CHARLES RIVER LABORATORIES INTERNATIONAL INC
Form 10-K
February 13, 2018

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

FORM 10-K

(Mark One)

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

FOR THE FISCAL YEAR ENDED DECEMBER 30, 2017

OR

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

FOR THE TRANSITION PERIOD FROM TO

Commission File No. 001-15943

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	06-1397316
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
251 Ballardvale Street Wilmington, Massachusetts	01887
(Address of Principal Executive Offices)	(Zip Code)

(Registrant's telephone number, including area code): (781) 222-6000

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

Title of each class	Name of each exchange on which registered
Common Stock, $0.01 par value	New York Stock Exchange

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

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

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 o No ý

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 ý No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, 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 ý No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the 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. ý

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

Large accelerated filer ý	Accelerated filer o	Non-accelerated filer o (Do not check if smaller reporting company)
Smaller reporting company o	Emerging growth company o	

If an emerging growth company, indicate by a 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. o

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

On July 1, 2017, the aggregate market value of the Registrant's voting common stock held by non-affiliates of the Registrant was approximately $4,728,183,315. As of January 26, 2018, there were 47,428,916 shares of the Registrant's common stock outstanding, $0.01 par value per share.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive Proxy Statement for its 2018 Annual Meeting of Shareholders scheduled to be held on May 8, 2018, which will be filed with the Securities and Exchange Commission (SEC) not later than 120 days after December 30, 2017, are incorporated by reference into Part III of this Annual Report on Form 10-K. With the exception of the portions of the 2018 Proxy Statement expressly incorporated into this Annual Report on Form 10-K by reference, such document shall not be deemed filed as part of this Form 10-K.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
ANNUAL REPORT ON FORM 10-K
FOR FISCAL YEAR 2017

TABLE OF CONTENTS

PART I

Item 1. Business

General

This Annual Report on Form 10-K contains forward-looking statements regarding future events and the future results of Charles River Laboratories International, Inc. that are based on our current expectations, estimates, forecasts and projections about the industries in which we operate and the beliefs and assumptions of our management. Words such as “expect,” “anticipate,” “target,” “goal,” “project,” “intend,” “plan,” “believe,” “seek,” “estimate,” “will,” “likely,” “may,” “future,” “can,” “could” and other similar expressions that are predictions, indicate future events and trends or which do not relate to historical matters are intended to identify such forward-looking statements. These statements are based on our current expectations and beliefs and involve a number of risks, uncertainties and assumptions that are difficult to predict. For example, we may use forward-looking statements when addressing topics such as: goodwill and asset impairments still under review; future demand for drug discovery and development products and services, including the outsourcing of these services; our expectations regarding stock repurchases, including the number of shares to be repurchased, expected timing and duration, the amount of capital that may be expended and the treatment of repurchased shares; present spending trends and other cost reduction activities by our clients; future actions by our management; the outcome of contingencies; changes in our business strategy, business practices and methods of generating revenue; the development and performance of our services and products; market and industry conditions, including competitive and pricing trends; our strategic relationships with leading pharmaceutical companies and venture capital limited partnerships, and opportunities for future similar arrangements; our cost structure; the impact of completed and in-process acquisitions (including Argenta, BioFocus, VivoPath, ChanTest, Sunrise, Celsis, Oncotest, WIL Research, Blue Stream, Agilux, Brains On-Line, KWS BioTest, and MPI Research) and the timing of closing of in-process acquisitions; our expectations with respect to revenue growth and operating synergies (including the impact of specific actions intended to cause related improvements); the impact of specific actions intended to improve overall operating efficiencies and profitability (and our ability to accommodate future demand with our infrastructure), including gains and losses attributable to businesses we plan to close, consolidate or divest; changes in our expectations regarding future stock option, restricted stock, performance share units and other equity grants to employees and directors; expectations with respect to foreign currency exchange; assessing (or changing our assessment of) our tax positions for financial statement purposes; and our liquidity. In addition, these statements include the impact of economic and market conditions on us and our clients; the effects of our cost-saving actions and the steps to optimize returns to shareholders on an effective and timely basis.

You should not rely on forward-looking statements because they are predictions and are subject to risks, uncertainties and assumptions that are difficult to predict. Therefore, actual results may differ materially and adversely from those expressed in any forward-looking statements. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this document or in the case of statements incorporated by reference, on the date of the document incorporated by reference. Factors that might cause or contribute to such differences include, but are not limited to, those discussed in this Form 10-K under the sections entitled “Our Strategy,” “Risk Factors,” "Management's Discussion and Analysis of Financial Condition and Results of Operations,” in our press releases and other financial filings with the SEC. We have no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or risks. New information, future events or risks may cause the forward-looking events we discuss in this report not to occur.

Corporate History

We began operating in 1947 and since then, we have undergone several changes to our business structure. Charles River Laboratories International, Inc. was incorporated in 1994 and in 2000 we completed our initial public offering. Our stock is traded on the New York Stock Exchange under the symbol “CRL” and is included in the Standard & Poor's MidCap 400, 1000 and Composite 1500 indices, the Dow Jones U.S. Health Care Index, the NYSE Arca Biotechnology Index, the NYSE Composite, and many of the Russell indices, among others. We are headquartered in Wilmington, Massachusetts. Our headquarters mailing address is 251 Ballardvale Street, Wilmington, MA, 01887, and the telephone number at that location is (781) 222-6000. Our Internet site is www.criver.com. Material contained

on our Internet site is not incorporated by reference into this Form 10-K. Unless the context otherwise requires, references in this Form 10-K to “Charles River,” “we,” “us” “the Company” or “our” refer to Charles River Laboratories International, Inc. and its subsidiaries.

This Form 10-K, as well as all other reports filed with the SEC, is available free of charge through the Investor Relations section of our Internet site as soon as practicable after we electronically file such material with, or furnish it to, the SEC. You may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington,

DC 20549. In addition, you may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site (http://www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

Overview

We are a full service, early-stage contract research organization (CRO). We have built upon our core competency of laboratory animal medicine and science (research model technologies) to develop a diverse portfolio of discovery and safety assessment services, both Good Laboratory Practice (GLP) and non-GLP, which is able to support our clients from target identification through non-clinical development. We also provide a suite of products and services to support our clients' manufacturing activities. Utilizing our broad portfolio of products and services enables our clients to create a more flexible drug development model, which reduces their costs, enhances their productivity and effectiveness, and increases speed to market.

Discovery represents the earliest stages of research in the life sciences, directed at the identification, screening, and selection of a lead molecule for future drug development. Discovery activities typically extend anywhere from 4 to 6 years in conventional pharmaceutical research and development timelines.

Development activities, which follow, and which can take up to 7 to 10 years, are directed at demonstrating the safety, tolerability, and clinical efficacy of the selected drug candidates. During the non-clinical stage of the development process, a drug candidate is tested in vitro (non-animal, typically on a cellular or sub-cellular level in a test tube or multi-well petri plate) and in vivo (in research models) to support planned or on-going human clinical trials.

The development of new drugs requires the steadily increasing investment of time and money. Various studies and reports estimate that it takes between 10 to 15 years, up to $2.0 billion excluding time costs, and exploration of between 10,000 and 15,000 drug molecules to produce a single Food and Drug Administration (FDA)-approved drug. We are positioned to leverage our leading portfolio in early-stage drug research in an efficient and cost-effective way to aid our clients in bringing their drugs to market faster.

For over 70 years, we have been in the business of providing the research models required in research and development of new drugs, devices, and therapies. Over this time, we have built upon our core competency of in vivo biology to develop a diverse and expanding portfolio of products and services, which now encompasses the broader early-stage drug research process. Our client base includes global pharmaceutical companies, biotechnology companies, government agencies, and hospitals and academic institutions around the world. We currently operate approximately 80 facilities in 23 countries worldwide, which numbers exclude our Insourcing Solutions (IS) sites. Our products and services, supported by our global infrastructure and deep scientific expertise, enable our clients to overcome many of the challenges of early-stage life sciences research. In 2017, our total revenue was $1.9 billion and our operating income from continuing operations, before income taxes, was $297.0 million.

We have three reporting segments: Research Models and Services (RMS), Discovery and Safety Assessment (DSA), and Manufacturing Support (Manufacturing).

Through our RMS segment, we have been supplying research models to the drug development industry since 1947. With over 150 different strains, we continue to maintain our position as a global leader in the production and sale of the most widely used rodent research model strains, principally genetically and microbiologically defined purpose-bred rats and mice. We also provide a variety of related services that are designed to assist our clients in supporting the use of research models in drug discovery and development. We maintain multiple production centers, including barrier rooms and/or isolator facilities, on three continents (North America, Europe, and Asia). In 2017, RMS accounted for 26.6% of our total revenue and approximately 3,200 of our employees, including approximately 100 science professionals with advanced degrees.

Our DSA business segment provides services that enable our clients to outsource their innovative drug discovery research, their related drug development activities, and their regulatory-required regulatory safety testing of potential new drugs, industrial and agricultural chemicals and medical devices to us. The demand for these services has historically been driven by the needs of large global pharmaceutical companies that have exceeded their internal capacity and by the needs of biotechnology companies and non-governmental organizations (NGOs) who traditionally outsourced most of their discovery, development and safety testing programs. Global pharmaceutical, biotechnology,

and chemical companies choose to outsource their discovery, development, and safety activities because outsourcing reduces the significant investment in personnel and facilities and capital resources necessary to efficiently and effectively conduct required scientific studies. Additionally, outsourcing to Charles River provides companies access to scientific expertise that they may not have internally or otherwise available to them.

We are the largest provider of drug discovery, non-clinical development, and safety testing services worldwide and offer a comprehensive portfolio of services required for regulatory submission of pharmaceuticals, and industrial and agricultural

chemicals. We have extensive expertise in the discovery of small molecule clinical candidates and in the design, execution, and reporting of safety assessment studies for numerous types of compounds including small and large molecule pharmaceuticals, industrial and agricultural chemicals, biocides and medical devices. We currently provide discovery and safety assessment services at multiple facilities located in the United States (U.S.), Canada, and Europe. Our DSA segment represented 52.8% of our total revenue in 2017 and employed approximately 6,400 of our employees including approximately 1,000 science professionals with advanced degrees.

Through our Manufacturing segment, we help ensure the safe production and release of products manufactured by our clients. Our Microbial Solutions business provides in vitro methods for conventional and rapid quality control testing of sterile and non-sterile pharmaceuticals and consumer products. Our Biologics Testing Solutions business provides specialized testing of biologics and devices frequently outsourced by global pharmaceutical and biotechnology companies. Our Avian Vaccine Services business provides specific-pathogen-free (SPF) fertile chicken eggs, SPF chickens and diagnostic products used to manufacture vaccines.

In 2017, Manufacturing accounted for 20.7% of our total revenue from continuing operations and approximately 1,500 of our employees, including approximately 100 science professionals with advanced degrees.

In recent years, we have focused our efforts on improving the efficiency of our global operations to enhance our ability to support our key clients. Our key pharmaceutical and biotechnology clients are increasingly seeking full service, “one-stop” global partners to whom they can outsource more of their drug discovery and development efforts. It is estimated that the market for regulated safety assessment services is at least 50% outsourced, while emerging growth areas such as early and in vivo discovery and certain research model services are currently believed to be less outsourced.

Research Models and Services (RMS). Our RMS segment is comprised of (1) Research Models and (2) Research Model Services.

Research Models. Our Research Models business is comprised of the production and sale of research models.

Research Models. A significant portion of this business involves the commercial production and sale of research models, principally purpose-bred rats and mice for use by researchers. We provide our rodent models to numerous clients around the world, including most pharmaceutical companies, a broad range of biotechnology companies, and many government agencies, hospitals, and academic institutions. We have a global footprint with production facilities strategically located in 8 countries, in close proximity to our clients. Our research models include standard stocks and strains and disease models such as those with compromised immune systems, which are in demand as early-stage research tools. The FDA and foreign regulatory agencies typically require that the safety and efficacy of new drug candidates be tested on research models like ours prior to testing in humans. As a result, our research models are an essential part of the drug discovery and development process.

Our rodent species have been, and continue to be, some of the most extensively used research models in the world, largely as a result of our geographic footprint and continuous commitment to innovation and quality. Our research models are bred and maintained in controlled environments, which are designed to ensure that the models are free of specific viral and bacterial agents and other contaminants that can disrupt research operations and distort research results. With our production capabilities, we are able to deliver consistently high-quality research models worldwide.

Our research models include:

- outbred, which are purposefully bred for heterogeneity;
- inbred, which are bred to be homogeneous;
- spontaneous mutant, whose genotype results in a naturally occurring genetic mutation (such as immune deficiency);
- hybrid, which are the offspring of two different inbred parents; and
- other genetically modified research models, such as knock-out models with one or more disabled genes and transgenic models.

