenses, administrative travel, and other expenses not directly related to service delivery. Rent, utilities, supplies, and software license expenses are allocated between Direct costs, excluding depreciation and amortization, and Selling, general and administrative based on the estimated contribution among service delivery and support function efforts on a percentage basis. Depreciation and amortization is reported separately in the accompanying consolidated statements of operations. Costs of sales and marketing activities not subject to recovery pursuant to customer contracts, such as feasibility assessments and negotiation of contracts, are expensed as incurred and recorded as a component of Selling, general and administrative in the accompanying consolidated statements of operations.

Advertising expenses are recorded as a component of Selling, general and administrative expenses in the accompanying consolidated statements of operations. Total advertising expenses of $0.6 million, $0.6 million and $0.4 million were incurred during the years ended December 31, 2017, 2016 and 2015, respectively.

Reimbursed Out-of-Pocket Expenses

The Company incurs on behalf of its customers various out-of-pocket expenditures including, but not limited to, travel, meetings, printing, and shipping and handling fees, which are reflected as a separate component of operating expenses and recorded in Reimbursed out-of-pocket expenses in the accompanying consolidated statements of operations. Reimbursements received are reflected in Reimbursed out-of-pocket revenue without mark-up or profit in the consolidated statements of operations.

Fees paid to investigators and other disbursements in which the Company acts as an agent on behalf of the customer are recorded net in the consolidated statements of operations with no impact on the Company's revenue or expenses. Funds received in advance of study expenditures are recorded as Pre-funded study cost liabilities on the consolidated balance sheets. Any pre-funded amounts remaining at the conclusion of a study are returned to the client. Pre-funded study cost disbursements of $138.7 million, $150.3 million and $114.4 million were made during the years ended December 31, 2017, 2016 and 2015, respectively.

Income Taxes

The Company's consolidated U.S. federal income tax return is comprised of its U.S. subsidiaries and one of its foreign subsidiaries located in Korea. All foreign subsidiaries of the Company file tax returns in their local jurisdictions.

The Company provides for income taxes on all transactions that have been recognized in the consolidated financial statements in accordance with accounting guidance governing income tax accounting. Accordingly, the impact of changes in income tax laws on deferred tax assets and deferred tax liabilities are recognized in net earnings in the period during which such changes are enacted.

The Company records deferred tax assets and liabilities based on temporary differences between the financial statement bases and tax bases of assets and liabilities. Deferred tax assets are recorded for tax benefit carryforwards using tax rates anticipated to be in effect in the year in which the temporary differences are expected to reverse. If it does not appear more likely than not that the full value of a deferred tax asset will be realized, the Company records a valuation allowance against the deferred tax asset, with an offsetting charge to the Company's income tax provision or benefit. The value of the Company's deferred tax assets is estimated based on, among other things, the Company's ability to generate a sufficient level of future taxable income. In estimating future taxable income, the Company has considered both positive and negative evidence, such as historical and forecasted results of operations, and has considered the implementation of prudent and feasible tax planning strategies.

The Company's current accounting position is that unremitted foreign earnings are indefinitely reinvested. The Company has accrued a provisional Transition Tax on the deemed repatriated earnings that were previously indefinitely reinvested. We will continue to monitor our assertion related to investment of foreign earnings and how this assertion may be impacted by the "Tax Cuts and Jobs Act" (TCJA). See Note 12 for further information regarding how this assertion could be impacted by the TCJA.

The Company follows accounting guidance related to accounting for uncertainty in income taxes which requires significant judgment in determining what constitutes an individual tax position as well as assessing the possible outcome of each tax position. Changes in judgments as to recognition or measurement of tax positions can materially affect the estimate of the effective tax rate, and, consequently, the Company's consolidated financial results. The Company considers many factors when evaluating and estimating tax positions and tax benefits, which may require periodic adjustments and which may not accurately anticipate actual outcomes. In addition, the calculation of tax liabilities involves dealing with uncertainties in the application of complex tax regulations in a multitude of jurisdictions. The Company determines its liability for uncertain tax positions globally. If the payment of these amounts ultimately proves to be unnecessary, the reversal of liabilities would result in tax benefits being recognized in the period when it is determined the liabilities are no longer necessary. If the calculation of the liability related to uncertain tax positions proves to be more or less than the ultimate assessment, a tax expense or tax benefit would result. Interest and penalties associated with uncertain tax positions are recognized as components of the Company's Income tax provision.

Research and Development Credits

Research and development credits are available to the Company under tax laws in certain jurisdictions, based on qualifying research and development spend as defined under those tax laws. Certain tax jurisdictions provide refundable credits that are not wholly dependent on the Company's income tax status or income tax position. In these circumstances the benefit of the credits is recorded as a reduction of operating expense. When they are wholly dependent upon the Company's income tax position, research and development credits are recognized as a reduction of income tax expense.

Stock-Based Compensation

The Company has stock-based employee compensation plans for which it incurs compensation expense.

Equity Awards

In connection with the Company's IPO, the Board approved the formation of the 2016 Incentive Award Plan (the "2016 Plan"), which replaced our 2014 Equity Incentive Plan (the "2014 Plan"). The 2016 Plan provides for long-term equity incentive compensation for key employees, officers and non-employee directors. A variety of discretionary awards (collectively, the "Awards") for employees and non-employee directors are authorized under the 2016 Plan, including vested common shares, stock options, stock appreciation rights ("SARs"), restricted stock awards ("RSAs"), restricted stock units ("RSUs"), or other cash based or stock dividend equivalent awards. The vesting of such awards may be conditioned upon either a specified period of time or the attainment of specific performance goals as determined by the administrator of the 2016 Plan. The option price and term are also subject to determination by the administrator with respect to each grant. Option prices are generally expected to be set at the market price of our common stock at the date of grant and option terms are not expected to exceed ten years. All outstanding Awards under the 2016 Plan are equity classified awards.

The Company created the 2014 Plan, providing for the future issuance of vested shares, stock options, RSAs and RSUs in Medpace Holdings, Inc.'s common stock (the "2014 Plan Awards"). The 2014 Plan Awards were subject to either equity or liability-classification pursuant to the terms of the participant's award agreement and the 2014 Plan based on accounting guidance which governs such transactions.

Stock-based compensation expense for both the 2016 Plan and 2014 Plan is calculated using the fair value method on the grant date. The Company expenses stock-based compensation using a graded vesting schedule.

For liability-classified awards under the 2014 Plan, the Company recorded fair value adjustments up to and including the settlement date. Changes in the fair value of the stock compensation liability that occurred during the requisite service period were recognized as compensation cost over the vesting period. Changes in the fair value of the stock compensation liability that occurred after the end of the requisite service period but before settlement, were compensation cost of the period in which the change occurred.

As a result of the Company's IPO, a condition of all outstanding stock options issued before August 10, 2016 under the 2014 Plan that previously required the exchange of the shares issued for incentive units in the equity of a non-consolidated related party was dissolved. All future exercises of options issued pursuant to the 2014 Plan will settle in unregistered shares of the Company. As a result of the modification in the settlement condition, the options are equity-classified instruments and changes in the fair value of the stock compensation liability that occur during the requisite service period are no longer recognized.

Stock-based compensation expense is allocated between Direct costs, excluding depreciation and amortization, and Selling, general and administrative in the consolidated statements of operations based on the underlying classification and scope of work for the employees receiving the Awards.

Net Income (Loss) Per Share

Basic and diluted earnings or loss per share ("EPS") are computed using the two-class method, which is an earnings allocation that determines EPS for each class of common stock and participating securities according to dividends

declared and participation rights in undistributed earnings. The Company's RSAs are considered participating securities because they are legally issued at the date of grant and holders are entitled to receive non-forfeitable dividends during the vesting term.

The computation of diluted EPS includes additional common shares, such as unvested RSUs and stock options with exercise prices less than the average market price of the Company's common stock during the period ("in-the-money options"), which would be considered outstanding under the treasury stock method. The treasury stock method assumes that additional shares would have to be issued in cases where the exercise price of stock options is less than the value of the common stock being acquired because the cash proceeds received from the stock option holder would not be sufficient to acquire that same number of shares. The Company does not compute diluted EPS in cases where the inclusion of such additional shares would be anti-dilutive in effect.

The following table sets forth the computation of basic and diluted earnings per share for the years ended December 31, 2017, 2016 and 2015 (in thousands, except for earnings per share):

	Year Ended December 31,		
	2017	2016	2015
Weighted-average shares:			
Common shares outstanding	39,056	35,690	31,346
RSAs	90	88	-
Total weighted-average shares	39,146	35,778	31,346
Earnings per common share—Basic			
Net income (loss)	$ 39,122	$ 13,425	$ (8,673)
Less: Undistributed earnings allocated to RSAs	90	33	-
Net income (loss) available to common shareholders—Basic	$ 39,032	$ 13,392	$ (8,673)
Net income (loss) per common share—Basic	$ 1.00	$ 0.38	$ (0.28)
Basic weighted-average common shares outstanding	39,056	35,690	31,346
Effect of diluted shares	783	639	-
Diluted weighted-average shares outstanding	39,839	36,329	31,346
Net income (loss) per common share—Diluted	$ 0.98	$ 0.37	$ (0.28)

For the years ended December 31, 2017, 2016 and 2015, the computation of diluted EPS excludes the effect of (in thousands) 0, 0 and 660 combined RSAs and RSUs, and 63, 0 and 1,794 stock options, respectively, due to the Company's net loss position as well as each respective period's average fair value of the Company's common stock not exceeding the exercise prices.

Fair Value Measurements

The Company follows accounting guidance related to fair value measurements that defines fair value, establishes a framework for measuring fair value, and establishes a hierarchy for inputs used in measuring fair value. This hierarchy maximizes the use of "observable" inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. The hierarchy specifies three levels based on the inputs, as follows:

Level 1: Valuations based on quoted prices in active markets for identical assets or liabilities.

Level 2: Valuations based on directly observable inputs or unobservable inputs corroborated by market data.

Level 3: Valuations based on unobservable inputs supported by little or no market activity representing management's determination of assumptions of how market participants would price the assets or liabilities.

The fair value of financial instruments such as cash and cash equivalents, accounts receivable and unbilled, net, accounts payable, accrued expenses, and advanced billings approximate their carrying amounts due to their short term maturities.

The Company does not have any recurring fair value measurements as of December 31, 2017. There were no transfers between Level 1, Level 2, or Level 3 during the years ended December 31, 2017, 2016 and 2015.

Cash and Cash Equivalents, including Restricted Cash

Cash and cash equivalents, including restricted cash, are invested in demand deposits, all of which have an original maturity of three months or less. Restricted cash consists of customer funds received in advance and subject to specific restrictions, as well as amounts placed in escrow for contingent payments resulting from acquisitions or other contractual arrangements.

Accounts Receivable and Unbilled, Net

Accounts receivable represent amounts due from the Company's customers who are concentrated primarily in the pharmaceutical, biotechnology, and medical device industries. Unbilled services represent service revenue recognized to date that is currently not billable to the customer pursuant to contractual terms. In general, amounts become billable upon the achievement of negotiated contractual events or in accordance with predetermined payment schedules. Amounts classified to unbilled services are those billable to customers within one year from the respective balance sheet date.