Certain of our research models are proprietary rodent models used to research treatments for diseases such as diabetes, obesity, cardiovascular, cancer and kidney disease.

We are also a premier provider of high quality, purpose bred, SPF large research models to the biomedical research community.

3

Research Model Services. RMS also offers a variety of services designed to support our clients' use of research models in basic research and screening non-clinical drug candidates. These services address the need among pharmaceutical and biotechnology companies to outsource the non-core aspects of their drug discovery activities. Our services include those which are related to the maintenance and monitoring of research models, and managing research operations for government entities, academic organizations, and commercial clients. We currently have three service offerings in research models services: Genetically Engineered Models and Services, Insourcing Solutions, and Research Animal Diagnostic Services.

Genetically Engineered Models and Services (GEMS). We create, breed and maintain research models required by our clients for biomedical research activities. The creation of a genetically engineered model (GEM) is a critical scientific event, but it is only the first step in the discovery process, and our scientists can advise clients on how to efficiently create custom models utilizing together with in-licensed technologies and approaches to modify the genome. Through our phenotyping platforms we can also design and conduct the relevant studies and tests
allowing characterization of the generated models. Productive utilization of GEMs requires significant additional technical expertise in order to properly support basic and early discovery research. We provide breeding expertise and colony development, quarantine, health and genetic testing and monitoring, germplasm cryopreservation, and rederivation including assisted reproduction and model creation. Our team of project managers is supported by a technologically advanced Internet Colony Management (ICM™) system that allows for real-time data exchange. We provide these services to clients around the world, including pharmaceutical and biotechnology companies, hospitals, universities, and government agencies.

Insourcing Solutions (IS). We manage research operations (including recruitment, training, staffing, and management services) for government entities, academic organizations, and commercial clients. Some research institutions prefer to retain certain elements of their research in-house, while outsourcing staffing and management, thus driving demand for our services. We believe that our expertise in early-stage drug research, and in particular research model care, scientific and technical support, facility operations, and discovery and development services, enhances the productivity and quality of our clients' research programs.

Research Animal Diagnostic Services (RADS). We monitor and analyze the health profiles of our clients’ research models and research biologics by providing infectious agents and pathology assessment. We developed this capability internally in order to address the quality control of our research model business. We are able to serve as our clients’ sole-source testing laboratory, or as an alternative source supporting our clients’ internal laboratory capabilities. We believe we are the reference laboratory of choice for health assessment of laboratory research models and an industry leader in the field of laboratory animal diagnostics.

Discovery and Safety Assessment (DSA)

We currently offer discovery and safety assessment services, both regulated and non-regulated, in which we include both in vitro and in vivo studies, supporting laboratory services, and strategic non-clinical consulting and program management to support product development.

Discovery Services. We offer a full spectrum of discovery services from identification of a novel druggable target, followed by high-throughput screening and medicinal chemistry, through delivery of non-clinical drug and therapeutic candidates ready for safety assessment. Our Early Discovery and In Vivo Discovery businesses are integrated into a single business line - Discovery Services - as evidence of our efforts to streamline and enhance the support we can provide for clients’ integrated drug discovery programs. One seamless discovery organization allows us to better engage with clients at the earliest stages of drug discovery and support their complex scientific needs. We support a variety of therapeutic areas including oncology, central nervous system, bone and musculoskeletal, inflammation, metabolic diseases, respiratory and fibrotic diseases, cardiovascular, gastrointestinal, genito-urinary, anti-infectives, and ophthalmology. We also provide expertise in the growing area of rare and orphan diseases, which are typically diseases of high unmet medical need in smaller patient populations, such as myotonic dystrophy, cystic fibrosis, and Huntington’s Disease. We believe there are emerging opportunities to assist our clients in a variety of drug discovery applications and platforms from target discovery to candidate selection.

Early Discovery. We are a global leader in integrated drug discovery services, with a predominant focus on in vitro biology capabilities and medicinal chemistry. Our knowledge and expertise allow us to support our clients as they drive their molecules forward through design and implementation of clear program plans. Our full suite of service offerings allows us to support our clients at the earliest stages of their research, and to stay with them through the entire early-stage process. Our Early Discovery service capabilities include: target discovery and validation (which includes custom in vivo and in vitro genome editing), hit identification, medicinal chemistry, scale-up chemistry and testing how a drug is absorbed, distributed in the body, metabolized, and excreted (ADME). We also offer ion channel testing for both discovery and non-clinical purposes. Our genome editing capabilities enable us to develop more translational research models designed to enhance scientific understanding and improve

the efficiency and effectiveness of the drug discovery process. These services extend from the early discovery screening process through to in vitro GLP safety assessment testing. In addition to providing these services to our clients at our research laboratories, we also provide some of these services at our clients' laboratories with Charles River scientists as an in-sourcing service model.

In Vivo Discovery Services. In Vivo Discovery Services are essential in early stage, non-clinical discovery, directed at the identification, screening, and selection of a lead compound for drug development. In vivo activities typically extend anywhere from 4 to 6 years in conventional pharmaceutical research and development timelines. We offer research and development expertise, capabilities, and services globally to accelerate our clients' drug discovery pipelines from lead generation to candidate selection and on occasion, complete in vivo studies in support of clinical efforts or post-marketing work. We complement and extend clients' capabilities and expertise to improve their decision-making, increase their flexibility, and reduce their internal costs and product development timelines. In addition, we provide in vitro and in vivo assays in support of lead optimization to candidate selection activities. Examples of this include early pharmacokinetic and pharmacodynamic studies and in vitro and in vivo assays to assess mechanism, bioavailability, metabolism, efficacy, and safety pharmacology.

In August 2017, we acquired Brains On-Line (BOL), a leading CRO that provides critical data that advances novel therapeutics for the treatment of central nervous system (CNS) diseases. This acquisition strategically expands our existing CNS capabilities and establishes us as a single-source provider for a broad portfolio of discovery CNS services. In January 2018, we acquired KWS BioTest (KWS), a leading CRO specializing in in vitro and in vivo discovery testing services for immuno-oncology and inflammatory and infectious diseases. The addition of KWS enhances our discovery expertise, with complementary offerings that provide our clients with additional tools in the active therapeutic research areas of oncology and immunology.

Safety Assessment. We offer a full range of safety assessment studies required for regulatory submission on a global basis.

Bioanalysis, Drug Metabolism and Pharmacokinetics. In support of non-clinical drug safety testing, our clients are required to demonstrate appropriate stability in the collected biological sample, pharmacokinetics of their drug or compound in circulation, the presence of metabolites, and, with biologics, the presence or absence of anti-drug antibodies. We have scientific depth in the sophisticated bioanalytical techniques required to satisfy these requirements for a number of drug classes. Once the analysis is complete, our scientists evaluate the data to provide information on the pharmacokinetics and/or toxicokinetics of the drug, and complete an evaluation of the biologic disposition of the drug and its potential metabolites. Pharmacokinetics refers to the understanding of what the body does to a drug or compound administered at therapeutic dose levels, including the process by which the drug is absorbed, distributed in the body, metabolized and excreted (ADME). Toxicokinetics refers to the same understanding as applied at higher doses that may result in adverse effects. These studies are required for the full non-clinical assessment of the disposition of the drug and the results are used in the final non-clinical safety evaluation of the compound to support the start of clinical trials. After performing sample analysis in support of non-clinical studies, we also have the capabilities to capture the benefits of bridging the non-clinical bioanalysis with subsequent clinical development.

Safety Pharmacology. In support of non-clinical drug safety testing, our clients are required to demonstrate that the test article as formulated does not have the potential to prolong the cardiac QT interval, effects on CNS and respiratory system. We have the assays (both in vitro and in vivo) and can perform the screening for this demonstration that is required prior to the commencement of clinical trials.

Toxicology. We have expertise in the design and execution of development programs in support of chemically-derived (small molecule) and biotechnology-derived (large molecule) pharmaceuticals. We also support safety studies to test chemicals, industrial chemical, agrochemicals and medical devices. For human pharmaceutical candidates, once a lead molecule is selected, toxicology studies are required to support clinical trials in humans and new drug registrations. These toxicology studies focus on assessing the safety of the molecule to determine if administration of the molecules to humans might cause any unintended harmful effects. For industrial chemicals and agrochemicals, safety studies are performed to identify potential risks to humans and the environment and are required

for regulatory registration. Toxicology studies performed for any of these compounds are typically performed using in vitro and in vivo research models to identify any potential adverse effects that a compound has on an organism over a variety of doses and over various time periods.

Our toxicology services feature:

- a broad offering of in vitro and in vivo capabilities and study types designed to identify possible safety risks for potential human and animal therapeutics, industrial chemicals and agrochemicals as they progress from discovery to regulatory registration;

- a broad offering of in vitro and in vivo studies in support of general toxicology (acute, sub-acute, and chronic studies), genetic toxicology, safety pharmacology, and carcinogenicity bioassays that are required for regulatory submissions supporting “first-in-human” to “first-to-the-market” strategies for potential human therapeutics;
- a broad offering of in vitro and in vivo studies in support of general toxicology (acute, sub-acute, and chronic studies), genetic toxicology, reproductive and developmental toxicology, environmental toxicology, and carcinogenicity bioassays that are required for regulatory submissions supporting the registration of industrial chemicals, agrochemicals, and biocides;
- expertise in standard and specialty routes of administration (e.g., infusion, intravitreal, intrathecal, and inhalation) that are important not only for the testing of potential pharmaceuticals and biopharmaceuticals, but also for the safety testing of medical devices, nutraceuticals, animal health products, and other materials;
- expertise in the conduct and assessment of reproductive, developmental, and juvenile toxicology studies (in support of larger-scale and later-stage human clinical trials or chemical registration);
- expertise in environmental toxicology (aquatic and terrestrial) and regulatory submissions required for chemical registration;
- services in important specialty areas such as ocular, bone, juvenile/neonatal, immune-toxicology, photobiology, inhalation, and dermal testing;
- expertise in all major therapeutic areas;
- study design and strategic advice to our clients based on our wealth of experience and scientific expertise in support of drug development and chemical registration; and
- a strong history of assisting our clients in achieving their regulatory and/or internal milestones for the safety testing of numerous therapy types including stem cells, vaccines, proteins, antibodies, drug conjugates, oligonucleotide biotherapeutics, small molecules, medical devices, chemicals, and agrochemicals.

Our safety assessment facilities comply with GLP to the extent required by the FDA, Environmental Protection Agency, USDA, European Medicines Agency, European Chemicals Agency, Organization for Economic Co-operation and Development (OECD), as well as other international regulatory agencies. Furthermore, our early-stage discovery work, which is not subject to GLP standards, is typically carried out under a quality management system such as ISO 9100 or similarly constructed internally developed quality systems. Our facilities are regularly inspected by U.S. and other regulatory compliance monitoring authorities, our clients' quality assurance departments, and our own internal quality assessment program.

Pathology Services. The ability to identify and characterize clinical and anatomic pathologic changes is critical in determining the safety and efficacy of potential new therapeutics and industrial and agriculture chemicals and medical devices. Key “go/no-go” decisions regarding continued product development are typically dependent on the identification, characterization and evaluation of fluid, tissue, and cellular changes that our experts identify and interpret for our clients. We employ a large number of highly trained veterinary anatomic and clinical pathologists and other scientists who use state-of-the-art techniques to identify potential test compound-related changes within tissues, fluids, and cells. In addition to all standard anatomic and clinical pathology techniques, we provide specialized evaluations such as cytology, platelet function, assay development, immunohistochemistry, in situ hybridization electron microscopy, tissue morphometry, and stereology services.

Manufacturing Support (Manufacturing)

Microbial Solutions. Our Microbial Solutions business provides in vitro methods for conventional and rapid quality control testing of sterile and non-sterile biopharmaceutical and consumer products. Our legacy Endosafe business provides lot release testing of medical devices and injectable drugs for endotoxin contamination. Our Celsis business provides rapid microbial detection systems for quality control testing in the pharmaceutical and consumer products industries. Our Accugenix business provides state-of-the-art microbial identification and genetic sequencing services for manufacturing in the biopharmaceutical, medical device, nutraceutical, and consumer care industries.

Endotoxin testing is an in vitro process which uses a processed extract from the raw materials of the horseshoe crab, known as limulus amebocyte lysate (LAL). The LAL test is the first and most successful FDA-validated alternative to an in vivo test to date. The extraction of the raw materials for LAL does not harm the crabs, which are subsequently

returned to their natural ocean environment. Our Microbial Solutions business produces and distributes a comprehensive portfolio of endotoxin testing, microbial detection and identification kits, reagents, software, accessories, instruments, and associated microbial quality control

laboratory services to a broad range of companies manufacturing and releasing products from the pharmaceutical, biotechnology, consumer products, and dairy industries worldwide. We are a market leader in endotoxin testing products and services, which are used for FDA-required quality control testing of injectable drugs and medical devices, their components, and the processes by which they are manufactured.