The Company grants credit terms to its customers prior to signing a service contract and monitors the creditworthiness of its customers on an ongoing basis. The Company maintains an allowance for doubtful accounts based on specific identification of accounts receivable that are at risk of not being collected. Uncollectible accounts receivable are written off only after all reasonable collection efforts have been exhausted. Moreover, in some cases the Company requires advance payment from its customers for a portion of the study contract price upon the signing of a service contract. These advance payments are deferred and recognized as revenue as services are performed.

Inventory

Inventory, which consists primarily of laboratory supplies, is valued at the lower of cost or market. Inventory is stated at purchased cost using the first-in, first out (FIFO) cost method. The inventory balance is included in Prepaid expenses and other current assets in the consolidated balance sheets.

Property and Equipment

Property and equipment is recorded at cost. Depreciation is provided on the straight-line method at rates adequate to allocate the cost of the applicable assets over their estimated useful lives, which is three to five years for computer hardware, software, phone, and medical imaging equipment, five to seven years for furniture and fixtures and other equipment, and thirty to forty years for buildings. The Company capitalizes costs of computer software developed for internal use and amortizes these costs on a straight-line basis over the estimated useful life, not to exceed three years. Leasehold improvements and deemed assets from landlord building construction are capitalized and amortized on a straight-line basis over the shorter of the estimated useful life of the improvement or the associated remaining lease term. Repairs and maintenance are expensed as incurred.

Leases

The Company leases facilities and equipment to be used in its operations, some of which require capitalization in accordance with US GAAP. Upon the execution of new leases, the Company determines the appropriate

classification of the lease as operating or capital and reflects the impact of this classification in its consolidated financial statements.

Goodwill and Intangible Assets

Goodwill

Goodwill represents the excess of purchase price over the fair value of net assets acquired in business combinations. The carrying value of goodwill is reviewed at least annually for impairment, or as indicators of potential impairment are identified, at the reporting unit level. The reporting units are Phase II-IV clinical research services, Laboratories, and Clinics as of December 31, 2017.

The Company performs its annual impairment tests during the fourth quarter each year, utilizing the quantitative two step model defined by accounting guidance which governs such assessments. The first step involves the Company comparing each of its reporting unit carrying values, inclusive of assigned goodwill, to their respective estimated fair values. Fair value is estimated using a combination of the income approach, a discounted cash flow analysis, and the market approach, utilizing the guideline company method.

If the calculation in the first step results in any of the reporting units' carrying values exceeding their respective estimated fair values, a second step is performed. The second step requires the Company to allocate the fair value of the reporting unit derived in the first step to the fair value of the reporting unit's net assets. Any fair value in excess of amounts allocated to such net assets represent the implied fair value of goodwill for that reporting unit. Any excess of reporting unit carrying value of goodwill over the implied fair value of goodwill results in an impairment. There was no indication of impairment related to goodwill based on the fourth quarter 2017 assessment.

Intangible Assets

The Company has an indefinite lived intangible asset related to its trade name. The carrying value of the trade name asset is reviewed at least annually for impairment, or as indicators of potential impairment are identified. The Company performs its annual impairment test in the fourth quarter each year in conjunction with its annual assessment of goodwill. The assessment consists of comparing the carrying value of the indefinite lived intangible asset to its estimated fair value, utilizing the relief from royalty method, an income approach valuation. There was no indication of impairment related to the trade name asset based on the fourth quarter 2017 assessment.

Finite-lived intangible assets consist mainly of the value assigned to customer relationships, backlog and developed technologies. Finite-lived intangible assets are amortized straight-line or using an accelerated method over their estimated useful lives, which range in term from seventeen months to fifteen years.

Impairment of Long-Lived Assets

Long-lived assets, primarily property and equipment and finite-lived intangible assets, are reviewed for impairment and the reasonableness of the estimated useful lives whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be recoverable or that a change in useful life may be appropriate. Recoverability for long-lived assets is determined by comparing the forecasted undiscounted cash flows of the operation to which the assets relate to the carrying amount of the assets. If the undiscounted cash flows are less than the carrying amount of the assets, then the Company reduces the carrying value of the assets to estimated fair values, which are primarily based upon forecasted discounted cash flows. Fair value of long-lived assets is determined based on a combination of discounted cash flows and market multiples.

Advanced Billings

Advanced billings represents cash received from customers, or billed amounts per an agreed upon payment schedule, in advance of services being performed or revenue being recognized.

Deemed Landlord Liabilities

Deemed landlord liabilities are recorded at their net present value when the Company enters into qualifying leases and are reduced as the Company makes periodic lease payments on the properties.

Deferred Credit

Deferred credit represents tax credits recognized initially in conjunction with the Nephrogenex asset acquisition that will be recognized within Income tax provision in proportion to the realization of the deferred tax assets and federal tax credits prospectively.

Other Current Liabilities and Other Long-Term Liabilities

Deferred rent represents the cumulative additional portion of rent expense recognized on a straight line basis in conjunction with the Company's current leases at the balance sheet date. The Company defers incentives received from landlords for the purpose of making leasehold improvements. These liabilities are amortized as a component of rent expense over the term of the respective lease.

Exit liabilities, if any exist, are recorded at their net present value to the extent the Company no longer receives any benefit from the related property and when the Company has ceased all use of the property.

Asset retirement obligations, to the extent they exist, are recorded at their net present value and accreted to the Company's estimate of liability at the time the obligation would be required to be satisfied.

Recently Adopted Accounting Standards

In January 2017, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2017-01, Business Combinations. The standard changes the definition of a business to assist entities with evaluating when a set of transferred assets and activities is a business. Under the new guidance, an entity first determines whether substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or a group of similar identifiable assets. If this threshold is met, the set is not a business. If it's not met, the entity then evaluates whether the set meets the requirement that a business include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs. ASU 2017-01 is effective for fiscal years beginning after December 15, 2017, and for interim periods within those fiscal years. The Company, as permitted, early adopted ASU 2017-01 using the prospective method in the second quarter of 2017. ASU 2017-01 was considered in the asset acquisition described in Note 2.

In March 2016, the FASB issued ASU No. 2016-09, *Compensation - Stock Compensation: Improvements to Employee Share-Based Payment Accounting*. The new guidance is intended to simplify certain aspects of accounting for share based payments to employees, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. The Company elected to adopt this ASU in the first quarter of 2017 as required. The following summarizes the effects of the adoption on the Company's consolidated financial statements:

- *Income taxes* - Upon adoption of this standard, all excess tax benefits and tax deficiencies (including tax benefits of dividends, if distributed, on share-based payment awards) are recognized as income tax expense or benefit in the statement of operations. The tax effects of exercised or vested awards are treated as discrete items in the reporting period in which they occur. As a result, the Company recognized discrete adjustments to income tax expense for the year ended December 31, 2017 of less than $0.1 million related to excess tax benefits. The Company also recognizes excess tax benefits regardless of whether the benefit reduces taxes payable in the current period. The Company applied the prospective adoption approach for any unrecognized excess tax benefits beginning in 2017, which did not result in any cumulative-effect adjustment upon adoption. Prior periods have not been adjusted.
- *Forfeitures* - Prior to adoption, share-based compensation expense was recognized on a straight line basis, net of estimated forfeitures, such that expense was recognized only for share-based awards that were expected to vest. A forfeiture rate was estimated annually and revised, if necessary, in subsequent periods if

actual forfeitures differed from initial estimates. Upon adoption, the Company no longer applies a forfeiture rate and instead accounts for forfeitures as they occur. The Company applied the modified retrospective adoption approach beginning in 2017 and booked an immaterial cumulative-effect adjustment to additional paid-in-capital and retained earnings within Shareholders' Equity. Prior periods have not been adjusted.

- *Statements of Cash Flows* - The Company historically accounted for excess tax benefits on the consolidated statements of cash flows as a financing activity. Upon adoption of this standard, excess tax benefits are classified along with other income tax cash flows as an operating activity. The Company elected to adopt this portion of the standard on a prospective basis beginning in 2017. Prior periods have not been adjusted.
- *Earnings Per Share* - The Company uses the treasury stock method to compute diluted earnings per share, unless the effect would be anti-dilutive. Under this method, the Company is no longer required to estimate the tax rate and apply it to the dilutive share calculation for determining the dilutive earnings per share. The Company utilized the prospective adoption approach and applied this methodology beginning in 2017. Prior periods have not been adjusted.

Upon adoption, no other aspects of ASU 2016-09 had an effect on the Company's consolidated financial statements or related footnote disclosures.

Recently Issued Accounting Standards

In February 2016, the FASB issued ASU 2016-02, Leases *(Topic 842)*. The guidance in ASU 2016-02 supersedes the lease recognition requirements in ASC Topic 840, *Leases (FAS 13)*. ASU 2016-02 requires an entity to recognize assets and liabilities arising from a lease for both financing and operating leases, along with additional qualitative and quantitative disclosures. ASU 2016-02 will be applied on a modified retrospective basis to each prior reporting period presented and is effective for fiscal years beginning after December 15, 2018, with early adoption permitted. The Company is currently evaluating the effect this standard will have on its consolidated financial statements.

In May 2014, the FASB issued ASU No. 2014-09 ‘‘Revenue from Contracts with Customers,’’ to clarify the principles of recognizing revenue and create common revenue recognition guidance between US GAAP and International Financial Reporting Standards. In March 2016, the FASB issued ASU 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net). In April 2016, the FASB issued ASU 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing. In May 2016, the FASB issued ASU 2016-12, Narrow-Scope Improvements and Practical Expedients. In December 2016, the FASB issued ASU 2016-20 Technical Corrections and Improvements to Topic 606, Revenue From Contracts with Customers. ASUs' 2016-20, 2016-12, 2016-10 and 2016-08 all clarify the interpretation guidance in ASU No. 2014-09, "Revenue from Contracts with Customers" specifically related to narrowing specific aspects of Topic 606 and adding illustrative examples to assist in the application of the guidance. The effective date and transition requirements in ASUs' 2016-20, 2016-12, 2016-10, and 2016-08 are the same as the effective date and transition requirements of ASU 2014-09. ASU 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date, deferred the original effective date of ASU 2014-09 by one year. The new standard allows for either a retrospective or modified retrospective approach to transition upon adoption. The new standard will be effective for annual reporting periods beginning after December 15, 2017.

The Company continues to evaluate the potential impact of adopting this standard on its business policies, processes and systems, internal control over financial reporting environment, and financial reporting disclosures.

The Company expects that the majority of its contracts will have a single performance obligation that is satisfied over time, with revenue recognized based on overall project progress measured as of the financial statement date. This represents a change in the Company's current revenue accounting methodology as a majority of contracts are accounted for with multiple units of account under the multiple element arrangement guidance. Under the current accounting methodology, certain revenue related to reimbursable expenses is presented either as a separate line item within Reimbursable out-of-pocket revenue or net of related expenses within Service revenue, net in the consolidated statements of operations. As a result of having a single performance obligation, the Company

anticipates that all revenue related to reimbursable expenses will prospectively be accounted for gross within a single revenue line item with related expenses presented gross within Direct Costs, excluding depreciation and amortization. Measurement of progress on contracts with customers will generally be based on the input measurement of cost incurred relative to the total expected costs to satisfy the performance obligation. The inclusion of reimbursable costs in the measurement of progress under these contracts as part of one performance obligation may create a timing difference between the amounts the Company is entitled to receive in reimbursement for costs incurred and the amount of revenue recognized related to such costs on individual projects.