The growth in our Microbial Solutions business is driven by our FDA-approved line of next-generation endotoxin testing products. This line is based on the Endosafe Portable Testing System (Endosafe®-PTS™) technology, which allows rapid endotoxin testing in the central laboratory or manufacturing environment. In recent years, we expanded the PTS product portfolio to include a multiple sample testing system known as the Endosafe®-MCS™ (multi-cartridge system) and the first fully automated robotic system developed specifically for high-volume endotoxin testing, Endosafe®-Nexus, to satisfy the demand of our clients who require higher sample throughput. We expect to see expanded use of this rapid endotoxin testing technology as clients transition from traditional methods to our rapid cartridge technology. In 2017, we launched our Cortex software that provides an integrated solution to securely consolidate, query and analyze data.

Celsis' systems are principally used for product-release testing to help ensure the safe manufacture of pharmaceutical and consumer products. The Advance II™, Accel™ and Innovate™ systems for non-sterile applications complement our PTS-Micro™, a rapid bacterial (bioburden) detection system for sterile biopharmaceutical applications. We expect our comprehensive portfolio to drive increased adoption of our quality control testing solutions across both sterile and non-sterile applications.

Our Accugenix global lab network is the premier provider of current Good Manufacturing Practice (cGMP)-compliant contract microbial identification services. Accugenix is an acknowledged industry leader in species-level identification and strain typing of bacteria and fungi that are recovered from manufacturing facilities. Utilizing state-of-the-art and proprietary technologies, coupled with scientific expertise and analysis, Accugenix excels in providing accurate, timely, and cost-effective microbial identification services required to meet internal quality standards and government regulations.

Biologics Testing Solutions. We perform specialized testing of biologics frequently outsourced by global pharmaceutical and biotechnology companies. Our laboratories in the U.S., Germany, Scotland, Ireland, and France provide timely and regulatory-compliant services in the areas of analytical, molecular biology, virology, bioanalysis, immunochemistry, microbiology, cell biology, in vivo studies and related services. We confirm that biomanufacturing processes for drug candidates and drugs produced are consistent, correctly defined, stable, and essentially contaminant free. This testing is required by the FDA, EMA and other international regulatory authorities for our clients to obtain new drug approvals, to maintain government-licensed manufacturing facilities, and to manufacture and release market-approved therapeutic products for patient treatment.

Our manufacturing services group grows and stores well-characterized early-stage client cell lines for later development or manufacture of therapeutic proteins and vaccines for clinical trials. We further design and provide viral clearance projects for Phase I, II, and III studies in our German and U.S. facilities.

Avian Vaccine Services. We are the global leader for the supply of SPF fertile chicken eggs and chickens. SPF chicken embryos are used by vaccine producers as self-contained "bioreactors" for the manufacture of live viruses. These viruses are used as a raw material for human and veterinary vaccine applications. The production of SPF eggs is performed under biosecure conditions, similar in many ways to our research model production. We have a worldwide presence, with several SPF egg production facilities in the U.S., and contracted production capabilities in Hungary. We also operate a specialized avian laboratory in the U.S., which provides in-house quality control testing of the SPF flocks, offers testing services to vaccine companies and commercial poultry operations, and manufactures poultry diagnostics and bulk antigens for poultry vaccines.

Our Strategy

Our objective is to be the preferred strategic global partner for our clients. Our strategy is to deliver a comprehensive and integrated portfolio of drug discovery and non-clinical development products, services, and solutions to support our clients' discovery and early-stage drug research, process development, scale up, and manufacturing efforts, and enable them to bring new and improved therapies to market faster and more cost effectively. In addition, we believe

we can improve and augment drug discovery and early-stage development effectiveness by coordinating the dialog between large pharmaceutical, biotechnology, academic and non-governmental organizations, and venture capitalists. Separately, through our various Manufacturing segment businesses, we aim to be the premier provider of products and services that ensure our clients produce and release their products safely. As these groups increasingly rely on and interact with one another in this field, we assist them in working together by developing deeper strategic relationships with each of these constituencies.

We believe we have certain competitive advantages in executing this strategy, as a result of our continuing focus on the following:

Integrated Early-Stage Portfolio. We are the only large, global CRO with a portfolio of products, services, and solutions that focuses on drug discovery and early-stage development. We provide research models and associated services, discovery research studies and services, and comprehensive safety assessment studies in both regulated and non-regulated environments. As such, we are able to collaborate with clients from target discovery through candidate selection. When critical decisions are made regarding which therapeutics will progress from discovery to development, we continue to work alongside our clients as the drug candidates move downstream. Our recognized expertise in early-stage drug research and pharmacology provides us with a competitive advantage. We understand our clients' therapies and the challenges they face during the discovery and development process, including mechanism of action, efficacy, drug metabolism, safety assessment, and toxicological testing critical for making “go/no-go” decisions.

Pharmaceutical Manufacturing Support Portfolio. We also offer a portfolio of products, services, and solutions that supports the process development, scale up, and quality control efforts of the biopharmaceutical industry. We provide products and services that support the development and release of commercialized biologics products. In particular, we are an industry leader in the areas of microbial detection and microbial identification to support process development and ongoing commercial production. Our portfolio spans a broad range of traditional and rapid methods, which provide the highest testing quality, enhance productivity, and reduce cycle time.

Deep Scientific Expertise. We provide a breadth and depth of scientific expertise across a broad range of therapeutic areas which may be too costly for our clients to build and/or maintain in-house. We provide essential capabilities, including biomarkers, biologics, medicinal chemistry, in vitro screening, in vivo pharmacology, immunology, pathology, biologics process development testing, microbial detection and identification, and other specialty service areas that have high infrastructure costs or are cost-prohibitive for clients to maintain in-house. We continue to expand our portfolio in key therapeutic and pharmacology areas to align with our clients' internal drug discovery and development areas of focus. These areas of disease focus and expertise include oncology, metabolism and obesity, immunology, respiratory, bone and musculoskeletal, diabetes, cardiovascular, ophthalmology, and central nervous system. In the areas of functional expertise, it includes synthetic and medicinal chemistry, cell line development, in vitro and in vivo assay development screening, non-clinical imaging, structural biology, process chemistry, toxicology, veterinary pathology, bioanalysis, scale up, and formulation development. We also continue to enhance our small molecule and biologics manufacturing portfolio in areas of greatest industry need, where outsourcing provides major benefits for our clients and where we could provide significant benefits given our unique early development portfolio and global footprint.

Commitment to Animal Welfare. We are committed to being the worldwide leader in the humane care of laboratory animals and implementation of the “3Rs” (Replacement, Reduction, and Refinement). As researchers, we are responsible to our clients and the public for the health and well-being of the animals in our care. We work hand-in-hand with the scientific community to understand how living conditions, handling procedures, and reduction of stress play an important role in the quality and efficiency of research.

Superior Quality and Client Support. We maintain scientific rigor and high quality standards through management of key performance indicators and an intense focus on biosecurity. These standards allow clients to access our global portfolio of products and services with the confidence that they will obtain consistent results no matter where they choose to obtain their products or conduct their research.

Flexible and Customized Environment to Provide the Right Solutions. Each of our clients is different, with unique needs and specific requirements. We understand the importance of flexibility, and leverage the expertise embedded in our integrated early-stage portfolio to provide customized solutions tailored to the specific need or therapeutic area for a particular client. By utilizing our streamlined and efficient facilities, we help clients create a flexible infrastructure in order to improve their workload and staffing requirements. This allows our clients to reduce internal capacity and/or staff. We provide enhanced value to clients who use us as a full-service integrated partner over a longer period of time.

Large, Global Partner. We believe there is a particular advantage in being a full service, high-quality provider of research models and associated services, discovery and non-clinical in vivo and in vitro services, and manufacturing support on a global scale. Many of our clients, especially large biopharmaceutical companies, have decided to limit the number of suppliers with which they work. Their preference is to partner with large Tier 1 CROs like Charles River, who can offer clients support across the early-stage drug research process as a result of broader portfolios and

experience in project management. This includes extensive scientific, technical, and therapeutic area expertise, real-time access to data through secure portals, a global footprint, and streamlined and simplified processes and communications including professional project and relationship management. We are focused on leveraging our competitive advantages to ensure we are recognized as the premier preferred provider, thereby enabling us to build broader and deeper long-term strategic relationships with our clients.

Global biopharmaceutical companies are continuing to make the decision to outsource more significant tranches of their drug discovery, development, and manufacturing processes. Over the past few years we have entered into strategic relationships with leading global biopharmaceutical companies and expanded existing preferred provider agreements with other leading global biopharmaceutical companies. For example, during the past year:

- We launched a multi-year strategic partnership with Nimbus Therapeutics to advance new programs spanning the disease areas of immunology, metabolic disorders and oncology from the discovery phase through to Investigational New Drug submission.
- We extended our longstanding, strategic, integrated drug discovery partnership with Chiesi Farmaceutici SpA in the field of respiratory disease. Through this continued partnership, we provide Chiesi an extensive portfolio of integrated drug discovery capabilities, including medicinal chemistry, ADME/DMPK studies, pharmaceuticals, in vitro assays, in vivo models and safety pharmacology studies to help identify and test Chiesi’s candidates for preclinical development.

For some of our partners, we provide a broad suite of research models and discovery and safety assessment services and for others we provide a customized and select array of discovery and safety assessment services and/or research models. Offering flexibility enables our clients to utilize our products and services to deliver innovative health solutions in a manner which best suits their individual needs.

There have been fundamental changes in our clients' research and development needs, particularly with regard to the large pharmaceutical industry. First, these clients are increasingly emphasizing studies that have greater translation to the clinic so that they can make appropriate decisions regarding the progression of potential therapeutic entities earlier in the development process. The result is a greater focus on discovery services, including in vivo pharmacology studies consisting of efficacy and non-GLP DMPK (drug metabolism and pharmacokinetics) studies. Second, these clients are choosing to outsource additional discovery and safety assessment services in order to increase the efficiency and effectiveness of their drug selection processes.

We believe that this changing environment will provide enhanced outsourcing opportunities for us in the future. We remain optimistic that our clients are increasingly receptive to partnering with CROs as a means of meeting their discovery and non-clinical support needs. We believe that the successful development of new therapies and outsourcing by the pharmaceutical industry will continue to be positive drivers of demand for our products and services.

We also believe that larger biopharmaceutical companies will increasingly focus on efficiencies and execution. They will continue to reassess what are core differentiators from research and development to commercialization. We expect they will also continue to be conservative in re-building infrastructure and expertise. This should lead to more opportunities for strategic outsourcing as clients choose to utilize external resources rather than invest in internal infrastructure. In the aggregate, we believe that the evolving large biopharmaceutical research and development business model will make our essential products and services even more relevant to our clients, and allow them to leverage our integrated offerings and expertise to drive their research, non-clinical development, and manufacturing efficiency and cost effectiveness.

We believe it is critical to participate in the strategic partnering process because these relationships are likely to extend for lengthy periods of time - three to five years. Furthermore, both the client and the CRO invest heavily in the initial phases of the relationship to successfully transfer work streams and establish governance processes. Given this investment, clients are less likely to change CROs at the conclusion of the initial relationship. Our goal is to prevail in the majority of these opportunities.

We also believe that our portfolio provides flexible solutions that meet the customized needs for virtual and small biotechnology companies, which have limited or no infrastructure. These clients also value our ability to provide a

broad range of services and integrated services where we work hand in hand with our customers to design, plan, and manage integrated projects and programs. This includes classically outsourced services, “insourced” services, and hybrid offerings blending resources from both our clients and our staff. Our clients have utilized this capability, which blends resources both inside and outside their walls.

We maintain an intense focus on initiatives designed to allow us to drive profitable growth and maximize value for shareholders, and better position ourselves to operate successfully in the current and future business environment. As a result, we believe that we are well positioned to exploit both existing and new outsourcing opportunities.

We intend to continue to broaden the scope of the products and services we provide across the drug discovery and early-stage development continuum primarily through internal development, and, as needed, through focused acquisitions and alliances. Acquisitions are an integral part of our growth strategy, both to expand our portfolio and broaden our geographic footprint. We are committed to a disciplined approach that seeks to target businesses that are a sound strategic fit and that offer the prospect of enhancing shareholder value, typically including the achievement of a hurdle rate for return on invested capital above our weighted average cost of capital. For example, in each of 2016 and 2017, we completed strategic acquisitions. In 2016, we completed three acquisitions. In April 2016, we acquired WIL Research, a premier provider of safety assessment and contract development and manufacturing services to biopharmaceutical and agricultural and industrial chemical companies worldwide. In June 2016, we acquired Blue Stream, an analytical CRO supporting the development of complex biologics and biosimilars. In September 2016, we acquired Agilux, a CRO that provides a suite of integrated discovery small and large molecule bioanalytical services, drug metabolism and pharmacokinetic services, and pharmacology services. In August 2017, we acquired Brains On-Line (BOL), a leading CRO that provides critical data that advances novel therapeutics for the treatment of central nervous system (CNS) diseases. In January 2018, we acquired KWS, a leading CRO specializing in in vitro and in vivo discovery testing services for immuno-oncology and inflammatory and infectious diseases.