The Company will adopt ASU 2014-09 as well as the clarified guidance in ASUs' 2016-20, 2016-12, 2016-10, 2016-08, utilizing the modified retrospective approach, during the first quarter of 2018. The Company is finalizing its assessment and will record a cumulative-effect adjustment to retained earnings upon adoption.

4. ACCOUNTS RECEIVABLE AND UNBILLED, NET

Accounts receivable and unbilled, net includes service revenue and reimbursed out-of-pocket revenue. Accounts receivable and unbilled, net consisted of the following at December 31 (in thousands):

	2017	2016
Accounts receivable	$ 55,599	$ 48,270
Unbilled	28,153	34,719
Less allowance for doubtful accounts	(673)	(3,222)
Total accounts receivable and unbilled, net	$ 83,079	$ 79,767

A rollforward of allowance for doubtful account activity is as follows:

	Year Ended December 31,		
	2017	2016	2015
Allowance for doubtful accounts - beginning balance	$ (3,222)	$ (1,724)	$ (5,855)
Current year provision	(250)	(2,166)	(642)
Write-offs, recoveries and the effects of foreign currency exchange	2,799	668	4,773
Allowance for doubtful accounts - ending balance	$ (673)	$ (3,222)	$ (1,724)

5. PROPERTY AND EQUIPMENT, NET

Property and equipment, net consisted of the following at December 31 (in thousands):

	2017	2016
Land	$ 972	$ 543
Equipment	12,171	10,094
Furniture, fixtures, and leasehold improvements	21,280	15,415
Computer hardware, software, and phone equipment	9,571	7,535
Buildings	2,559	2,253
Deemed assets from landlord building construction	22,752	22,752
Construction-in-progress	5,554	2,840
Property and equipment at cost	74,859	61,432
Less: Accumulated depreciation	(26,120)	(17,627)
Property and equipment, net	$ 48,739	$ 43,805

Depreciation expense, which includes amortization from capital leases, was $8.6 million and $7.4 million for the years December 31, 2017 and 2016, respectively.

In 2011, Medpace, Inc. entered into two multi-year lease agreements governing the future occupancy of additional office space in Cincinnati, Ohio. The Company assumed occupancy of both spaces during 2012 and began making lease payments at that time. The leases expire in 2027 and the Company has one 10-year option to extend the term of the leases.

In accordance with the accounting guidance related to leases, the Company was deemed in substance to be the owner of the property during the construction phase. The accounting guidance requires that a lessee be considered the owner of a real estate project during the construction period if a related party of the lessee is an owner of the real estate. Given that a related party of Medpace made an equity investment in the lessor, Medpace was considered the owner of the property for accounting purposes during the buildings' construction. Accordingly, the Company reflected the building and related liabilities as Deemed assets from landlord building construction ("Deemed Assets") and Deemed landlord liabilities, respectively in the consolidated balance sheets. The Deemed Assets are being fully depreciated, on a straight line basis, over the 15-year term of the lease.

6. GOODWILL AND INTANGIBLE ASSETS

Goodwill

The changes in the carrying amount of goodwill are as follows (in thousands):

Balance as of December 31, 2015	$	660,981
Impairment of Goodwill		-
Balance as of December 31, 2017 and 2016	$	660,981

The annual impairment test performed in the fourth quarter of 2015 resulted in an impairment charge of $9.3 million related to the Company's Clinics reporting unit. The 2015 goodwill impairment charge represents the total accumulated goodwill impairment losses recognized to date on existing goodwill through December 31, 2017.

Total assets carried on the balance sheet and not remeasured to fair value on a recurring basis, identified as Level 3 measurements, as of December 31, 2017 are $692.6 million, comprised of $661.0 million of goodwill and $31.6 million of identified indefinite-lived intangible assets.

Intangible Assets, Net

Intangible assets, net consisted of the following at December 31 (in thousands):

	2017	2016
Intangible assets:		
Finite-lived intangible assets:		
Carrying amount:		
Backlog	$ 72,630	$ 72,630
Customer relationships	145,051	145,051
Developed technologies	54,475	54,475
Other	3,074	2,505
Total finite-lived intangible assets	275,230	274,661
Accumulated amortization:		
Backlog	(72,630)	(72,630)
Customer relationships	(92,661)	(66,267)
Developed technologies	(40,856)	(29,961)
Other	(1,989)	(1,378)
Total accumulated amortization	(208,136)	(170,236)
Total finite-lived intangible assets, net	67,094	104,425
Trade name (indefinite-lived)	31,646	31,646
Total intangible assets, net	$ 98,740	$ 136,071

As of December 31, 2017, estimated amortization expense of the Company's intangible assets for each of the next five years and thereafter is as follows (in thousands):

2018	$ 29,561
2019	14,829
2020	7,876
2021	5,114
2022	3,353
Later years	6,361
	$ 67,094

7. ACCRUED EXPENSES

Accrued expenses consisted of the following at December 31 (in thousands):

	2017	2016
Employee compensation and benefits	$ 19,707	$ 21,453
Other	3,966	2,964
Total accrued expenses	$ 23,673	$ 24,417

8. DEBT

Debt consisted of the following at December 31 (in thousands):

	2017	2016
Revolving credit facility	$ 70,000	$ -
Term loan	152,625	165,000
Less unamortized discount	(399)	(534)
Less unamortized term loan debt issuance costs	(615)	(824)
Less current portion of long-term debt	(16,500)	(12,375)
Long-term debt, net, less current portion	$ 205,111	$ 151,267

Principal payments on debt are due as follows (in thousands):

2018	16,500
2019	16,500
2020	20,625
2021	169,000
Total	$ 222,625

The estimated fair value of the Company's debt based on Level 2 inputs using the market approach, which is primarily based on rates at which the debt is traded among financial institutions, approximates carrying value as of December 31, 2017 and 2016, respectively.

2016 Credit Agreement

On December 8, 2016 (the "Closing Date"), Medpace IntermediateCo, Inc., as borrower (the "Borrower"), and Medpace Acquisition, Inc., a wholly-owned subsidiary of Medpace Holdings, Inc. (the "Company"), as parent guarantor (the "Parent Guarantor"), entered into a credit agreement (the "Senior Secured Credit Agreement") consisting of a $165.0 million term loan (the "Senior Secured Term Loan Facility") issued at 99.7% and a $150.0 million revolving credit facility (the "Senior Secured Revolving Credit Facility" and, together with the Senior Secured Term Loan Facility, the "Senior Secured Credit Facilities"). The Senior Secured Term Loan Facility and Senior Secured Revolving Credit Facility expire in December 2021.

The Senior Secured Credit Facilities provide for, at the Company's option, interest at the Eurocurrency rate or Base rate for the Senior Secured Term Loan Facility and the Senior Secured Revolving Credit Facility borrowings. The Company, at its discretion, may choose interest periods of one, two, three or six months, which determines the interest rate to be applied. Interest on Eurocurrency loans continues to be payable at the end of the selected Eurocurrency term and interest on Base rate loans are payable quarterly in conjunction with any required principal payments.

Borrowings under the Senior Secured Credit Facilities bear interest at a rate equal to, at our option, either (i) the adjusted Eurocurrency rate based on LIBOR for U.S. dollar deposits for loans denominated in dollars, EURIBOR for Euro deposits for loans denominated in Euros and the offer rate for any other currencies for loans denominated in such other currencies for the relevant interest period plus an applicable margin from 1.25% to 2.25% based on the total net leverage ratio from less than 1.50:1.00 to greater than 3.75:1:00, or (ii) an alternative base rate (determined by reference to the highest of (a) the prime commercial lending rate of the administrative agent, as established from time to time, (b) the Federal Funds Rate plus 0.50% and (c) the one-month adjusted Eurocurrency rate for loans in U.S. dollars plus 1.00%) plus an applicable margin from 0.25% to 1.25% based on the total net leverage ratio from less than 1.50:1.00 to greater than 3.75:1:00. The applicable margin as of December 31, 2017 was 1.25% for

eurocurrency loans and 0.25% for base rate loans. The Company may voluntarily prepay outstanding loans under the Senior Secured Credit Facilities without premium or penalty. As of December 31, 2017, the interest rate applicable on the term loan was the Eurocurrency interest rate of 2.82%.

In addition, the Company is required to pay to the lenders a commitment fee on a quarterly basis at an annual rate of 0.375% of the unused borrowings under the Senior Secured Revolving Credit Facility for the first full fiscal quarter after the closing date, and thereafter 0.50% if the total net leverage ratio is greater than or equal to 3.00:1.00, or 0.375% if the total net leverage ratio is less than 3.00:1.00. At December 31, 2017 and 2016, respectively, the Company had $70.0 million and no outstanding borrowings under the Senior Secured Revolving Credit Facility, resulting in $80.0 million and $150.0 million in undrawn capacity available under the Senior Secured Revolving Credit Facility. As of December 31, 2017, the interest rate applicable on the Senior Secured Revolving Credit Facility was the Eurocurrency interest rate of 2.82%. In addition, the Company had $0.3 million and $0.1 million in letters of credit outstanding, which are secured by the Senior Secured Revolving Credit Facility at December 31, 2017 and 2016.

The original issue discount of $0.5 million related to the issuance of the Senior Secured Term Loan Facility was recorded as a reduction of the underlying debt issuances within Long-term debt, net, less current portion and is being amortized over the life of the debt using the effective-interest method. The unamortized portion of the discount related to the Senior Secured Term Loan Facility was $0.4 million and $0.5 million as of December 31, 2017 and 2016, respectively. Per the terms of the Senior Secured Credit Term Loan Facility, principal is scheduled to be paid quarterly on the last business day of March, June, September and December of each year, beginning March 2017.

Origination fees of $0.8 million related to the Senior Secured Term Loan Facility were recorded as a reduction of the underlying debt issuances in Long-term debt, net. These fees are being amortized over the life of the debt using the effective-interest method. The unamortized portion of the origination fees related to the Senior Secured Term Loan Facility was $0.6 million and $0.8 million at December 31, 2017 and 2016, respectively. Origination fees of $1.6 million related to the Senior Secured Revolving Credit Facility were originally capitalized as a component of Other assets. These fees are being amortized over the life of the debt using the effective-interest method. The unamortized portion of the origination fees related to the Senior Secured Revolving Credit Facility was $1.3 million and $1.6 million at December 31, 2017 and 2016, respectively.

The Senior Secured Credit Facilities are guaranteed by the Parent Guarantor and its material, direct or indirect wholly owned domestic subsidiaries, with certain exceptions, including where providing such guarantees is not permitted by law, regulation or contract or would result in adverse tax consequences. The Senior Secured Credit Facilities are subject to customary covenants relating to financial ratios and restrictions on certain types of transactions, including restricting the Company's ability to incur additional indebtedness, acquire and dispose of assets, make investments, pay dividends, or engage in mergers and acquisitions. The Company is required to maintain a ratio of consolidated funded indebtedness minus unrestricted cash and cash equivalents (in the aggregate not to exceed $50 million and to include not more than $25 million of foreign unrestricted cash and cash equivalents) to consolidated EBITDA for the most recent four fiscal quarter period not to exceed 4.00:1.00; provided that the Company shall be permitted to increase the ratio to 4.50:1.00 in connection with any permitted acquisition or any other acquisition consented to by the Administrative Agent and the Required Lenders (as defined in the Senior Secured Credit Agreement) with total cash consideration in excess of $25 million. Such increase shall be applicable for the fiscal quarter in which such acquisition is consummated and the three consecutive test periods thereafter. The Company is also required to maintain a ratio of consolidated EBITDA to consolidated interest expense, in each case for the most recent four fiscal quarter period, of not less than 3.00:1.00. The Company was in compliance with all financial covenants as of December 31, 2017.