We are also partnering with a diverse set of leading venture capital firms around the world primarily investing in life sciences, health care, and therapeutics with an emphasis on early-stage companies. Through these partnerships and close relationships, we gain insight into their company and asset portfolios and are thus able to promote our contract research services for discovery, safety assessment, and biologics testing. Thus, we have the opportunity to establish ourselves as a provider of choice for a unique client group which has emerged as biopharmaceutical companies rationalize and prioritize their development pipelines.

Customers

We maintain a three-pronged sales organization with a focus on:

- global biopharmaceutical companies;
- small and mid-sized pharmaceutical, biotechnology, agrochemical, industrial chemical, and veterinary medicine companies, as well as contract research organizations; and
- academic and government institutions.

We also maintain several sales specialists which either have specific technical expertise (often degreed scientists) or cover unique markets.

Our clients continue to consist primarily of all of the major biopharmaceutical companies; many biotechnology, agricultural and industrial chemical, life science, veterinary medicine, medical device, diagnostic, and consumer product companies; contract research and contract manufacturing organizations; and other commercial entities, as well as leading hospitals, academic institutions, and government agencies. We have stable, long-term relationships with many of our clients. During 2017, no single commercial client accounted for more than 3% of our total revenue and no single customer accounted for more than 10% of the revenue of any of our three business segments.

We continue to pursue a goal of expanding our relationships with our large biopharmaceutical clients, and with many of our larger mid-market clients. These relationships take different forms, from preferred provider arrangements to strategic partnerships. The structure of these relationships incentivizes clients to purchase more products and services across our early-stage portfolio. Because of the strength of these relationships, we have better insight into our clients' planning processes, and therefore, better visibility than in the past. For information regarding revenue attributable to each of our business segments for the last three fiscal years, please see Note 15, “Segment and Geographic Information” included in the Notes to Consolidated Financial Statements included elsewhere in this Form 10-K. For information regarding revenue and long-lived assets attributable to operations in the United States, Europe, Canada, Asia Pacific, and other countries for each of the last three fiscal years, please review Note 15, “Segment and Geographic Information” included in the Notes to Consolidated Financial Statements included elsewhere in this Form 10-K.

Sales, Marketing and Customer Support

10

We have designated dedicated sales people for each of our three client segments (global biopharmaceutical, small and mid-sized pharmaceutical and biotechnology companies, and academic and government institutions). This enhances our ability to meet client needs by offering customized, tailored solutions across our entire portfolio. In addition, our mid-market pharmaceutical and biotechnology clients benefit by additional support from a combination of account managers with broad portfolio knowledge and specialists with specific scientific expertise. This allows us to provide comprehensive coverage of all of the market segments among our diverse client population. We also apply the use of dedicated sales specialists for certain technical product lines, such as in our Manufacturing businesses.

We sell our products and services principally through our direct sales force and account management teams who work in North America, Europe, and the Asia-Pacific countries. In addition to interactions with our direct sales force, our primary promotional activities include organizing scientific symposia, publishing scientific papers and newsletters, hosting webinars and making presentations at, and participating in, scientific conferences and trade shows in North America, Europe, and Asia. We supplement these scientifically based marketing activities with internet-based marketing, advertising, and direct mail. In certain areas, our direct sales force is supplemented by international distributors and agents.

Our internal marketing/product management teams support the field sales staff and account management teams while developing and implementing programs to create close working relationships with our clients in the biomedical research industry. We maintain customer service, technical assistance, and consulting service departments (in addition to project managers for our service businesses), which address both our clients' routine and more specialized needs and generally serve as a scientific resource for them. We frequently assist our clients in solving problems related to animal husbandry, health and genetics, biosecurity, non-clinical study design, regulatory consulting, protocol development, and other areas in which our expertise is widely recognized as a valuable resource by our clients.

Our marketing efforts are focused on stimulating demand for further outsourcing across our entire services portfolio. We believe that our ability to provide solutions that address all aspects of early-stage drug research are increasingly attractive to our clients, and we continue to design and market our commercial activities to deliver flexible, customized programs designed by segment to meet our clients' global and site-specific needs.

Competition

Our goal is to be a leader in each of the markets in which we participate. We compete in the marketplace on the basis of our therapeutic and scientific expertise in early-stage drug research, quality, reputation, flexibility, responsiveness, pricing, innovation, and global capabilities. We are able to offer a unique portfolio of early-stage products and services to support drug discovery and development.

We encounter a broad range of competitors of different sizes and capabilities in each of our three businesses segments, although the largest competitors within any segment vary. We also face competition from the internal discovery and development resources of our clients.

- For RMS, we have five main competitors of which one is a government funded, not-for-profit entity; one is part of a large public company; one is privately held in Europe and two are privately held in the U.S. We believe that none of these competitors compares to us in global reach, financial strength, breadth of product and services offerings, technical expertise, or pharmaceutical and biotechnology industry relationships.
- For DSA, both our Discovery Services and Safety Assessment businesses have numerous competitors. Discovery has hundreds of competitors, as it is a highly competitive and fragmented market; Safety Assessment has dozens of competitors of varying size, but it has five main competitors; one is part of a large public company in the U.S.; one is a private company in China; two are privately held in the U.S.; and one is privately held in France. Our DSA segment also competes with in-house departments of pharmaceutical and biotechnology companies, universities, and teaching hospitals.
- For Manufacturing, each of our underlying businesses has several competitors. In addition to many smaller competitors, Biologics has five main competitors, of which two are public companies in Europe, one is a private company in the U.S., one is a public company in China, and one is a public company in the U.S. Avian has one main competitor to its SPF eggs business, which is privately held in Europe, and numerous competitors for specialized avian laboratory services. Microbial Solutions has five main competitors, of which three are public companies in

Europe and two are privately held in the U.S.

Industry Support and Animal Welfare

One of our core values is a concern for, and commitment to, animal welfare. We have been in the forefront of animal welfare improvements in our industry, and continue to show our commitment with special recognition programs for employees who demonstrate an extraordinary commitment in this critical aspect of our business. We created our own Humane Care Initiative, which is directed by our Animal Welfare and Training Group. The goal of the initiative is to assure that we continue as a worldwide leader in the humane care of laboratory animals and implementation of the 3Rs (Replacement, Reduction and Refinement). Laboratory animals are an important resource that further our knowledge of living systems and contribute to the discovery of life-saving drugs and procedures. We work hand-in-hand with the scientific community to understand how living conditions, handling procedures and stress play a role in the quality and efficiency of research. As researchers, we are responsible to our clients and the public for the health and well-being of the animals in our care.

We are firmly committed to the 3Rs and to reducing the number of animals used by emphasizing health and genetic integrity to decrease study data variability. Whenever possible, we use technological advances such as new diagnostic tests for screening pathogens in laboratory rodents, microsampling and in vitro assays. We also partner with customers to develop study designs decreasing the number of animals needed and suggesting pilot studies where appropriate. We also maintain a quarterly award recognizing our employees' efforts to continually implement the 3Rs at our sites globally.

We support a wide variety of organizations and individuals working to further animal welfare as well as the interests of the biomedical research community. We fund scholarships to laboratory animal training programs, provide financial support to non-profit institutions that educate the public about the benefits of animal research and provide awards and prizes to outstanding leaders in the laboratory animal medicine field and the supporters of 3Rs.

Employees

As of December 30, 2017, we had approximately 11,800 employees (including approximately 1,300 science professionals with advanced degrees, including Ph.D.s, D.V.M.s and M.D.s). Our employees are not unionized in the U.S. Employees at some of our European facilities are represented by works councils and/or unions, which is consistent with local customs for our industry. We believe we have good relationships with our employees, based on a number of factors including employee retention and survey results.

Backlog

Our backlog for our RMS, DSA and Manufacturing reportable segments was $96.8 million, $590.0 million and $46.9 million, respectively, as of December 30, 2017, as compared to $88.0 million, $551.8 million and $39.5 million, respectively, as of December 31, 2016. Related services are performed over varying durations, from short to extended periods of time, which may be as long as several years. We maintain an order backlog to track anticipated revenue from studies and projects that either have not started, but are anticipated to begin in the near future, or are in process and have not been completed. We only recognize a study or project in backlog after we have received written evidence of a client's intention to proceed. Canceled studies or projects are removed from backlog.

We believe our aggregate backlog as of any date is not necessarily a meaningful indicator of our future results for a variety of reasons. First, studies vary in duration (i.e., some studies or projects that are included in December 30, 2017 backlog may be completed in 2018, while others may be completed in later years). Second, the scope of studies or projects may change, which may either increase or decrease their value. Third, studies or projects included in backlog may be subject to bonus or penalty payments. Fourth, studies or projects may be terminated or delayed at any time by the client or regulatory authorities for a number of reasons, including the failure of a drug to satisfy safety and efficacy requirements, or a sponsor making a strategic decision that a study or service is no longer necessary. Delayed contracts remain in our backlog until a determination of whether to continue, modify, or cancel the study has been made. We cannot provide any assurance that we will be able to realize all or most of the net revenues included in backlog or estimate the portion to be filled in the current year.

Regulatory Matters

As our business operates in a number of distinct operating environments and in a variety of locations worldwide, we are subject to numerous, and sometimes overlapping, regulatory environments.

The Animal Welfare Act (AWA) governs the care and use of certain species of animals used for research in the U.S. other than laboratory rats, mice and chickens. As a result, most of our U.S. small animal research models activities and our avian vaccine services operations are not subject to regulation under the AWA. For regulated species, the AWA and the associated Animal Care regulations require producers and users of regulated species to provide veterinary care and to utilize specific husbandry practices such as cage size, shipping conditions, sanitation and environmental enrichment to assure the welfare of these animals. Separately, facilities using live vertebrate animals in research funded by the U.S. Public Health Service (PHS) must

also adhere to the PHS Policy on Humane Care and Use of Laboratory Animals and follow the Guide for the Care and Use of Laboratory Animals produced by the Institute for Laboratory Animal Research.

We comply with licensing and registration requirement standards set by the United States Department of Agriculture (USDA) and similar agencies in other countries such as the European Union, China and Japan for the care, handling and use of regulated species. Our animal production facilities in the U.S., our DSA facilities in the U.S. and Canada, and most of our DSA and RMS sites in Europe are either accredited or in the process of obtaining accreditation by the AAALAC International, a private, nonprofit, international organization that promotes the humane treatment of animals in science through voluntary accreditation and assessment programs.

Our import and export of animals and our operations in foreign countries are subject to international agreements and conventions, as well as a variety of national, regional, and local laws and regulations, which establish the standards for the humane treatment, care, handling, and transport of animals by dealers and research facilities.

We conduct non-clinical safety assessment studies to support the submissions for approval or licensing of our clients' products throughout the world. Many of these studies must comply with national statutory or regulatory requirements for GLP. GLP regulations describe a quality system for the organizational process and the conditions under which non-clinical studies are planned, performed, monitored, recorded, reported and archived. GLP compliance is required by such regulatory agencies as the FDA, United States Environmental Protection Agency, European Medicines Agency, Medicines and Healthcare Products Regulatory Agency in the United Kingdom (U.K.), Health Products Regulatory Authority in Ireland, Health Canada and other similar monitoring authorities in the countries where we operate. GLP requirements are significantly harmonized throughout the world and our laboratories are capable of conducting studies in compliance with all necessary requirements.

Regulatory monitoring authorities such as the FDA, Medicines and Healthcare products Regulatory Agency and OECD countries have indicated an increased emphasis on the management of computerized systems to ensure data integrity. New guidance related to the need for data integrity compliance programs have recently been released and may require additional efforts by CRL for validation, audit trail review and archiving activities to be considered. To assure that we have proper regulatory oversight over electronic records, a dedicated quality function reviews computerized system practices to ensure that appropriate record controls are in place and that a robust audit strategy confirms requirements for compliance.

Our Manufacturing businesses produce endotoxin test kits, reagents, cell banks used in research and biopharmaceutical production, clinical trial vaccines, vaccine support products and provided GMP contract manufacturing of clinical and marketed products. Additionally, several of our laboratories conduct biosafety and analytical testing such as identity, stability, sterility and potency testing in support of our clients' manufacturing programs working with our clients to fulfill their validation requirements as applicable. These activities are subject to regulation and consequently require these businesses to be inspected by the FDA and other national regulatory agencies under their respective current Good Manufacturing Practice (cGMP) regulations. These regulations require that we manufacture our products or perform testing in a prescribed manner with respect to cGMP compliance, and maintain records of our manufacturing, testing and control activities. In addition, the specific activities of some of our businesses require us to hold specialized licenses for the manufacture, distribution and/or marketing of particular products.

All of our sites are subject to licensing and regulation under international treaties and conventions, including national, regional and local laws relating to:

- the surface and air transportation of chemicals, biological reagents and laboratory specimens;
- the handling, use, storage, and disposal of chemicals (including narcotics and psychotropic drugs), biological reagents, laboratory specimens, hazardous waste, and radioactive materials;
- the procurement, handling, use, storage, and disposal of human cells, tissues, and cellular and tissue based products for research purposes;
- the safety and health of employees and visitors to our facilities; and
- protection of the environment and general public.

Global compliance programs are centralized under a single group responsible for global regulatory affairs compliance, including quality programs and systems to ensure that all business sectors comply with applicable statutory and regulatory requirements and satisfy our clients' expectations for quality and regulatory compliance. To assure these compliance

obligations, we established quality assurance units (QAUs) in each of our regulated businesses that require independent oversight. The QAUs operate independently from those individuals that direct and conduct studies, manufacturing or analytical testing that studies that supports manufacturing.

Intellectual Property

We develop and implement computer software and technically derived procedures and products intended to maximize the quality and effectiveness of our services. Although our intellectual property rights are valuable to our success, we believe that such factors as the technical expertise, proprietary know-how, ability, and experience of our professionals are more important, and that, overall, these technological capabilities provide significant benefits to our clients. Where we consider it appropriate, steps are taken to protect our know-how through confidentiality agreements and registrations. In addition, we in-license technology and products from other companies when it enhances our product and services businesses. In the future, in-licensing may become a larger initiative to enhance our offerings, particularly as we focus on therapeutic area expertise. With the exception of technology related to our Microbial Solutions testing business, we have no patents, trademarks, licenses, franchises, or concessions which are material and upon which any of our products or services are dependent.

Corporate Governance

We are committed to operating our business with integrity and accountability. We strive to meet or exceed all of the corporate governance standards established by the New York Stock Exchange, the SEC, and the Federal government as implemented by the Sarbanes-Oxley Act of 2002 and the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. Ten of the eleven members of our Board of Directors are independent and have no significant financial, business, or personal ties to us or management and all of our board committees (with the exception of our Executive Committee and our Strategic Planning and Capital Allocation Committee) are composed entirely of independent directors. The Board adheres to our Corporate Governance Guidelines and a Code of Business Conduct and Ethics which has been communicated to employees and posted on our website. We are diligent in complying with established accounting principles and are committed to providing financial information that is transparent, timely, and accurate. We have a Related Person Transactions Policy designed to promote the timely identification of such transactions and to ensure we give appropriate consideration to any real or perceived conflicts in our commercial arrangements. We have a global process through which employees, either directly or anonymously, can notify management (and the Audit Committee of the Board of Directors) of alleged accounting and auditing concerns or violations including fraud. Our internal Disclosure Committee meets regularly and operates pursuant to formal disclosure procedures and guidelines which help to ensure that our public disclosures are accurate and timely. Copies of our Corporate Governance Guidelines, Code of Business Conduct and Ethics, and Related Person Transactions Policy are available on our website at http://ir.criver.com.

Executive Officers of the Registrant (pursuant to Instruction 3 to Item 401(b) of Regulation S-K)

Below are the names, ages and principal occupations of each of our current executive officers. All such persons have been elected to serve until their successors are elected and qualified or until their earlier resignation or removal.

James C. Foster, age 67, joined us in 1976 as General Counsel. During his tenure, Mr. Foster has held various staff and managerial positions, and was named Chief Executive Officer in 1992 and our Chairman in 2000.

William D. Barbo, age 57, joined us in 1982 as a laboratory technician. Between 1982 and 2005, Mr. Barbo served in a variety of positions of increasing responsibilities. He was named Corporate Vice President of Research Models and Services in 2005, Corporate Senior Vice President of Global Sales and Marketing in 2010, and Corporate Executive Vice President and Chief Commercial Officer in October 2016.

David P. Johst, age 56, joined us in 1991 as Corporate Counsel and was named Vice President, Human Resources in 1995. He became Vice President, Human Resources and Administration in 1996, a Senior Vice President in 1999, and a Corporate Executive Vice President in 2005. He currently serves as our General Counsel and Chief Administrative Officer and is responsible for overseeing our corporate legal function, Human Resources department, and several other corporate staff departments. Prior to joining us, Mr. Johst was in private practice at the law firm of Hale and Dorr (now WilmerHale). Mr. Johst currently serves as a trustee of Mt. Ida College.

Davide Molho, age 48, joined our Italian operations in 1999 and was promoted to Director of Operations for RMS Italy in 2002. In 2005, his role was expanded to include French RMS operations and in 2007, he became Corporate Vice President, European Research Models and Services with responsibility for all European RMS operations. In July 2009, Dr. Molho was promoted to Corporate Senior Vice President, North American and European Research Models and Services. He was subsequently promoted to Corporate Executive Vice President and President, Global Research Models and Services in

December 2010. In 2011, Dr. Molho was named Corporate Executive Vice President, North America Operations; in December 2013, he was named Corporate Executive Vice President and President, Global RMS and Safety Assessment and Biologics Operations; and in February 2018, he was appointed President and Chief Operating Officer.

David R. Smith, age 52, has served as our Corporate Executive Vice President and Chief Financial Officer since August 2015. He joined us as Corporate Vice President, Discovery Services through our acquisition of Argenta and BioFocus from Galapagos NV in March 2014 and was promoted to Corporate Senior Vice President, Global Discovery Services, in October 2014. At Galapagos, he served in various capacities, including as Chief Executive Officer of its Galapagos Services division and as Chief Financial Officer. Mr. Smith served as Chief Financial Officer for Cambridge University Hospitals from 2007 to 2013. Mr. Smith spent eight years at PricewaterhouseCoopers prior to joining AstraZeneca in 1997, where he spent the next nine years in various finance and business roles of increasingly greater responsibility.

Birgit Girshick, age 48, joined us in 1989 and has held positions of increasing responsibility in our RMS Germany and RMS Avian Vaccine businesses. In 2004, Ms. Girshick was promoted to General Manager of the RMS Avian Vaccine Services business. She was named Executive Director, RMS Process Improvement in 2009, and Corporate Vice President, Global Biopharmaceutical Services in 2010. In 2013, Ms. Girshick was promoted to Corporate Senior Vice President, Research Models and Biologics Testing Solutions. In 2016, Ms. Girshick was tasked with leading the integration of WIL Research into our Safety Assessment business. Also in 2016, Ms. Girshick assumed the role of Corporate Senior Vice President, Global Discovery Services. In February 2018, Ms. Girshick was appointed Corporate Executive Vice President, Discovery and Safety Assessment.

Item 1A. Risk Factors

Set forth below, elsewhere in this Form 10-K and in other documents we file with the SEC are risks and uncertainties that could cause actual results to differ materially from the results contemplated by the forward-looking statements contained in this Form 10-K. We note that factors set forth below, individually or in the aggregate, may cause our actual results to differ materially from expected and historical results. We note these factors for investors as permitted by the Private Securities Litigation Reform Act of 1995. You should understand that it is not possible to predict or identify all such factors. Consequently, you should not consider the following to be a complete discussion of all potential risks or uncertainties.

The outsourcing trend in non-clinical (discovery and safety assessment) stages of drug discovery and development may decrease, which could impair our growth.

Over the past decade, pharmaceutical and biotechnology companies have generally increased their outsourcing of non-clinical research support activities, such as discovery and safety assessment. While many industry analysts expect the outsourcing trend to continue to increase for the next several years (although with different growth rates for different phases of drug discovery and development), decreases in such outsourcing may result in a diminished growth rate in the sales of any one or more of our service lines and may adversely affect our financial condition and results of operations. For additional discussion of the factors that we believe have recently been influencing outsourcing demand from our clients, please see the section entitled “Our Strategy” included elsewhere in this Form 10-K.

A reduction in research and development budgets at pharmaceutical and biotechnology companies may adversely affect our business.

Our clients include researchers at pharmaceutical and biotechnology companies. Our ability to continue to grow and win new business is dependent in large part upon the ability and willingness of the pharmaceutical and biotechnology industries to continue to spend on molecules in the non-clinical phases of research and development (and in particular discovery and safety assessment) and to outsource the products and services we provide. Fluctuations in the expenditure amounts in each phase of the research and development budgets of these researchers and their organizations could have a significant effect on the demand for our products and services. Research and development budgets fluctuate due to changes in available resources, mergers of pharmaceutical and biotechnology companies, spending priorities (including available resources of our biotechnology clients, particularly those that are cash-negative, who may be highly focused on rationing their liquid assets in a challenging funding environment), general economic conditions, and institutional budgetary policies. Available funding for biotechnology clients in

particular may be affected by the capital markets, investment objectives of venture capital investors, and priorities of biopharmaceutical industry sponsors.

Our business could be adversely affected by any significant decrease in drug research and development expenditures by pharmaceutical and biotechnology companies, as well as by academic institutions, government laboratories, or private foundations. Similarly, economic factors and industry trends that affect our clients in these industries also affect their research

and development budgets and, consequentially, our business as well. Furthermore, our clients (particularly larger biopharmaceutical companies) continue to search for ways to maximize the return on their investments with a focus on leaner research and development costs per drug candidate. For additional discussion of the factors that we believe have recently been influencing research and development budgets at our clients, please see the sections entitled “Our Strategy” and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Form 10-K.

A reduction or delay in government funding of research and development may adversely affect our business.

A portion of revenue, predominantly in our RMS segment, is derived from clients at academic institutions and research laboratories whose funding is partially dependent on both the level and timing of funding from government sources such as the U.S. National Institutes of Health (NIH) and similar domestic and international agencies, which can be difficult to forecast. Government funding of research and development is subject to the political process, which is inherently fluid and unpredictable. Our revenue may be adversely affected if our clients delay purchases as a result of uncertainties surrounding the approval of government budget proposals. Also, government proposals to reduce or eliminate budgetary deficits have sometimes included reduced allocations to the NIH and other government agencies that fund research and development activities. Other programs, such as homeland security or defense, or general efforts to reduce the federal budget deficit could be viewed by the U.S. government as a higher priority. These budgetary pressures may result in reduced allocations in the future to government agencies that fund research and development activities. A reduction in government funding for the NIH or other government research agencies could adversely affect our business and our financial results. Also, there is no guarantee that NIH funding will be directed towards projects and studies that require use of our products and services.

Any failure by us to comply with applicable regulations and related guidance could harm our reputation and operating results, and compliance with new regulations and guidance may result in additional costs.

Any failure on our part to comply with applicable regulations could result in the termination of ongoing research or the disqualification of data for submission to regulatory authorities. This could harm our reputation, our prospects for future work and our operating results. For example, the issuance of a notice of objectionable observations or a warning from the FDA based on a finding of a material violation by us for GLP or cGMP requirements could materially and adversely affect us. If our operations are found to violate any applicable law or other governmental regulations, we might be subject to civil and criminal penalties, damages and fines. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses, divert our management's attention from the operation of our business and damage our reputation.

Regulatory monitoring authorities such as the FDA, Medicines and Healthcare Products Regulatory Agency and OECD have increased their emphasis on the management of computerized systems to ensure data integrity. New guidance related to the need for data integrity compliance programs have recently been released and we may require additional efforts for validation, audit trail review and archiving activities. To assure that we have proper regulatory oversight over our electronic records, a dedicated quality function reviews our computerized system practices to ensure that appropriate record controls are in place and that a robust audit strategy confirms requirements for compliance. In addition, the FDA’s recently applicable SEND (Standardization for Exchange of Nonclinical Data) standards which apply to our customers’ NDA (and as of December 18, 2017, IND) submissions require us to provide electronic data in specific formats that will allow for more efficient, higher quality regulatory reviews. Accordingly, our customers expect us to timely deliver their nonclinical data compliant with SEND. Notwithstanding, some of these standards require additional operating and capital expenses that will impact not only us and our industry competitors, but clients in the biomedical research community. Non-compliance with any of these expectations could lead to official action by a government authority, damage to our reputation and a potential loss of business.

In addition, regulations and guidance worldwide concerning the production and use of laboratory animals for research purposes continue to evolve. Similarly, guidance has been and continues to be developed for other areas that impact the biomedical research community on both a national and international basis including transportation, mandated contingency planning, euthanasia guidance, import and export requirements of biological materials, health monitoring requirements and the use of disinfectants.