Borrowings under the Senior Secured Credit Facilities were utilized to repay and extinguish our obligations under the 2014 Senior Secured Credit Facilities (as defined below). In accordance with accounting guidance governing such transactions, upon closing the 2014 Senior Secured Credit Facility (as defined below) and commencement of the Senior Secured Credit Facilities, the Company recognized a loss on extinguishment of debt totaling $10.7 million, of which $10.2 million related to unamortized loan origination fees from the credit agreement for our 2014 Senior Secured Credit Facilities (as defined below) and $0.5 million related to third party fees incurred during the fourth quarter of 2016.

2014 Credit Agreement

On April 1, 2014, the Company entered into a credit agreement, consisting of a $530 million term loan (“2014 Senior Secured Term Loan Facility”) and a $60 million revolving credit facility ("2014 Senior Secured Revolving Credit Facility" and together with the 2014 Senior Secured Term Loan Facility, the “2014 Senior Secured Credit Facilities”). The 2014 Senior Secured Term Loan Facility, which was terminated in 2016 in connection with the new borrowings under the Senior Secured Credit Facility, was guaranteed by the Company and its subsidiaries and was subject to customary covenants relating to financial ratios and restrictions on certain types of transactions, including restricting the Company's ability to incur additional indebtedness, acquire and dispose of assets, make investments, pay dividends, or engage in mergers and acquisitions.

Borrowings under the 2014 Senior Secured Credit Facilities incurred interest at a rate equal to, at our option, either (a) a Eurocurrency rate based on LIBOR for U.S. dollar deposits for loans denominated in dollars, EURIBOR for Euro deposits for loans denominated in Euros and the offer rate for any other currencies for loans denominated in such other currencies for the relevant interest period, plus 4.00% per annum if our total net leverage ratio was greater than 4.75:1.00, or 3.75% if our total net leverage ratio was less than or equal to 4.75:1.00; provided that the relevant Eurocurrency rate was deemed to be no less than 1.00% per annum; (b) a base rate, which was defined as the highest of (i) the Federal Funds Rate on such day plus ½ of 1.00%, (ii) the Prime Lending Rate on such day, (iii) the Adjusted Eurocurrency Rate for loans denominated in U.S. dollars published on such day for an Interest Period of one month plus 1.00% and (iv) 2.00%, plus 3.00% per annum if our total net leverage ratio was greater than 4.75:1.00, or 2.75% if our total leverage ratio was less than or equal to 4.75:1.00; provided that the base rate was deemed to be no less than 2.00% per annum. In addition, the Company was required to pay to the lenders a commitment fee of 0.5% quarterly for unused commitments on the 2014 Senior Secured Revolving Credit Facility, subject to a step-down to 0.375% based upon achievement of a certain leverage ratio as defined within the 2014 Senior Secured Credit Facilities. The Company was able to voluntarily prepay outstanding loans under the 2014 Senior Secured Credit Facilities without premium or penalty.

9. COMMITMENTS, CONTINGENCIES, AND GUARANTEES

Lease Obligations

The Company has payment obligations under non-cancellable operating leases, primarily for office space and furniture and fixtures to support its global operations. These leases often contain customary scheduled rent increases or escalation clauses and renewal options. Rent expense is recorded on a straight line basis. As of December 31, 2017, minimum future lease payments required under these leases are as follows (in thousands):

	Related Party Operating Lease	Non-Related Parties Operating Leases	Total Operating Leases
2018	$ 2,164	$ 4,841	$ 7,005
2019	2,164	3,052	5,216
2020	2,164	2,459	4,623
2021	2,164	1,979	4,143
2022	1,803	1,709	3,512
Thereafter	-	3,264	3,264
Total minimum lease payments	$ 10,459	$ 17,304	$ 27,763

The related party operating lease is for one of the Company’s three buildings within its corporate headquarters. The non-related party operating leases are for the Company’s remaining leases throughout the world consisting primarily of office space, fixtures and vehicles.

Rental expense under operating leases totaled $7.9 million, $6.7 million and $5.8 million for the years ended December 31, 2017, 2016 and 2015, respectively, and is allocated between Direct costs, excluding depreciation and amortization, and Selling, general and administrative in the consolidated statements of operations.

Deemed Landlord Liabilities

As of December 31, 2017, minimum annual payments required in conjunction with the Deemed landlord liabilities are as follows (in thousands):

	Related Party Minimum Lease Payments	Less: Interest	Total Principal Amounts Due
2018	$ 3,852	$ 1,960	$ 1,892
2019	3,937	1,819	2,118
2020	3,988	1,662	2,326
2021	4,039	1,490	2,549
2022	4,092	1,301	2,791
Thereafter	19,842	3,024	16,818
Total	$ 39,750	$ 11,256	$ 28,494

Legal Proceedings

Medpace periodically becomes involved in various claims and lawsuits that are incidental to its business. Management believes, after consultation with counsel, that no matters currently pending would, in the event of an adverse outcome, have a material impact on the Company's consolidated balance sheets, statements of operations, or cash flows.

In March 2012, the Company filed a legal claim against one of its customers, citing as a basis for its claim the customer's non-payment of more than $6.5 million in outstanding invoices. In response, the customer filed a counterclaim against the Company for compensatory damages, asserting that the Company had willfully and wrongly withheld clinical study data alleged to be owned by the customer. The Company objected to these allegations and believed it had meritorious defenses against these claims and also believed that it would ultimately prevail in this matter. During 2015, a Settlement and Mutual Release Agreement (the "Agreement") was entered into whereas the Company agreed to settle all outstanding claims for payment of $2.0 million from the customer and both parties waived the right to file any future suits. The customer paid the $2.0 million settlement during 2015 and the Company recorded a bad debt recovery of $2.0 million in Selling, general and administrative in the consolidated statements of operations.

10. SHAREHOLDERS' EQUITY

Authorized Shares

On August 16, 2016 the Company amended its Certificate of Incorporation in connection with the closing of its IPO to increase the authorized number of shares of common stock to 250,000,000 and to authorize 5,000,000 shares of preferred stock that may be issued from time to time by the Company's Board of Directors.

Stock-Based Compensation

2016 Incentive Award Plan

On August 11, 2016 in connection with the Company's IPO, the Board approved the formation of the 2016 Incentive Award Plan (the "2016 Plan"), which replaced our 2014 Equity Incentive Plan (the "2014 Plan"). The 2016 Plan provides for long-term equity incentive compensation for key employees, officers and non-employee directors. A variety of discretionary awards (collectively, the "Awards") for employees and non-employee directors are authorized under the 2016 Plan, including vested shares, stock options, stock appreciation rights ("SARs"), restricted stock awards ("RSAs"), restricted stock units ("RSUs"), or other cash based or stock dividend equivalent awards, which are all equity-classified instruments under the 2016 Plan. The number of shares registered and available for grant under the 2016 Plan is 6,000,000. The vesting of such awards may be conditioned upon either a specified period of time or the attainment of specific performance goals as determined by the administrator of the 2016 Plan. The option price and term are also subject to determination by the administrator with respect to each

grant. Option prices are generally expected to be set at the market price of the Company's common stock at the date of grant and option terms are not expected to exceed ten years.

The Company granted 1,009,896 awards under the 2016 Plan during the year ended December 31, 2017, consisting of 797,550 stock option awards, 118,000 restricted stock awards ("RSA") and 38,000 restricted stock units ("RSU"), all vesting after four years. The Company granted an additional 41,346 stock option awards, vesting over one year, to non-employee directors under the 2016 Incentive Award Plan, during the year ended December 31, 2017. Additionally, the Company granted 15,000 stock option awards, vesting equally on the second, third and fourth anniversary of the grant date over four years.

The Company granted 648,180 stock options under the 2016 Plan during the year ended December 31, 2016, consisting of 626,650 stock options vesting after four years and 21,530 stock options with various vesting schedules, but all of which vest within a calendar year of the respective grant date. The 2016 Plan has reserved 6,000,000 shares for issuance of RSAs, RSUs or stock options, of which approximately 4.3 million awards were available for future grants as of December 31, 2017.

The 2016 Plan expires in 2026, except for awards then outstanding, and is administered by the Board. All Awards granted at the IPO or thereafter were or will be issued under the 2016 Plan.

The company satisfies stock option exercises and vested stock awards with newly issued shares. Shares available for future stock compensation grants totaled 4.3 million and 5.4 million at December 31, 2017 and 2016.

2014 Equity Incentive Plan

The 2014 Plan for employees and directors provided the issuance of vested shares, stock options, RSAs and RSUs in Medpace Holdings, Inc.'s common stock. The awards were granted to key employees as additional compensation for services rendered and as a means of retention over the vesting period, typically three to four years. RSAs awarded under the 2014 Plan were subject to automatic forfeiture upon departure until vested and entitle the shareholder to all rights of common stock ownership except that they may not be sold, transferred, pledged or otherwise disposed of during the restriction period, except as noted in the following paragraph. The 2014 Plan allowed for the issuance of non-qualified stock options to employees, officers, and directors under this plan (collectively, "the Participants"). Under the 2014 Plan, options could be granted with an exercise price equal to or greater than the fair value of common stock at the grant date as determined by the Board of Directors. The stock options, if unexercised, expired seven years from the date of grant. The Company granted 45,932 Awards under the 2014 Plan, consisting of 34,821 stock options vesting equally over four years and 11,111 fully vested shares, during the year ended December 31, 2016.

As a condition to exercising stock options and acceptance of certain restricted shares, employees must have executed a Contribution and Subscription Agreement (the "Subscription Agreement") that provided for the exchange of the shares issued for incentive units (the "Incentive Units") in Medpace Investors upon the occurrence of certain events. The Incentive Units were tied directly to common stock ownership in Medpace Holdings, Inc. and entitled the Incentive Unit holder to participate in the risks and rewards of owning the Company's stock through ownership in Medpace Investors. The awards containing this condition were liability-classified instruments as they were inevitably settled in the equity of a non-consolidated related party. Restricted share awards excluding the requirement to execute a Contribution and Subscription Agreement and settlement in common shares of Medpace Holdings, Inc. were equity-classified instruments.

At the grant date for RSAs that were liability-classified, restricted shares were legally issued and exchanged for MPI Incentive Units on behalf of the employee. If the RSAs were not yet vested and an employee left the Company's employment, the restricted shares of Medpace Holdings, Inc. reverted back to the Company and were available for re-issuance under the 2014 Plan. Upon the vesting of RSAs and RSUs and upon the exercise of stock options, the stock-based compensation liability was settled by exchanging the Company's stock for MPI Incentive Units. If an employee left the Company's employment after they vested in the Awards and the exchange for Incentive Units was made, Medpace Investors may exercise a call option to repurchase an employee's Incentive Units at a price determined by the manager and majority unit holder of Medpace Investors, who is also the chief executive officer of Medpace. If Medpace Investors exercised the call right, it could do so up to the later of twelve months following the

employee's departure date or six months following the determination that the former employee was directly or indirectly engaged in competitive business activities.

Restricted Awards Modification

On December 17, 2015, the Board of Directors approved a resolution to accelerate the vesting period for all issued, outstanding and unvested RSAs and RSUs to vest on December 31, 2015, so long as the recipient of each restricted share or unit was in good standing, had not provided notice of resignation and continued to be employed by the Company as of December 31, 2015. In total, 688,599 unvested restricted awards held by 158 current employees were modified resulting in settlement of 688,599 shares.

According to the authoritative guidance for stock-based compensation, under these circumstances a company should recognize additional stock-based compensation expense in the amount of the incremental fair value of the modified award. Because the restricted awards that were modified were liability-classified, the awards were at fair value at the time of the modification and no incremental cost was recognized. While there was no incremental cost related to fair value of the awards, $5.7 million of stock-based compensation expense was recorded in 2015 related to previously unrecognized stock-based compensation cost for awards expected to vest in 2016, 2017 and 2018.

Option Awards Modification

As a result of the Company's IPO, a condition of all outstanding stock options issued before August 10, 2016 under the 2014 Plan that previously required the exchange of the shares issued for incentive units in the equity of a non-consolidated related party was dissolved. All future exercises of options issued pursuant to the 2014 Plan will now settle in shares of the Company. As a result of the modification in the settlement condition, the options will now be equity-classified instruments and changes in the fair value of the stock compensation liability that occur during the requisite service period are no longer recognized. According to the authoritative guidance for stock-based compensation, at modification the Company should recognize additional stock-based compensation expense in the amount of the incremental fair value of the modified award. As a result, the Company recognized $3.1 million of incremental stock-based compensation expense during the year ended December 31, 2016. In addition, the $10.5 million stock-based compensation liability associated with the modified stock options was reclassified to additional paid-in capital as a result of the change to equity classification. There is no stock-based compensation liability for the years ended December 31, 2017 and 2016.

Equity Awards

Valuation Assumptions

The Company determines the fair value of stock options using the Black-Scholes-Merten option pricing model (the "BSM Model"). The BSM Model is primarily affected by the fair value of the Company's common stock (see restricted share valuation discussion below), the expected holding period for the option, expected stock price volatility over the term of the awards, the risk-free interest rate, and expected dividends.

The following table sets forth the key weighted-average assumptions used in the BSM Model to calculate the fair value of options:

	Year Ended December 31,		
	2017	2016	2015
Expected holding period - years	5.4	3.6	4.2
Expected volatility	28.0%	30.2%	36.4%
Risk-free interest rate	2.0%	1.0%	1.2%
Expected dividend yield	0.0%	0.0%	0.0%

The assumptions used in the table above reflect both grant date inputs to arrive at the grant date fair values for stock options subject to equity-classified stock compensation accounting and reflect a fair value calculation for stock

options outstanding in the period subject to liability-classified stock compensation accounting. Subsequent to August 10, 2016, all outstanding stock based awards are subject to equity classification through either modifications of the award terms and conditions that occurred during the years ended December 31, 2016 and 2015, or based on terms and conditions applicable as of the grant date.

The expected holding period represents the period of time the grants are expected to be outstanding. The Company uses the simplified method, as prescribed by accounting guidance governing such awards, to calculate the expected holding period for options granted to employees as we do not have sufficient historical evidence data to provide a reasonable basis upon which to estimate the expected holding period. For options valued by the Company for the years ended December 31, 2017, 2016 and 2015, the expected holding period is based on an average between the midpoint of the vesting date and the expiration date of the options.

The Company estimates expected volatility primarily by using the historical volatility of a publicly traded peer group that operates in the clinical research and development industry. The Company does not have adequate history to calculate its own historical or implied volatility and believes the Company's expected volatility will approximate the historical experience of the peer group.

The risk-free interest rate is based on the yield on U.S. Treasury obligations with remaining durations equal to the expected holding period of the options. The expected dividend yield is assumed to be zero based on recent and anticipated dividend activity.

Subsequent to the IPO, the fair value of common stock is based upon the market price of the Company's common stock on the date of grant as listed on the NASDAQ. Due to the absence of an active market for the Company's common stock prior to the IPO, the Company determined the fair value of restricted shares by obtaining an independent valuation of the fair value of the Company's equity, applying a discount for lack of marketability, and then calculating the implied share price. The fair value of the Company was estimated primarily using an income approach which is based on assumptions and estimates made by management and, secondarily, using other market-related factors in current industry trends as well as observed transaction values. In determining the estimated future cash flows used in the income approach, the Company developed and applied certain estimates and judgments, including current and projected future levels of income based on management's plans, business trends, prospects and market and economic conditions, including market-participant considerations. Significant assumptions utilized in the income approach were based on company specific information and projections, which were not observable in the market and are thus considered Level 3 measurements by authoritative guidance. The discount for lack of marketability (the "Marketability Discount") was applied to reflect what a market participant would consider in relation to the post-vesting restrictions imposed regarding the inability to sell, transfer, or pledge the shares during the restriction period. The Marketability Discount was estimated by using the BSM Model to calculate the cost of a theoretical put option to hedge the fluctuation in value of the investment between the valuation date and an anticipated liquidity date.

The following table summarizes the grant date fair values of stock options and restricted shares issued during the period as well as the allocation of stock-based compensation expense to Direct costs, excluding depreciation and amortization, and Selling, general and administrative reported in the consolidated statements of operations:

	Year Ended December 31,		
	2017	2016	2015
Weighted average, grant date fair value			
Stock Options	$ 8.54	$ 6.91	$ 3.81
Restricted shares (RSAs and RSUs)	$ 31.90	$ 15.08	$ 12.53
Stock-based compensation expense allocated to:			
Direct costs, excluding depreciation and amortization	$ 2,128	$ 5,555	$ 9,243
Selling, general, and administrative	2,335	4,260	13,081
Total stock-based compensation expense	$ 4,463	$ 9,815	$ 22,324

Award Activity

The following table sets forth the Company's stock option activity:

	Year Ended December 31,					
	2017		2016		2015	
	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Outstanding - beginning of Period	2,350,166	$ 17.57	1,794,709	$ 15.42	1,091,048	$ 14.40
Granted	853,896	$ 28.67	683,001	$ 22.80	889,849	$ 16.67
Exercised	(116,787)	$ 15.52	(36,980)	$ 14.50	(17,404)	$ 14.41
Forfeited/Expired	(304,407)	$ 20.55	(90,564)	$ 15.85	(168,784)	$ 15.53
Outstanding - end of period	2,782,868	$ 20.73	2,350,166	$ 17.57	1,794,709	$ 15.42
Exercisable - end of period	917,592	$ 15.40	647,343	$ 15.22	242,777	$ 14.40

The following table sets forth the Company's Restricted Share activity:

	Year Ended December 31,		
	2017	2016	2015
	Shares	Shares	Shares
Outstanding and unvested - beginning of period	59,258	90,697	407,171
Granted	156,000	11,111	1,253,924
Vested	(29,629)	(41,069)	(1,530,547)
Forfeited	(2,000)	(1,481)	(39,851)
Outstanding and unvested - end of period	183,629	59,258	90,697
Cumulative vested shares - end of period	1,884,287	1,854,658	1,813,589

During the years ended December 31, 2017, 2016 and 2015, 0, 11,111 and 583,021 Restricted Shares were granted and immediately vested upon issuance (the "Vested Shares"), respectively. There was no stock-based compensation liability related to Restricted Shares as of the year ended December 31, 2017 and 2016. The stock-based

compensation liability related to 231,229 Vested Shares granted during the year ended December 31, 2015 was settled by exchanging the awards for Medpace Investors' Incentive Units. The stock-based liability related to the residual 351,851 Vested Shares granted during the year ended December 31, 2015 was settled by exchanging the awards for the Company's common stock.

The following table summarizes information about stock options expected to vest, stock options exercisable, and unvested restricted share awards expected to vest at December 31, 2017:

	Weighted Average Exercise Price	Stock Options	Restricted Shares	Weighted Average Remaining Life (Years)
December 31, 2017				
Number of stock options expected to vest	$ 20.73	2,782,868	-	4.9
Number of Restricted Shares expected to vest		-	183,629	
Total expected to vest - December 31, 2017		2,782,868	183,629	
Total stock options exercisable - December 31, 2017	$ 15.40	917,592		3.8
Unrecognized compensation cost - December 31, 2017 (in thousands)		$ 8,833	$ 4,745	
Weighted average years over which unrecognized compensation cost will be recognized		1.9	3.3	

The following table sets forth the aggregate intrinsic value of stock options exercised, the fair values of awards vested, and share based liabilities settled during the respective periods (in thousands):

	Year Ended December 31, 2017	2016	2015
Total intrinsic value of stock options exercised	$ 1,619	$ 403	$ (36)
Total grant-date fair value of stock options vested	$ 1,317	$ 1,384	$ 1,168
Total grant-date fair value of restricted shares vested	$ 447	$ 614	$ 18,284
Total settlement date fair value of restricted shares vested	$ 1,074	$ 1,236	$ 21,134
Total share-based liabilities settled	$ -	$ 76	$ 16,858

The actual tax benefits recognized related to stock-based compensation totaled $0.5 million, $1.0 million and $4.6 million for the years ended December 31, 2017, 2016 and 2015, respectively.

11. EMPLOYEE BENEFIT PLANS

The Company provides a 401(k) plan that covers substantially all U.S. employees. Participants can elect to contribute up to 50% of their eligible earnings on a pre-tax basis, subject to Internal Revenue Service annual limitations.

The U.S.-based plan offers a year-end employer matching contribution, requiring the participant to be an employee at year-end to qualify for the match. Participants with one year or more of service are eligible for the matching contribution. Participants fully vest in the employer contributions after three years of service. The employer contribution represents a percentage of a participant's eligible compensation. The Company's 401(k) Plan costs were $2.3 million, $2.0 million and $1.7 million during the years ended December 31, 2017, 2016 and 2015, respectively, and were allocated between Direct costs, excluding depreciation and amortization, and Selling, general and administrative in the consolidated statements of operations.

The Company has various defined contribution arrangements for eligible employees of non-U.S. entities. These defined contribution arrangements provide employees with retirement savings and life insurance benefits. The Company incurred expenses related to these arrangements of $0.9 million, $0.7 million and $0.7 million in the years ended December 31, 2017, 2016 and 2015, respectively, and were allocated between Direct costs, excluding depreciation and amortization, and Selling, general and administrative in the consolidated statements of operations.

The Company is also required to pay certain minimum statutory post-employment benefits. The Company recognizes a liability and the associated expense for these benefits when it is probable that employees are entitled to the benefit.

12. INCOME TAXES

US Tax Reform

The "Tax Cuts and Jobs Act" (TCJA) was enacted on December 22, 2017 and it significantly reforms the Internal Revenue Code of 1986, as amended. The TCJA, among other things, includes a reduction in the U.S. federal tax rate from 35% to 21%, allows for the expensing of capital expenditures, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, creates new taxes on certain foreign sourced earnings and puts into effect the migration from a "worldwide" system of taxation to a territorial system.

The Company has not completed its accounting for the income tax effects of the TCJA. Where the Company has been able to make reasonable estimates of the effects for which its analysis is not yet complete, the Company has recorded provisional amounts in accordance with SEC Staff Accounting Bulletin No. 118. Where the Company has not yet been able to make reasonable estimates of the impact of certain elements, the Company has not recorded any amounts related to those elements and has continued accounting for them in accordance with ASC 740 on the basis of the tax laws in effect immediately prior to the enactment of the TCJA.