Contaminations in our animal populations can damage our inventory, harm our reputation for contaminant-free production, result in decreased sales and cause us to incur additional costs.

Our research models and fertile chicken eggs must be free of certain infectious agents such as certain viruses and bacteria because the presence of these contaminants can distort or compromise the quality of research results and could adversely impact human or animal health. The presence of these infectious agents in our animal production facilities and certain service

operations could disrupt our contaminant-free research model and fertile egg production as well as our animal services businesses including GEMS, harm our reputation for contaminant-free production, and result in decreased sales. If they occur, contaminations typically require cleaning up, renovating, disinfecting, retesting, and restarting production or services. Such clean-ups result in inventory loss, clean-up and start-up costs, and reduced sales as a result of lost client orders and potentially credits for prior shipments. In addition to microbiological contaminations, the potential for genetic mix-ups or mis-matings also exists and may require the restarting of the applicable colonies. While this does not require the complete clean-up, renovation, and disinfection of the room, it would likely result in inventory loss, additional start-up costs and possibly reduced sales. Contaminations also expose us to risks that clients will request compensation for damages in excess of our contractual indemnification requirements. There also exists a risk that contaminations from models that we produce may affect our client's facilities, with similar impact to them for which we could be liable for damages. In some cases, we may produce or import animals carrying infectious agents capable of causing disease in humans; and in the case of such a contamination or undiagnosed infection, there could be a possible risk of human exposure and infection.

We are also subject to similar contamination risks with respect to our large research models. While often we own these models, they may be maintained on our behalf at a site operated by the original provider. Accordingly, risk of contamination may be outside of our control, and we depend on the practices and protocols of third parties to ensure a contamination-free environment. A contamination may require extended CDC quarantine with subsequent reduced sales as a result of lost client orders as well as the potential for complete inventory loss and disinfection of the affected quarantine rooms. Furthermore, while we often negotiate for contractual risk indemnification, we may be exposed in the event of such contaminations if the third party does not fulfill its indemnification obligation or is unable to as a result of insolvency or other impediments.

All such contaminations described above are unanticipated and difficult to predict and could adversely impact our financial results. Many of our operations are comprised of complex mechanical systems which are subject to periodic failure, including aging fatigue. Such failures are unpredictable, and while we have made significant capital expenditures designed to create redundancy within these mechanical systems, strengthen our biosecurity, improve our operating procedures to protect against such contaminations, and replace impaired systems and equipment in advance of such events, failures and/or contaminations may still occur.

We could experience a breach of the confidentiality of the information we hold or of the security of our computer systems.

We operate large and complex computer systems that contain significant amounts of client data. As a routine element of our business, we collect, analyze, and retain substantial amounts of data pertaining to the non-clinical studies we conduct for our clients. Unauthorized third parties could attempt to gain entry to such computer systems for the purpose of stealing data or disrupting the systems. We believe that we have taken appropriate measures to protect them from intrusion, and we continue to improve and enhance our systems in this regard, but in the event that our efforts are unsuccessful, we could suffer significant harm. Our contracts with our clients typically contain provisions that require us to keep confidential the information generated from these studies. In the event the confidentiality of such information was compromised, we could suffer significant harm.

Changes in government regulation or in practices relating to the pharmaceutical or biotechnology industries, including potential healthcare reform, could decrease the need for the services we provide.

Governmental agencies throughout the world, but particularly in the U.S., strictly regulate the drug development process. Our business involves helping pharmaceutical and biotechnology companies, among others, navigate the regulatory drug approval process. Accordingly, many regulations, and often new regulations, are expected to result in higher regulatory standards and often additional revenues for companies that service these industries. However, some changes in regulations, such as a relaxation in regulatory requirements or the introduction of streamlined or expedited drug approval procedures, or an increase in regulatory requirements that we have difficulty satisfying or that make our services less competitive, could eliminate or substantially reduce the demand for our services.

Although we believe we are currently in compliance in all material respects with national, regional, and local laws, as well as other accepted guidance used by oversight bodies (which include the USDA, the standards set by the

International Air Transport Association, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, U.S. Fish and Wildlife Service, The Centers for Disease Control, the Department of Transportation, the Department of State, the office of Laboratory Animal Welfare of NIH, the Drug Enforcement Agency, as well as numerous other oversight agencies in Canada, Europe, and Asia), failure to comply could subject us to denial of the right to conduct business, fines, criminal penalties, and other enforcement actions. In addition, if regulatory authorities were to mandate a significant reduction in safety assessment procedures which utilize laboratory animals (as has been advocated by certain groups), certain segments of our business could be materially adversely affected.

In March 2010, the U.S. Congress enacted healthcare reform legislation, the Patient Protection and Affordable Care Act, or the ACA, intended over time to expand health insurance coverage and impose health industry cost containment measures. In June 2012, the U.S. Supreme Court upheld the constitutionality of this legislation. The Court's decision allows implementation of key provisions impacting drug manufacturers going forward, including, but not limited to, (1) expansion of access to health insurance coverage, (2) expansion of the Medicaid program, (3) enactment of an industry fee on pharmaceutical companies, and (4) imposition of an excise tax on the sale of medical devices. Since the law and its implementation continue to face challenges in Congress and federal courts, and from certain state governments, opposition advocacy groups, and some small business organizations, as well as from the incoming president and his administration, we are uncertain as to the ultimate effects of this legislation on our business and are unable to predict what legislative proposals will be adopted in the future.

Implementation of healthcare reform legislation may have certain benefits, but also may contain costs that could limit the profits that can be made from the development of new drugs. This could adversely affect research and development expenditures by pharmaceutical and biotechnology companies, which could in turn decrease the business opportunities available to us both in the U.S. and abroad. In addition, new laws or regulations may create a risk of liability, increase our costs, or limit our service offerings. Furthermore, if health insurers were to change their practices with respect to reimbursements for pharmaceutical products, our clients may spend less, or reduce their growth in spending on research and development.

The current Executive Branch of the U.S. government has disclosed a key initiative as being to repeal or substantially unwind the ACA. While it is not possible to predict whether and when any such changes will occur, changes at the local, state or federal level may significantly impact our domestic and foreign businesses and/or those of our clients. Specific legislative and regulatory proposals discussed during and after the election that may have a material impact on us or our clients include, but are not limited to, appeal or reform of the ACA; and modifications to international trade policy, public company reporting requirements, environmental regulation and antitrust enforcement.

Our revenue generating agreements contain termination and service reduction provisions or may otherwise terminate according to their term, which may result in less contract revenue than we anticipate.

Many of our agreements with both large and small clients, including those which underlie our strategic relationships with some of our more significant customers, provide for termination or reduction in scope with little or no notice. In addition, we sell our products and services to our competitors, and similarly they sell products and services to us. For instance, we have historically entered into, and currently are party to, contracts with certain of our competitors to distribute specialty research models in locations where our competitors may not have distribution capabilities. Clients and/or competitors may elect to terminate their agreements with us for various reasons including:

- the products being tested fail to satisfy safety requirements;
- unexpected or undesired study results;
- production problems resulting in shortages of the drug being tested;
- a client's decision to forego or terminate a particular study;
- establishment of alternative distribution channels by our competitors;
- the loss of funding for the particular research study; or
- general convenience/counterparty preference.

If a client or competitor terminates a contract with us, we are typically entitled under the terms of the contract to receive revenue earned to date as well as certain other costs and, in some cases, termination fees. Cancellation of a large contract or proximate delay, cancellation or conclusion of multiple contracts could materially adversely affect our business and, therefore, may adversely affect our operating results.

Many of our contracts are fixed price and may be delayed or terminated or reduced in scope for reasons beyond our control, or we may under price or overrun cost estimates with these contracts, potentially resulting in financial losses. Many of our contracts provide for services on a fixed price or fee-for-service with a cap basis and, accordingly, we bear the financial risk if we initially under-price our contracts or otherwise overrun our cost estimates. In addition, these contracts may be terminated or reduced in scope either immediately or upon notice. Cancellations may occur for a variety of reasons, and often at the discretion of the client. The loss, reduction in scope or delay of a large contract or

the loss or delay of multiple contracts could materially adversely affect our business, although our contracts frequently entitle us to receive the costs of

winding down the terminated projects, as well as all fees earned by us up to the time of termination. Some contracts also entitle us to a predetermined termination fee and irrevocably committed costs/expenses.

Several of our product and service offerings are dependent on a limited source of supply, which if interrupted could adversely affect our business.

We depend on a limited international source of supply for certain products, such as large research models. Disruptions to their continued supply may arise from health problems, export or import laws/restrictions or embargoes, international trade regulations, foreign government or economic instability, severe weather conditions, increased competition among suppliers for models, disruptions to the air travel system, activist campaigns, commercial disputes, supplier insolvency, or other normal-course or unanticipated events. Any disruption of supply could harm our business if we cannot remove the disruption or are unable to secure an alternative or secondary supply source on comparable commercial terms.

If we are not successful in selecting and integrating the businesses and technologies we acquire, or in managing our current and future divestitures, our business may suffer.

During the past fifteen years, we have steadily expanded our business through numerous acquisitions. We plan to continue to acquire businesses and technologies and form strategic alliances. However, businesses and technologies may not be available on terms and conditions we find acceptable. We risk spending time and money investigating and negotiating with potential acquisition or alliance partners, but not completing transactions.

On February 12, 2018, we entered into a definitive agreement to acquire MPI Research, a non-clinical CRO, providing comprehensive testing services to biopharmaceutical and medical device companies worldwide. If consummated, this transaction will be the largest acquisition in nearly fifteen years. Refer to Item 8, “Financial Statements and Other Supplementary Data” in this Annual Report on Form 10-K for more details.

Acquisitions and alliances involve numerous risks which may include:

- difficulties in achieving business and financial success;
- difficulties and expenses incurred in assimilating and integrating operations, services, products, technologies, or pre-existing relationships with our customers, distributors, and suppliers;
- challenges with developing and operating new businesses, including those which are materially different from our existing businesses and which may require the development or acquisition of new internal capabilities and expertise;
- potential losses resulting from undiscovered liabilities of acquired companies that are not covered by the indemnification we may obtain from the seller or the insurance we acquire in connection with the transaction;
- loss of key employees;
- the presence or absence of adequate internal controls and/or significant fraud in the financial systems of acquired companies;
- diversion of management's attention from other business concerns;
- becoming subject to a more expansive regulatory environment;
- acquisitions could be dilutive to earnings, or in the event of acquisitions made through the issuance of our common stock to the shareholders of the acquired company, dilutive to the percentage of ownership of our existing shareholders;
- risks of not being able to overcome differences in foreign business practices, customs, and importation regulations, language, and other cultural barriers in connection with the acquisition of foreign companies;
- new technologies and products may be developed which cause businesses or assets we acquire to become less valuable; and
- risks that disagreements or disputes with prior owners of an acquired business, technology, service, or product may result in litigation expenses and diversion of our management's attention.

In the event that an acquired business, technology, or an alliance does not meet our expectations, our results of operations may be adversely affected.

Some of the same risks exist when we decide to sell a business, site, or product line. In addition, divestitures could involve additional risks, including the following:

- difficulties in the separation of operations, services, products, and personnel;
- diversion of management's attention from other business concerns; and
- the need to agree to retain or assume certain current or future liabilities in order to complete the divestiture.

We continually evaluate the performance and strategic fit of our businesses. These and any divestitures may result in significant write-offs, including those related to goodwill and other intangible assets, which could have an adverse effect on our results of operations and financial condition. In addition, we may encounter difficulty in finding buyers, or, alternative exit strategies at acceptable prices and terms, and in a timely manner. We may not be successful in managing these or any other significant risks that we encounter in divesting a business, site, or product line, and as a result, we may not achieve some or all of the expected benefits of the divestiture.

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

We have intangible assets, including goodwill, on our balance sheet due to our acquisitions of businesses. The initial identification and valuation of these intangible assets and the determination of the estimated useful lives at the time of acquisition involve use of management judgments and estimates. These estimates are based on, among other factors, projections of cash flows that arise from identifiable intangible assets of acquired businesses and discount rates based on an analysis of our weighted average cost of capital, adjusted for specific risks associated with the assets. Disruptions in global financial markets and deterioration of economic conditions could, among other things, impact the discount rate and other assumptions used in the valuations and actual cash flows arising from a particular intangible asset could vary from projected cash flows, which could imply different carrying values from those established at the dates of acquisition and which could result in impairment of such assets.