The Company's accounting for the following elements of the TCJA is incomplete. However, the Company was able to make reasonable estimates of certain effects and, therefore, has recorded provisional amounts as follows:

- Revaluation of the Deferred Credit, deferred tax assets and liabilities and other miscellaneous tax attributes: The TCJA reduces the U.S. federal corporate tax rate from 35% to 21% for tax years beginning after December 31, 2017. In addition, the TCJA makes certain changes to the depreciation rules and implements new limits on the deductibility of certain executive compensation. The Company has evaluated these changes and has recorded a provisional tax benefit of $3.4 million. The Company is still completing its calculation of the impact of these changes on its deferred tax balances.
- Transition tax on unrepatriated foreign earnings: The Transition Tax on unrepatriated foreign earnings is a tax on previously untaxed accumulated and current earnings and profits ("E&P") of the Company's foreign subsidiaries. To determine the amount of the Transition Tax, the Company must determine, among other factors, the amount of post-1986 E&P of its foreign subsidiaries, as well as the amount of non-U.S. income taxes paid on such earnings. The Company was able to make a reasonable estimate of the Transition Tax and has recorded a provisional Transition Tax expense of $0.6 million. The Company is continuing to gather additional information to more precisely compute the amount of the Transition Tax to complete its calculation of E&P as well as the final determination of non-U.S. income taxes paid.

The Company's accounting for the following elements of the TCJA is incomplete, and it has not yet been able to make reasonable estimates of the effects of these items. Therefore, no provisional amounts were recorded.

- Indefinite reinvestment assertion: Beginning in 2018, the TCJA provides a 100% deduction for dividends received from 10-percent owned foreign corporations by U.S. corporate shareholders, subject to a one-year holding period. Although dividend income is now exempt from U.S. federal tax in the hands of the U.S. corporate shareholders, companies must still apply the guidance of ASC 740-30-25-18 to account for the tax consequences of outside basis differences and other tax impacts of their investments in non-U.S. subsidiaries. The Company has accrued the Transition Tax on the deemed repatriated earnings that were previously indefinitely reinvested. The Company is still evaluating the impacts of the TCJA related to its remaining outside basis differences and how the TCJA will affect the Company's current accounting position to indefinitely reinvest unremitted foreign earnings. The Company expects to finalize its conclusion related to its indefinite reinvestment assertion during the measurement period.
- Global intangible low taxed income (GILTI): The TCJA creates a new requirement that certain income (i.e., GILTI) earned by foreign subsidiaries must be included currently in the gross income of the U.S. shareholder. Due to the complexity of the new GILTI tax rules, the Company is continuing to evaluate this provision of the TCJA and the application of ASC 740. Under U.S. GAAP, the Company is permitted to make an accounting policy election to either treat taxes due on future inclusions in U.S. taxable income related to GILTI as a current-period expense when incurred or to factor such amounts into the Company's measurement of its deferred taxes. The Company has not yet completed its analysis of the GILTI tax rules and is not yet able to reasonably estimate the effect of this provision of the TCJA or make an accounting policy election for the ASC 740 treatment of the GILTI tax. Therefore, the Company has not recorded any amounts related to potential GILTI tax in its financial statements and has not yet made a policy decision regarding whether to record deferred taxes on GILTI.

The Company files income tax returns for U.S. federal and various U.S. states, as well as various foreign jurisdictions. The liabilities for unrecognized tax benefits are carried in Other long-term liabilities on the consolidated balance sheets because the payment of cash is not anticipated within one year of the balance sheet date.

The components of income (loss) before income taxes consisted of the following (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Domestic	$ 52,986	$ 18,016	$ (12,294)
Foreign jurisdictions	$ 3,959	$ 3,941	$ 4,464
Income (loss) before income taxes	$ 56,945	$ 21,957	$ (7,830)

Income tax provision (benefit) consisted of the following (in thousands):

	Current	Deferred	Total
Year ended December 31, 2017			
U.S. Federal	$ 10,953	$ 3,466	$ 14,419
U.S. state and local	2,032	51	2,083
Foreign jurisdictions	1,576	(255)	1,321
	$ 14,561	$ 3,262	$ 17,823
Year ended December 31, 2016			
U.S. Federal	$ 15,105	$ (8,784)	$ 6,321
U.S. state and local	1,636	(524)	1,112
Foreign jurisdictions	710	389	1,099
	$ 17,451	$ (8,919)	$ 8,532
Year ended December 31, 2015			
U.S. Federal	$ 11,067	$ (11,995)	$ (928)
U.S. state and local	1,119	(761)	358
Foreign jurisdictions	1,372	41	1,413
	$ 13,558	$ (12,715)	$ 843

The difference between the statutory rate for federal income tax and the effective income tax rate was as follows (in thousands):

	Year Ended December 31,					
	2017		2016		2015	
Income tax expense calculated at the federal statutory rate	$ 19,931	35.0%	$ 7,685	35.0%	$ (2,740)	35.0%
Effect of:						
State and local taxes, net of federal benefit	1,606	2.8	912	4.2	487	(6.2)
Tax on foreign earnings, net of tax credits and deductions	(69)	(0.1)	(26)	(0.1)	(330)	4.2
Tax reform adjustment	(3,418)	(6.0)				
Deferred credit	(1,053)	(1.9)				
Change in valuation allowance	-	-	-	-	-	-
Permanent items:						
Goodwill impairment	-	-	-	-	2,106	(26.9)
Stock-based awards	(179)	(0.3)	(534)	(2.4)	778	(9.9)
Tax reform adjustment	574	1.0	-	-	-	-
Other	483	0.9	174	0.8	185	(2.4)
State/Local tax credits	(1,187)	(2.1)	(1,049)	(4.8)	(931)	11.9
Change in liability for uncertain tax positions	1,141	2.0	1,212	5.5	1,250	(16.0)
Other	(6)	(0.0)	158	0.7	38	(0.5)
	$ 17,823	31.3%	$ 8,532	38.9%	$ 843	(10.8)%

Components of the Company's net deferred tax asset (liability) included in the consolidated balance sheets consisted of the following at December 31 (in thousands):

	2017	2016
Deferred tax assets:		
Accrued liabilities	$ 17,563	$ 19,393
Depreciation and amortization	980	1,787
Foreign operating loss carryforward	246	246
U.S. federal tax credits and carryforward	8,152	-
U.S. state and local tax credits and carryforward	1,799	385
Other	667	1,209
Valuation allowance	(2,394)	(987)
Total deferred tax assets	27,013	22,033
Deferred tax liabilities:		
Depreciation and amortization	(20,117)	(33,436)
Prepaid expenses	(572)	(310)
Other	(541)	(220)
Total deferred tax liabilities	(21,230)	(33,966)
Net deferred tax asset (liability)	$ 5,783	$ (11,933)

The deferred tax asset attributable to U.S federal tax credits and carryforwards includes $8.0 million of U.S. federal operating loss carryforwards that will expire at various times from 2031 to 2037 if not utilized. U.S. state and local tax credits and carryforwards above includes $1.3 million for U.S. state and local operating loss carryforwards that will expire at various times from 2026 to 2032 if not utilized.

The Company has foreign operating loss carryforwards for which a deferred tax asset of $0.2 million has been established. The Company has a valuation allowance of $0.2 million against this deferred tax asset based upon its assessment that it is more likely than not that this amount will not be realized. The ultimate realization of this tax benefit is dependent upon the generation of sufficient operating income in the respective tax jurisdictions. Approximately 74% of the foreign net operating loss carryforwards can be utilized over an indefinite period whereas the remainder will expire at various times from 2020 to 2025 if not utilized.

In May 2017, the Company acquired Nephrogenex which included deferred tax assets of $22.2 million, consisting of tax effected net operating losses in the amount of $13.5 million, tax effected capitalized research and development expenses of $8.5 million and tax effected federal tax credits of $0.2 million, and deferred tax liabilities of $0.1 million. See Note 2 for further description of the asset acquisition that occurred in the second quarter of 2017.

Annual activity related to the Company's valuation allowance is as follows (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Beginning Balance	$ 987	$ 1,021	$ 1,086
Additions charged to expense	-	-	-
Additions due to asset acquisition	2,033	-	-
Reductions from utilization, reassessments and expirations	3	(34)	(65)
Remeasurement due to effect of tax reform	(629)	-	-
Ending Balance	$ 2,394	$ 987	$ 1,021

A reconciliation of the beginning and ending balances of the total amounts of gross unrecognized tax benefits is as follows (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Beginning Balance	$ 5,698	$ 2,604	$ 1,353
Increases in tax positions for prior years	5	-	-
Decreases in tax positions for prior years	-	(196)	(14)
Increases in tax positions for current year	1,187	3,365	1,265
Lapse in statute of limitations	-	(75)	-
Ending Balance	$ 6,890	$ 5,698	$ 2,604

Interest and penalties associated with uncertain tax positions are recognized as components of Income tax provision in the consolidated statements of operations. There was no material change to tax-related interest and penalties during the years ended December 31, 2017, 2016 and 2015. As of December 31, 2017 and 2016, respectively, the Company has a liability for interest and penalties of $1.4 million and $1.0 million that is associated with related tax liabilities of $5.9 million and $4.3 million for uncertain tax positions.

The Company operates in various foreign, state and local jurisdictions. The number of tax years for which the statute of limitations remains open for foreign, state and local jurisdictions varies by jurisdiction and is approximately four years (2013 through 2017). For federal tax purposes, the Company's open tax years are 2014 through 2017.

13. MISCELLANEOUS EXPENSE, NET

Miscellaneous expense, net consisted of the following (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Net loss on foreign-currency transactions	$ (1,004)	$ (660)	$ (1,307)
Other income	650	237	174
Miscellaneous expense, net	$ (354)	$ (423)	$ (1,133)

14. RELATED PARTY TRANSACTIONS

Employee Loans

The Company periodically extends short term loans or advances to employees, typically upon commencement of employment. Total receivables as a result of these employee advances of $0.2 million existed at December 31, 2017 and 2016, respectively, and are included in the Prepaid expenses and other current assets and Other assets line items of the consolidated balance sheets, respectively, depending on the contractual repayment date.

Management Fees

In conjunction with the IPO, the Advisory Services Agreement with Cinven Capital Management (V) General Partner Limited ("Cinven") expired. Subsequent to the IPO, the Company pays fees for director services provided by Cinven employees that are members of the Company's Board of Directors and any related committees. The director fees are paid directly to Cinven in accordance with the Company's non-employee director compensation policy. During the years ended December 31, 2016 and 2015, the Company incurred management fees to Cinven of $0.2 million and $0.3 million, respectively. During the years ended December 31, 2017 and 2016, the Company incurred director fees of $0.1 million, respectively. In connection with these fees, Cinven incurred related travel expenses of $0.1 million, respectively, during the years ended December 31, 2017, 2016 and 2015. As of

December 31, 2017 and 2016, the Company had outstanding accounts payable to Cinven of less than $0.1 million and $0.1 million, respectively.