If the future growth and operating results of our business are not as strong as anticipated, overall macroeconomic or industry conditions deteriorate and/or our market capitalization declines, this could impact the assumptions used in establishing the carrying value of goodwill or other intangible assets. To the extent goodwill or other intangible assets are impaired, their carrying value will be written down to their implied fair values and a charge will be made to our income from continuing operations. Such an impairment charge could materially and adversely affect our operating results. As of December 30, 2017, the carrying amount of goodwill and other intangibles on our consolidated balance sheet was $1,174.7 million.

Our business is subject to risks relating to operating internationally.

A significant part of our revenue is derived from operations outside the U.S. Our international revenue represented approximately one-half of our total revenue in recent years. We expect that international revenue will continue to account for a significant percentage of our total revenue for the foreseeable future. There are a number of risks associated with our international business including:

- foreign currencies we receive for sales and in which we record expenses outside the U.S. could be subject to unfavorable exchange rates with the U.S. dollar and reduce the amount of revenue and cash flow (and increase the amount of expenses) that we recognize and cause fluctuations in reported financial results;
- certain contracts, particularly in Canada, are frequently denominated in currencies other than the currency in which we incur expenses related to those contracts, and where expenses are incurred in currencies other than those in which contracts are priced, fluctuations in the relative value of those currencies could have a material adverse effect on our results of operations;
- general economic and political conditions in the markets in which we operate;
- potential international conflicts, including terrorist acts;
- exchange controls, adverse tax consequences, and legal restrictions on the repatriation of funds into the U.S.;
- difficulties and costs associated with staffing and managing foreign operations, including risks of work stoppages and/or strikes, as well as violations of local laws or anti-bribery laws such as the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, and the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions;
- unexpected changes in regulatory requirements;

20

- the difficulties of compliance with a wide variety of foreign laws and regulations;
- unfavorable labor regulations in foreign jurisdictions;
- potentially negative consequences from changes in or interpretations of U.S. and foreign tax laws;
- exposure to business disruption or property damage due to geographically unique natural disasters (including within the U.S.);
- longer accounts receivable cycles in certain foreign countries; and
- compliance with import requirements and other trade regulations.

Changes in E.U. privacy and data protection regulations could have a material adverse impact on our operations. The General Data Protection Regulation (GDPR) becomes effective in May 2018 and will replace the 1995 Data Protection Directive. The GDPR will impose heightened obligations on businesses that control and manage the personal data of E.U. citizens. The penalties for non-compliance are significant, including up to four percent of global revenue.

These risks, individually or in the aggregate, could have an adverse effect on our results of operations and financial condition. For example, as mentioned above, we are subject to compliance with the U.S. Foreign Corrupt Practices Act and similar anti-bribery laws, which generally prohibit companies and their intermediaries from making improper payments to foreign government officials for the purpose of obtaining or retaining business. While our employees, distributors and agents are required to comply with these laws, we cannot be sure that our internal policies and procedures will always protect us from violations of these laws despite our commitment to legal compliance and corporate ethics. The occurrence or allegation of these types of risks may adversely affect our business, performance, prospects, value, financial condition, and results of operations.

Our facilities could be damaged or disrupted by natural disasters or other catastrophic events which could adversely affect our reputation, financial position, results of operations and cash flows.

While we have taken precautions to mitigate production and service interruptions at our global facilities, a major catastrophe, such as a hurricane, tornado, earthquake, flood, wildfire or other natural disaster (or other unanticipated displacement) at or near any of our facilities could result in physical damage to our properties, including closure, resulting in a prolonged interruption of our business. A disruption resulting from any one of these events could cause significant delays in shipments of our products, reduce our capacity to provide services, eradicate unique manufacturing capabilities and, ultimately, result in the loss of revenue and customers. Any of these factors could have a material adverse effect on our reputation, financial position, results of operations, and cash flows.

New technologies may be developed, validated, and increasingly used in biomedical research that could reduce demand for some of our products and services.

The scientific and research communities continue to explore methods to develop improved cellular and animal model systems that would increase the translation to human studies and vice-versa and possibly replace or supplement the use of traditional living animals as test platforms in biomedical research. Some companies have developed techniques in these areas that may have scientific merit to improve translation between species. In addition, technological improvements to existing or new processes, such as imaging and other translational biomarker technologies, could result in the refinement and utility for the number of animal research models necessary to improve the translation from non-clinical to clinical studies. There is an increasing push to focus on in vitro technologies such that employ human biospecimens, stem cell technologies, and genome editing.

It is our strategy to explore these in vitro technologies to refine and potentially reduce the utilization of animal models as these new methods become validated. For example, Charles River Laboratories Cleveland, Ind. (f/k/a ChanTest Corporation) has a well-developed program to evaluate the utility of induced pluripotent stem cell-derived cardiomyocytes, advanced in vitro models and “organ-on-a-chip” technologies. Successful commercialization of alternatives to traditional research models may not be sufficient to fully offset reduced sales or profits from research models. In addition, alternative research methods could decrease the need for future research models, and we may not be able to develop new products effectively or in a timely manner to replace any lost sales. Lastly, other companies or entities may develop research models with characteristics different than the ones that we produce, and which may be viewed as more desirable by some of our clients.

Negative attention from special interest groups may impair our business.

The products and services which we provide our clients are essential to the drug discovery, development and manufacturing processes, and a significant amount are mandated by law. Notwithstanding, certain special interest groups categorically object

to the use of animals for valid research purposes. Historically, our core research model activities with rats, mice and other rodents have not been the subject of significant animal rights media attention. However, research activities with animals have been the subject of adverse attention, including shareholder proposals and attempts to disrupt air carriers from transporting research models, impacting the industry. This has included periodic demonstrations near facilities operated by us and at our annual meetings, as well as shareholder proposals we received for some of our past Annual Meetings of Shareholders. Any negative attention, threats or acts of vandalism directed against either our animal research activities or our third party service providers such as our airline carriers in the future could impair our ability to operate our business efficiently.

Our debt level could adversely affect our business and growth prospects.

As of December 30, 2017, we had $1.1 billion of debt and in connection with our plan to acquire MPI Research (See Note 17 “Subsequent Event”, included in the Notes to Consolidated Financial Statements elsewhere in this Form 10-K), we announced our intention to increase our debt level by approximately $830 million by obtaining a commitment letter for a bridge loan facility. We are evaluating fixed-rate debt financing alternatives which could be used to finance the acquisition and for general corporate purposes. Our debt could have significant adverse effects on our business, including making it more difficult for us to obtain additional financing on favorable terms; requiring us to dedicate a substantial portion of our cash flows from operations to the repayment of debt and the interest on this debt; limiting our ability to capitalize on significant business opportunities; and making us more vulnerable to rising interest rates. For additional information regarding our debt, please see Note 7, “Long-Term Debt and Capital Lease Obligations”, included in the Notes to Consolidated Financial Statements included elsewhere in this Form 10-K.

The drug discovery, development services and manufacturing support industries are highly competitive.

The drug discovery, non-clinical development, and manufacturing support services industries are highly competitive. We often compete for business not only with other CROs, but also with internal discovery and development departments within our larger clients, who may have greater resources than ours. We also compete with universities and teaching hospitals for outsourced services. We compete on a variety of factors, including:

- reputation for on-time quality performance;
- reputation for regulatory compliance;
- expertise and experience in multiple specialized areas;
- scope and breadth of service and product offerings across the drug discovery and development spectrum;
- scope and breadth of service and product offerings across the manufacturing support spectrum;
- ability to provide flexible and customized solutions to support our clients' drug discovery, non-clinical development, and manufacturing support needs;
- broad geographic availability (with consistent quality);
- price/value;
- technological expertise and efficient drug development processes;
- quality of facilities;
- financial stability;
- size;
- ability to acquire, process, analyze, and report data in an accurate manner; and
- accessibility of client data through secure portals.

If we do not compete successfully, our business will suffer. Increased competition might lead to price and other concessions that could adversely affect our operating results. The drug discovery and development services industry has continued to see a trend towards consolidation, particularly among the biotechnology companies, who are targets for each other and for larger pharmaceutical companies. If this trend continues, it is likely to produce more competition among the larger companies and CROs generally, with respect to both clients and acquisition candidates. In addition, small, specialized entities considering entering the CRO industries will continue to find lower barriers to entry, and private equity firms may determine that there are opportunities to acquire and consolidate these companies, thus further increasing possible competition. More generally, our

22

competitors or others might develop technologies, services or products that are more effective or commercially attractive than our current or future technologies, services, or products, or that render our technologies, services, or products less competitive or obsolete. If competitors introduce superior technologies, services, or products and we cannot make enhancements to ours to remain competitive, our competitive position, and in turn our business, revenue, and financial condition, would be materially and adversely affected. In the aggregate, these competitive pressures may affect the attractiveness of our technologies, services, or products and could adversely affect our financial results.

Potential Changes in U.S. and International Tax Law.

On December 22, 2017, President Trump signed into law significant U.S. tax law changes (U.S. Tax Reform) which reduces the U.S. federal statutory tax rate, broadens the corporate tax base through the elimination or reduction of deductions, exclusions, and credits, limits the ability of U.S. corporations to deduct interest expense, and transitions to a territorial tax system which will allow for the repatriation of foreign earnings to the U.S. with a 100% federal dividends received deduction prospectively. In addition, U.S. Tax Reform requires a one-time transitional tax on foreign cash equivalents and previously unremitted earnings. Several of the new provisions enacted as part of U.S. Tax Reform require clarification and guidance from the Internal Revenue Service (IRS) and Treasury Department. These or other changes in U.S. tax laws could impact our profits, effective tax rate, and cash flows.

We have substantial operations in Canada, Ireland and the United Kingdom which currently benefit from favorable corporate tax arrangements. We receive substantial tax credits in Canada, from both the Canadian federal and Quebec governments, and the U.K. Any reduction in the availability or amount of these tax credits or increase to tax rates due to tax law changes or outcomes of tax controversies could have a material adverse effect on our profits, cash flows, and effective tax rate.

Currently, the OECD has developed an action plan to address concerns regarding base erosion and profit shifting (BEPS). This initiative has resulted in proposed and enacted changes to tax laws in various countries including France, Germany, Luxembourg, and the U.K. Future changes to tax laws or interpretation of tax laws resulting from the BEPS project could increase our effective tax rate, which would affect our profitability.

Contract research services create a risk of liability.

As a CRO, we face a range of potential liabilities which may include:

- errors or omissions in reporting of study detail in non-clinical studies that may lead to inaccurate reports, which may undermine the usefulness of a study or data from the study, or which may potentially advance studies absent the necessary support or inhibit studies from proceeding to the next level of testing;
- risks associated with our possible failure to properly care for our clients' property, such as research models and samples, study compounds, records, work in progress, other archived materials, or goods and materials in transit, while in our possession;
- risks that models in our breeding facilities or in facilities that we manage may be infected with diseases that may be harmful and even lethal to them or humans, despite preventive measures contained in our policies for the quarantine and handling of imported animals; and
- risks that we may have errors and omissions and/or product liabilities related to our products designed to conduct lot release testing of medical devices, injectable drugs, food, beverages, and home and beauty products (primarily through our Microbial Solutions business), or in the testing of biologics and other services performed by our Biologics business, which could result in us or our clients failing to identify unsafe or contaminated materials.

While we attempt to mitigate these risks through a variety of methods, it is impossible to completely eradicate such risks. In our RMS business, we mitigate these risks to the best of our abilities through our regimen of animal testing, quarantine procedures, and veterinary staff vigilance, through which we seek to control the exposure of animal related disease or infections. In our DSA and Manufacturing businesses, we attempt to reduce these risks by contractual risk transfer provisions entitling us to be indemnified by our clients and subject to a limitation of liability, by insurance maintained by our clients and/or by us, and by various regulatory requirements we must follow in connection with our business.

Contractual risk transfer indemnifications generally do not protect us against liability arising from certain of our own actions, such as negligence or misconduct. We could be materially and adversely affected if we are required to pay

damages or bear the costs of defending any claim that is outside any contractual indemnification provision, or if a party does not fulfill its indemnification obligations, or the damage is beyond the scope or level of insurance coverage. We also often contractually indemnify our clients (subject to a limitation of liability), similar to the way they indemnify us, and we may be materially

adversely affected if we have to fulfill our indemnity obligations. Furthermore, there can be no assurance that neither we nor a party required to indemnify us will be able to maintain such insurance coverage (either at all or on terms acceptable to us).

Upgrading and integrating our business systems could result in implementation issues and business disruptions.

In recent years, we implemented a project to replace many of our numerous legacy business systems at certain sites worldwide with an enterprise wide, integrated enterprise resource planning (ERP) system. The expansion of the ERP system to other international locations may occur at a future date based on value to the business. In general, the process of planning and preparing for these types of integrated, wide-scale implementations is extremely complex and we are required to address a number of challenges including data conversion, system cutover, and user training. Problems in any of these areas could cause operational problems during implementation including delayed shipments, missed sales, billing and accounting errors, and other operational issues. There have been numerous, well-publicized instances of companies experiencing difficulties with the implementation of ERP systems, which resulted in negative business consequences.