Service Agreements

Symplmed Pharmaceuticals, LLC ("Symplmed")

Medpace Investors LLC, a noncontrolling shareholder of the Company that is owned by employees of the Company and managed by our chief executive officer, has a majority ownership interest in Symplmed Pharmaceuticals, LLC ("Symplmed"), a private pharmaceutical development company. In addition, the chief executive officer and other executives of the Company are board members of Symplmed. The Company has operated under a Master Services Agreement ("MSA") with Symplmed since 2013 (amended in 2014) to perform clinical trial related services. Certain task orders governed by this arrangement were amended in the third quarter of 2016, changing the fee structure from unitized in nature to time and materials and revised pricing based on the Company's leveraging of this work to develop and enhance certain new service capabilities. The Company has evaluated its relationship with Symplmed and concluded that Symplmed is not a variable interest entity because the Company has no direct ownership interest or relationship other than the MSA. During the years ended December 31, 2017, 2016 and 2015, the Company recognized related party transactions of less than $0.1 million, less than $(0.1) million and $1.2 million as service revenue in the consolidated statements of operations, respectively.

Coherus BioSciences, Inc. ("Coherus") and MX II Associates, LLC ("MXII")

The chief executive officer of the Company is a member of Coherus BioSciences, Inc.'s ("Coherus") board of directors. During 2011 a related party of the Company in which the Company's chief executive officer is the managing member, MXII, made an investment in Coherus. In early 2012 the Company made a $2.5 million investment in Coherus. Concurrent with the initial investment, MXII secured the exclusive rights for Medpace to perform Phase I through Phase III clinical trial work for certain Coherus' "bio-similar" drug compounds executed through a MSA. In return, Medpace agreed to pay a 10% sales commission to MXII on cash received from Coherus. The commission agreement between the Company and MXII was terminated during 2015 but did not impact the MSA between the Company and Coherus. The agreement provides for a minimum fee commitment for clinical trial services and is cancelable without cause by either party upon 30 days prior notice. Medpace paid commissions of $1.1 million during the year ended December 31, 2015, which was recorded in Selling, general and administrative in the consolidated statements of operations. During the years ended December 31, 2017, 2016 and 2015, the Company recognized service revenue of $8.0 million, $22.3 million and $22.1 million from Coherus in the Company's consolidated statements of operations, respectively. In addition, the company recognized Reimbursed out-of-pocket revenue and Reimbursed out-of-pocket expenses with Coherus in the consolidated statements of operations of $1.3 million, $5.1 million and $6.9 million during the years ended December 31, 2017, 2016 and 2015, respectively. As of December 31, 2017 and 2016, the Company had Accounts receivable and unbilled, net from Coherus of $0.3 million and $2.0 million recorded in the consolidated balance sheets, respectively. In addition, the Company had Advanced billings of $1.5 million and $6.3 million and Pre-funded study costs of $1.0 million and $3.8 million with Coherus recorded in the consolidated balance sheets at December 31, 2017 and 2016, respectively.

Xenon Pharmaceuticals, Inc. ("Xenon")

Certain executives and employees of the Company, including the chief executive officer, have held equity investments in Xenon, a clinical-stage biopharmaceutical company. In addition, a Medpace employee was a director of Xenon until May 2015. During the second quarter of 2017, the chief executive officer sold his entire equity position held in Xenon. Xenon is no longer considered to be a related party subsequent to this sale. During July 2015 the Company and Xenon entered into an amended MSA agreement for the Company to provide clinical trial related services. The Company recognized service revenue from Xenon of $0.6 million, $1.3 million and $0.7 million during the six months ended June 30, 2017 and the years ended December 31, 2016 and 2015, respectively, in the Company's consolidated statements of operations. In addition, the Company recognized Reimbursed out-of-pocket revenue and Reimbursed out-of-pocket expenses with Xenon in the consolidated statements of operations of $0.1 million, $0.2 million and less than $0.1 million during the six months ended June 30, 2017 and the years ended December 31, 2016 and 2015, respectively. As of December 31, 2016, the Company had Accounts receivable and unbilled, net from Xenon of $0.3 million recorded in the consolidated balance sheets. As of December 31, 2016, the

Company had, from Xenon, $1.3 million of Advanced billings and $0.1 million of Pre-funded study costs, in the consolidated balance sheets.

Cymabay Therapeutics, Inc. (“Cymabay”)

Cymabay is a clinical-stage biopharmaceutical company developing therapies to treat metabolic diseases with high unmet medical need, including serious rare and orphan disorders. During the first quarter of 2016, it was announced that a Medpace employee would join Cymabay’s board of directors. The Company and Cymabay entered into a MSA dated October 21, 2016. Subsequently, the Company and Cymabay have entered into several task orders for the Company to perform clinical trial related services. The Company recognized service revenue from Cymabay of $0.6 million, $0.3 million and $0.1 million during the years ended December 31, 2017, 2016 and 2015, respectively, in the Company’s consolidated statements of operations. As of December 31, 2017 and 2016, the Company had Accounts receivable and unbilled, net from Cymabay of $0.1 million and less than $0.1 million recorded in the consolidated balance sheets, respectively.

LIB Therapeutics LLC (“LIB”)

Certain executives and employees of the Company, including the chief executive officer, are members of LIB’s board of managers and/or have equity investments in LIB. The Company entered into a MSA dated November 24, 2015 with LIB, a company that engages in research, development, marketing and commercialization of pharmaceutical drugs. Subsequently, the Company and LIB have entered into several task orders for the Company to perform clinical trial related services. The Company recognized service revenue from LIB of $1.4 million and $0.2 million during the years ended December 31, 2017 and 2016 in the Company’s consolidated statements of operations, respectively. As of December 31, 2017 and 2016, the Company had, from LIB, Advanced billings of $0.2 million and less than $0.1 million in the consolidated balance sheets, respectively. In addition, the Company had Accounts receivable and unbilled, net from LIB of $0.5 million and less than $0.1 million in the consolidated balance sheets at December 31, 2017 and 2016, respectively.

CinRX Pharma (“CinRx”)

Certain executives and employees of the Company, including the chief executive officer, are members of CinRx’s board of managers and/or have equity investments in CinRx, a biotech company. The Company and CinRx have entered into several task orders for the Company to perform clinical trial related services. During the year ended December 31, 2017, the Company recognized service revenue from CinRx of $0.4 million in the Company’s consolidated statements of operations.

Medpace Investors, LLC

Medpace Investors is a noncontrolling shareholder and related party of Medpace Holdings, Inc. Medpace Investors is owned and managed by employees of the Company. The Company’s chief executive officer is also the manager and majority unit holder of Medpace Investors. The Company acts as a paying agent for Medpace Investors with taxing authorities principally in instances when employee tax payments or remittance of withholdings related to equity compensation are required. During the years ended December 31, 2016 and 2015, the Company paid $0.8 million and $0.9 million to various taxing authorities on behalf of Medpace Investors. During the year ended December 31, 2016, the Company received $0.3 million from Medpace Investors for receivables owed to the Company from Symplmed. Additionally, the Company paid approximately $0.3 million to Medpace Investors due to the settlement of certain liabilities related to the Merger Agreement between the sellers (led by CCMP) and the buyers (led by Cinven).

Purchase of Real Estate Properties

In December 2016, the Company entered into a purchase agreement for four parcels of real estate property that are closely situated to the Medpace campus in Cincinnati, Ohio, from AT Redevelopment Company, LLC, which is wholly-owned by the Company's chief executive officer. The purchase price of the real estate property was $0.4 million as determined by an independent third party broker's opinion of value. The transaction closed on January 11, 2017.

Leased Real Estate

Headquarters Lease

The Company has entered into operating leases for its corporate headquarters and a storage space facility with an entity that is wholly owned by the Company's chief executive officer. The Company has evaluated its relationship with the related party and concluded that the related party is not a variable interest entity because the Company has no direct ownership interest or relationship other than the leases. The lease for headquarters is for an initial term of twelve years through November 2022 with a renewal option for one 10-year term at prevailing market rates. The lease for storage space was through June 2016 and was leased on a month to month basis, thereafter. The Company pays rent, taxes, insurance, and maintenance expenses that arise from the use of the properties. Annual base rent for the corporate headquarters is $2.1 million and allows for adjustments to the rental rate annually for increases in the consumer price index. Lease expense recognized for the years ended December 31, 2017, 2016 and 2015 was $2.1 million, respectively. The lease expense was allocated between Direct costs, excluding depreciation and amortization, and Selling, general and administrative in the consolidated statements of operations.

Deemed Assets and Deemed Landlord Liabilities

The Company entered into two multi-year lease agreements governing the occupancy of space of two buildings in Cincinnati, Ohio with an entity that is wholly owned by the Company's chief executive officer and certain members of his immediate family. In accordance with the accounting guidance related to leases, the Company was deemed in substance to be the owner of the property during the construction phase and at completion. Accordingly, the Company reflected the buildings and related liabilities as deemed assets from landlord building construction in Property and equipment, net, Other current liabilities, and Deemed landlord liabilities, respectively, on the consolidated balance sheets. The Company assumed occupancy in 2012 and the leases expire in 2027 with the Company having one 10-year option to extend the lease term. The deemed assets are being fully depreciated, on a straight line basis, over the 15-year term of the lease. Deemed landlord liabilities are recorded at their net present value when the Company enters into qualifying leases and are reduced as the Company makes periodic lease payments on the properties. Accretion expense is being recorded over the term of the lease as a component of Interest expense, net in the Company's consolidated statements of operations. The Company paid $3.8 million, $3.7 million and $3.4 million during the years ended December 31, 2017, 2016 and 2015, respectively. The current and long-term portions of the Deemed landlord liability at December 31, 2017 were $1.9 million and $26.6 million, respectively. The current and long-term portions of the Deemed landlord liability at December 31, 2016 were $1.7 million and $28.5 million, respectively. The Company has recognized $16.3 million and $18.1 million, respectively, of deemed assets, net at December 31, 2017 and 2016 in the consolidated balance sheets.

Travel Services

Reynolds Jet Management

The Company incurs expenses for travel services for company executives provided by a private aviation charter company that is owned by the chief executive officer and the senior vice president of operations of the Company ("private aviation charter"). The Company may contract directly with the private aviation charter for the use of its aircraft or indirectly through a third party aircraft management and jet charter company (the "Aircraft Management Company"). The travel services provided are primarily for business purposes, with certain personal travel paid for as part of the executives' compensation arrangements. The Aircraft Management Company also makes the private aviation charter aircraft available to third parties. The Company incurred travel expenses of $1.1 million, $1.0 million and $0.9 million during the years ended December 31, 2017, 2016 and 2015, respectively. These travel expenses are recorded in Selling, general and administrative in the Company's consolidated statements of operations.

Common Stock Purchases

During 2015, an employee of the Company entered into a stock purchase agreement ("SPA") with the Company that permitted the purchase of 37,037 shares of the Company's common stock at the then-current value for those shares. There was no stock-based compensation expense recognized in relation to the SPA due to no required services to be rendered in exchange for shares. The proceeds from this SPA are reflected as Proceeds from sale of common stock in the consolidated statement of cash flows for the year ended December 31, 2015.

Assets and Obligations Related to Former Owners

Pursuant to the Medpace, Inc. Stock Purchase Agreement dated June 17, 2011 (the "Predecessor Purchase Agreement"), certain tax indemnifications between the sellers (a group led by the former majority shareholder who is the current chief executive officer, the "Former Owners") and the buyers (led by CCMP) were entered into regarding contingencies that could arise after the June 17, 2011 transaction, as well as tax payments or refunds that were finalized after June 17, 2011 but which relate to periods prior to the Predecessor Purchase Agreement date. In February 2015, a settlement was reached with a local taxing authority regarding the refund of income tax payments made by the Company prior to June 17, 2011. The transactions were all fully settled in 2017. On the consolidated balance sheets at December 31, 2016, the Company had $0.1 million in Prepaid expenses and other current assets and Other assets related to the tax refund due from the local taxing authority and $0.1 million in Other current liabilities and Other long-term liabilities representing the obligation to the Former Owners. The Company had less than $0.1 million in Prepaid expenses and other current assets and $0.0 million in Other current liabilities on the consolidated balance sheets at December 31, 2016, associated with refunds from various other taxing authorities that were generated prior to June 17, 2011.

15. CASH FLOW STATEMENT – SUPPLEMENTAL INFORMATION

During the year ended December 31, 2017, the Company engaged in the following significant non-cash investing and financing activities:

- Acquired net assets totaling $0.7 million consisting of net Deferred tax assets of $21.1 million, offset by net Deferred tax liabilities of $0.1 million and Deferred credits of $20.3 million in exchange for Accounts receivable and unbilled, net of $0.6 million and Other assets of $0.1 million.

16. ENTITY WIDE DISCLOSURES

Operations By Geographic Location

The Company conducts operations in North America, Europe, Africa, Asia-Pacific and Latin America through wholly-owned subsidiaries and representative sales offices. The Company attributes service revenue to geographical locations based upon the location of the contracting entity. For the years ended December 31, 2017 and 2016, service revenue attributable to the U.S. represented approximately 98%, respectively, of total consolidated service revenue, net.

The following table summarizes property and equipment, net by geographic region and is further broken down to show countries which account for 10% or more of total as of December 31, if any (in thousands):

	2017	2016
Property and equipment, net:		
United States	$ 37,535	$ 34,817
Europe	9,266	7,436
Other	1,938	1,552
Total property and equipment, net	$ 48,739	$ 43,805

17. QUARTERLY FINANCIAL DATA (unaudited)

The following table summarizes the Company's unaudited quarterly results of operations (in thousands, except per share data):

	2017			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Service revenue, net	$ 93,781	$ 94,552	$ 98,681	$ 99,448
Direct costs, excluding depreciation and amortization	51,105	51,955	53,144	55,569
Income from operations	15,944	16,279	17,198	15,437
Net income	8,447	9,553	9,831	11,291
Net income per share attributable to common shareholders - Basic	$ 0.21	$ 0.24	$ 0.25	$ 0.30
Net income per share attributable to common shareholders - Diluted	$ 0.20	$ 0.23	$ 0.25	$ 0.30

	2016			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Service revenue, net	$ 87,800	$ 92,633	$ 94,812	$ 95,376
Direct costs, excluding depreciation and amortization	46,981	49,234	51,221	51,074
Income (loss) from operations	12,869	14,114	12,617	12,890
Net income (loss)	3,448	4,962	5,036	(21)
Net income (loss) per share attributable to common shareholders - Basic	$ 0.11	$ 0.15	$ 0.14	$ (0.00)
Net income (loss) per share attributable to common shareholders - Diluted	$ 0.11	$ 0.15	$ 0.13	$ (0.00)

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that

there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated, as of the end of the period covered by this Annual Report on Form 10-K, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")). Based on that evaluation, our chief executive officer and chief financial officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of December 31, 2017.

Management's Annual Report on Internal Control Over Financial Reporting

Our management's report on internal control over financial reporting is set forth in Part II, Item 8 of this Annual Report on Form 10-K and is incorporated herein by reference.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) identified in connection with the evaluation of our internal control performed during the fiscal quarter ended December 31, 2017, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item will be included in our definitive proxy statement (or the "2018 Proxy Statement") to be filed with the SEC within 120 days of the end of our fiscal year covered by this Annual Report and is incorporated herein by reference.

Item 11. Executive Compensation

The information required by this item will be included in our Proxy Statement for our 2018 Annual Meeting of Stockholders, and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this item will be included in our Proxy Statement for our 2018 Annual Meeting of Stockholders, and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item will be included in our Proxy Statement for our 2018 Annual Meeting of Stockholders, and is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services

The information required by this item will be included in our Proxy Statement for our 2018 Annual Meeting of Stockholders, and is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(1) Financial Statements

The following financial statements and supplementary data are included in Item 8 of this annual report:

(2) Financial Statement Schedules

The information required to be submitted in the Financial Statement Schedules for Medpace Holdings, Inc. and subsidiaries has either been shown in the financial statements or notes, or is not applicable or required under Regulation S-X; therefore, those schedules have been omitted.

(3) Exhibits

The exhibits listed in the accompanying Exhibit Index following the signature page are filed or furnished as a part of this report and are incorporated herein by reference.

Item 16. Form 10-K Summary

None.

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed/ Furnished Herewith
		Form	File No.	Exhibit	Filing Date	
3.1	Amended and Restated Certificate of Incorporation of Medpace Holdings, Inc.	8-K	001-37856	3.1	8/16/16	
3.2	Amended and Restated Bylaws of Medpace Holdings, Inc.	8-K	001-37856	3.2	8/16/16	
4.1	Specimen Stock Certificate evidencing shares of common stock	S-1/A	333-212236	4.1	7/26/16	
4.2	Voting Agreement	10-Q	001-37856	4.2	11/3/16	
#10.1	Medpace Holdings, Inc. 2016 Incentive Award Plan	10-Q	001-37856	10.1	11/3/16	
#10.2	Medpace Holdings, Inc. 2016 Senior Executive Incentive Bonus Plan	10-Q	001-37856	10.2	11/3/16	
10.3	Registration Rights Agreement	10-Q	001-37856	10.3	11/3/16	
#10.4	Form of Medpace Holdings, Inc. 2016 Incentive Award Plan Restricted Stock Award Grant Notice	S-1/A	333-212236	10.13	8/1/16	
#10.5	Form of Medpace Holdings, Inc. 2016 Incentive Award Plan Stock Option Grant Notice and Stock Option Agreement	S-1/A	333-212236	10.14	8/1/16	
#10.6	Form of Medpace Holdings, Inc. 2016 Incentive Award Plan Restricted Stock Unit Award Grant Notice.	S-1/A	333-212236	10.15	8/1/16	
#10.7	Medpace Holdings, Inc. 2016 Incentive Award Plan Sub-Plan for UK Participants	S-1/A	333-212236	10.16	8/1/16	
#10.8	Medpace Holdings, Inc. Non-Employee Director Compensation Policy	S-1	333-212236	10.17	6/24/16	
#10.9	Amended and Restated Employment Agreement, by and between Medpace Holdings, Inc. and Dr. August J. Troendle	S-1/A	333-212236	10.18	7/26/16	
#10.10	Medpace Holdings, Inc. 2016 Incentive Award Plan UK Company Share Option Plan (CSOP) Sub-Plan	S-1/A	333-212236	10.19	8/1/16	
10.11	Credit Agreement, dated as of December 8, 2016, by and among Medpace IntermediateCo, Inc., as parent guarantor, each lender from time to time party thereto and Wells Fargo Bank, National Association, as Administrative Agent	8-K	001-37856	10.1	12/8/16	
21.1	List of Subsidiaries of Medpace Holdings, Inc.					*

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed/ Furnished Herewith
		Form	File No.	Exhibit	Filing Date	
23.1	Consent of Deloitte & Touche LLP, Independent Registered Public Accounting Firm					*
31.1	Rule 13a-14(a) / 15d-14(a) Certification of Chief Executive Officer					*
31.2	Rule 13a-14(a) / 15d-14(a) Certification of Chief Financial Officer					*
32.1	Section 1350 Certification of Chief Executive Officer					**
32.2	Section 1350 Certification of Chief Financial Officer					**
101.INS	XBRL Instance Document					*
101.SCH	XBRL Taxonomy Extension Schema Document					*
101.CAL	XBRL Taxonomy Calculation Linkbase Document					*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					*
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					*
101.PRE	XBRL Taxonomy Extension Presentation					*

* Filed herewith.
** Furnished herewith.
# Indicates management contract or compensatory plan.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MEDPACE HOLDINGS, INC.

By: /s/ JESSE J. GEIGER
Name: Jesse J. Geiger
Title: Chief Financial Officer, and Chief Operating Officer, Laboratory Operations

Date: February 27, 2018

We, the undersigned, hereby severally constitute and appoint Dr. August J. Troendle and Jesse J. Geiger, and each of them singly, our true and lawful attorneys with full power to them and each of them to sign for us, in our names and capacities below, any and all amendments to this Annual Report on Form 10-K filed with the Securities and Exchange Commission.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Capacity	Date
/s/ AUGUST J. TROENDLE Dr. August J. Troendle	President, Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)	February 27, 2018
/s/ JESSE J. GEIGER Jesse J. Geiger	Chief Financial Officer, and Chief Operating Officer, Laboratory Operations (Principal Financial and Accounting Officer)	February 27, 2018
/s/ BRUCE BROWN Bruce Brown	Director	February 27, 2018
/s/ BRIAN T. CARLEY Brian T. Carley	Director	February 27, 2018
/s/ ROBERT O. KRAFT Robert O. Kraft	Director	February 27, 2018
/s/ DR. SUPRAJ R. RAJAGOPALAN Dr. Supraj R. Rajagopalan	Director	February 27, 2018
/s/ ANASTASYA MOLODYKH Anastasya Molodykh	Director	February 27, 2018
/s/ JOHN R. RICHARDSON John R. Richardson	Director	February 27, 2018

Exhibit 21.1

Jurisdiction of Organization	Entity Name
Delaware	Medpace Acquisition, Inc.
Delaware	Medpace IntermediateCo, Inc.
Ohio	Imagepace, LLC
Ohio	Medpace Clinical Pharmacology LLC
Ohio	Medpace, Inc.
Ohio	Medpace Reference Laboratories LLC

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-213116 on Form S-8 and Registration Statement No. 333-220306 on Form S-3 of our report dated February 27, 2018, relating to the financial statements of Medpace Holdings, Inc. appearing in this Annual Report on Form 10-K of Medpace Holdings, Inc. for the year ended December 31, 2017.

/s/ Deloitte & Touche LLP

Cincinnati, Ohio

February 27, 2018

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Dr. August J. Troendle, certify that:

1. I have reviewed this Annual Report on Form 10-K of Medpace Holdings, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 27, 2018

By: /s/ August J. Troendle
Dr. August J. Troendle
President, Chief Executive Officer and Chairman of the Board of Directors
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Jesse J. Geiger, certify that:

1. I have reviewed this Annual Report on Form 10-K of Medpace Holdings, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 27, 2018

By: /s/ Jesse J. Geiger
Jesse J. Geiger
Chief Financial Officer and Chief Operating Officer, Laboratory Operations
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Medpace Holdings, Inc. (the "Company") on Form 10-K for the year ended December 31, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company for the periods presented therein.

Date: February 27, 2018

By: /s/ August J. Troendle
Dr. August J. Troendle
President, Chief Executive Officer and
Chairman of the Board of Directors
(Principal Executive Officer)

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Medpace Holdings, Inc. (the "Company") on Form 10-K for the year ended December 31, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company for the periods presented therein.

Date: February 27, 2018

By: /s/ Jesse J. Geiger
Jesse J. Geiger
Chief Financial Officer and Chief Operating Officer, Laboratory Operations
(Principal Financial Officer)