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

The drug discovery and development industry has a history of patent and other intellectual property litigation and these lawsuits will likely continue.

In July 2015, IDEXX Laboratories, Inc. and IDEXX Distribution, Inc. (collectively, IDEXX) filed a complaint in the United States District Court for the District of Delaware alleging we have infringed three (3) recently issued patents related to a blood spot sample collection method used in determining the presence or absence of an infectious disease in a population of rodents. In February 2017, we entered into a settlement agreement with IDEXX, which included a license to us of the relevant technology, the withdrawal by IDEXX of their complaint and withdrawal by us of our inter partes review filing.

Legal proceedings relating to intellectual property are expensive, take significant time, and divert management's attention from other business concerns, whether we win or lose. If we do not prevail in an infringement lawsuit brought against us, we might have to pay substantial damages, including treble damages, and we could be required to stop the infringing activity or obtain a license to use technology on unfavorable terms.

We may not be able to successfully develop and market new services and products.

We may seek to develop and market new services and products that complement or expand our existing business or service offerings. We believe our ability to in-license new technologies from third parties will be critical to our ability to offer new products and services to our customers. Our ability to gain access to technologies that we need for new products and services depends, in part, on our ability to convince inventors and their agents or assignees that we can successfully commercialize their inventions. We cannot guarantee that we will be able to identify new technologies of interest to our customers. Even if we are able to identify new technologies of interest, we may not be able to negotiate license agreements on acceptable terms, or at all. If we are unable to develop new services and products and/or create demand for those newly developed services and products, our future business, results of operations, financial condition, and cash flows could be adversely affected.

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

Our success depends to a significant extent on the continued services of our senior management and other members of management. James C. Foster, our Chief Executive Officer since 1992 and Chairman since 2000, has held various positions with us for four decades. While we recently entered into an employment agreement with Mr. Foster, most members of our senior management do not have employment agreements. If Mr. Foster or other members of senior management do not continue in their present positions, our business may suffer.

Because of the specialized scientific nature of our business, we are highly dependent upon attracting and retaining qualified scientific, technical, and managerial personnel. While we have a strong record of employee retention, there is still significant competition for qualified personnel in the veterinary, pharmaceutical, and biotechnology fields. Therefore, we may not be able to attract and retain the qualified personnel necessary for the development of our

business. The loss of the services of existing personnel, as well as the failure to recruit additional key scientific, technical, and managerial personnel in a timely manner, could harm our business.

Our quarterly operating results may vary, which could negatively affect the market price of our common stock.

Our results of operations in any quarter may vary from quarter to quarter and are influenced by such factors as:

- changes in the general global economy;
- the number and scope of ongoing client engagements;
- the commencement, postponement, delay, progress, completion, or cancellation of client contracts in the quarter;
- changes in the mix of our products and services;
- competitive pricing pressures;
- the extent of cost overruns;
- holiday buying patterns of our clients;
- budget cycles of our clients;
- changes in tax laws, rules, regulations, and tax rates in the locations in which we operate;
- the timing and charges associated with completed acquisitions and other events;
- the financial performance of our venture capital investments;
- the occasional extra week ("53rd week") that we recognize in a fiscal year (and fourth fiscal quarter thereof) due to our fiscal year ending on the last Saturday in December; and
- exchange rate fluctuations.

We believe that operating results for any particular quarter are not necessarily a meaningful indication of future results. Nonetheless, fluctuations in our quarterly operating results could negatively affect the market price of our common stock.

Referendum on the United Kingdom's membership in the European Union ("Brexit") may adversely affect our business.

On June 23, 2016, the U.K. held a referendum in which voters approved an exit from the European Union (E.U.), referred to as "Brexit." As a result of the referendum, the British government continues to negotiate the terms of the U.K.'s future relationship with the E.U. The decision by referendum to withdraw the U.K. from the E.U. caused significant volatility in global stock markets and currency exchange rate fluctuations. The execution of Brexit also may create global economic uncertainty, which may cause our customers and potential customers to monitor their costs and reduce their budgets for our products and services. In addition, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations as the U.K. determines which E.U. laws to replace or replicate. Given that we conduct a substantial portion of our business in the E.U. and the U.K., these effects of Brexit, among others, could adversely affect our business, business opportunities, results of operations, financial condition, and cash flows.

Since we do not expect to pay any cash dividends for the foreseeable future, our shareholders will benefit from an investment in our common stock only if it appreciates in value.

We have not declared or paid any cash dividends on our common stock, and do not anticipate that we will pay any dividends to holders of our common stock for the foreseeable future. Any payment of cash dividends will be at the discretion of our Board of Directors and will depend on our financial condition, capital requirements, legal requirements, earnings and other factors. Consequently, our shareholders should not rely on dividends to receive a return on their investment.

Item 1B. Unresolved Staff Comments

There are no unresolved comments to be reported in response to Item 1B.

Item 2. Properties

We own or lease the land and buildings where we have facilities. We own large facilities (facilities over 50,000 square feet) for our DSA businesses in Canada, France, Ireland, Netherlands, Scotland, and the U.S. and lease large facilities in England and the U.S. We own large RMS facilities in Canada, China, France, Germany, Italy, Japan, England, and the U.S. We own large Manufacturing segment facilities in the U.S. and China. None of our leases is individually material to our business operations. Many of our leases have an option to renew, and we believe that we will be able to successfully renew expiring leases on terms satisfactory to us. We believe that our facilities in each of our reportable segments are adequate for our operations and that suitable additional space will be available when needed. For additional information, see Note 7, "Long-Term Debt and Capital Lease Obligations" and Note 13, "Commitments and Contingencies" included in Item 8, "Financial Statements and Other Supplementary Data" in this Annual Report on Form 10-K.

25

We track room utilization on an ongoing basis and depending on the needs of our clients at given times, we may need to execute on contingent plans for expansion, which average between six and fifteen months to complete.
We may also expand at specific sites in order to accommodate needs resulting from any consolidation strategy. We continue to employ a master site planning strategy to proactively evaluate our real estate needs. In certain circumstances, we dispose of or consolidate operations, which could result in impairment charges. In situations where the associated real estate is leased, and depending on the resolution of these situations, we may be encumbered with the remaining real estate lease obligations.

Item 3. Legal Proceedings

We are not party to any material legal proceedings, other than ordinary routine litigation incidental to our business that is not material to our business or financial condition.

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

Our common stock began trading on the New York Stock Exchange on June 23, 2000 under the symbol "CRL." The following table shows the high and low sales prices for our common stock:

Fiscal 2018	High	Low
First quarter (through January 26, 2018)	$112.47	$104.00
Fiscal 2017	High	Low
First quarter	$91.57	$75.25
Second quarter	102.32	86.44
Third quarter	109.59	94.15
Fourth quarter	119.05	99.12
Fiscal 2016	High	Low
First quarter	$81.61	$65.70
Second quarter	87.95	73.42
Third quarter	89.18	75.54
Fourth quarter	84.53	67.20

There were no equity securities that were not registered under the Securities Act of 1933, as amended, sold during fiscal year 2017.

Shareholders

As of January 26, 2018, there were 353 registered shareholders of the outstanding shares of common stock.

Dividends

We have not declared or paid any cash dividends on shares of our common stock in the past two years and we do not intend to pay cash dividends in the foreseeable future. We currently intend to retain any earnings to finance future operations and expansion.

Issuer Purchases of Equity Securities

The following table provides information relating to our purchases of shares of our common stock during the fourth quarter of fiscal 2017:

	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs (in thousands)
October 1, 2017 to October 28, 2017	—	$ —	—	$ 129,105
October 29, 2017 to November 25, 2017	—	—	—	129,105
November 26, 2017 to December 30, 2017	89	104.20	—	129,096
Total	89		—	

In July 2010, our Board of Directors authorized a $500.0 million stock repurchase program, and subsequently approved increases to the program of $250.0 million in fiscal year 2010, $250.0 million in fiscal year 2013, $150.0 million in fiscal year 2014, and $150.0 million in fiscal year 2017, for an aggregate authorization of $1.3 billion. During the fourth quarter of fiscal year 2017, we did not repurchase any shares of common stock under our Rule 10b5-1 Purchase Plan or in open market trading. Additionally, our stock-based compensation plans permit the netting of common stock upon vesting of restricted stock, restricted stock units, and performance share units in order to satisfy individual statutory tax withholding requirements.

Comparison of 5-Year Cumulative Total Return

The following stock performance graph compares the annual percentage change in the Company's cumulative total shareholder return on its Common Stock during a period commencing on December 29, 2012 and ending on December 30, 2017 (as measured by dividing (1) the sum of (A) the cumulative amount of dividends for the measurement period, assuming dividend reinvestment, and (B) the difference between the Company's share price at the end and the beginning of the measurement period; by (2) the share price at the beginning of the measurement period) with the cumulative total return of the S&P 500 Index and the S&P 500 Health Care Index during such period. The Company has not paid any dividends on the Common Stock, and no dividends are included in the representation of the Company's performance. The stock price performance on the graph below is not necessarily indicative of future price performance. The graph is not "soliciting material," is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference in any filing of the Company under the Securities Act of 1933 or the Securities Exchange Act of 1934 whether made before or after the date hereof and irrespective of any general incorporation language in any such filing. Information used in the graph was obtained from Standards & Poor's Institutional Market Services, a source believed to be reliable, but the Company is not responsible for any errors or omissions in such information

COMPARISON OF 5-YEAR CUMULATIVE TOTAL RETURN
Among Charles River Laboratories International, Inc., The S&P 500 Index and
The S&P 500 Health Care Index

	Fiscal Year					
	2012	2013	2014	2015	2016	2017
Charles River Laboratories International, Inc.	$100	$145	$174	$217	$207	$297
S&P 500	100	132	151	153	171	208
S&P 500 Health Care	100	141	177	190	184	225

Item 6. Selected Consolidated Financial Data

The selected financial data presented below is derived from our audited consolidated financial statements and should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in Item 7 and "Financial Statements and Supplementary Data" contained in Item 8 of this Annual Report on Form 10-K. Our fiscal year is typically based on 52-weeks, with each quarter composed of 13 weeks ending on the last Saturday on, or closest to, March 31, June 30, September 30, and December 31. A 53rd week was included in the fourth quarter of fiscal year 2016, which is occasionally necessary to align with a December 31 calendar year-end.

	Fiscal Year				
	2017	2016	2015	2014	2013
	(in thousands, except per share amounts)				
Statement of Income Data					
Total revenue	$1,857,601	$1,681,432	$1,363,302	$1,297,662	$1,165,528
Income from continuing operations, net of income taxes	125,586	156,086	152,037	129,924	105,416
Income (loss) from discontinued operations, net of income taxes	(137)	280	(950)	(1,726)	(1,265)
Common Share Data					
Earnings per common share from continuing operations:					
Basic	$2.60	$3.28	$3.23	$2.76	$2.18
Diluted	$2.54	$3.22	$3.15	$2.70	$2.15
Other Data					
Depreciation and amortization	$131,159	$126,658	$94,881	$96,445	$96,636
Capital expenditures	82,431	55,288	63,252	56,925	39,154
Balance Sheet Data (as of period end)					
Cash and cash equivalents	$163,794	$117,626	$117,947	$160,023	$155,927
Total assets	2,929,922	2,711,800	2,068,497	1,870,578	1,623,438
Long-term debt, net and capital leases	1,114,105	1,207,696	845,997	740,557	635,226
Redeemable noncontrolling interest	16,609	14,659	28,008	28,419	20,581

Refer to Note 2, "Business Acquisitions and Divestiture" included in Item 8, "Financial Statements and Supplementary Data" in this Annual Report on Form 10-K for additional information concerning the impact of our recent acquisitions.

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

The following discussion should be read in conjunction with our consolidated financial statements and related notes appearing in Item 8, "Financial Statements and Supplementary Data" in this Annual Report on Form 10-K. The following discussion contains forward-looking statements. Actual results may differ significantly from those projected in the forward-looking statements. Factors that might cause future results to differ materially from those projected in the forward-looking statements include, but are not limited to, those discussed in Item 1A, "Risk Factors" and elsewhere in this Annual Report on Form 10-K. Certain percentage changes may not recalculate due to rounding.

Overview

We are a full service, early-stage contract research organization (CRO). For over 70 years, we have been in the business of providing the research models required in research and development of new drugs, devices, and therapies. Over this time, we have built upon our original core competency of laboratory animal medicine and science (research model technologies) to develop a diverse portfolio of discovery and safety assessment services, both Good Laboratory Practice (GLP) and non-GLP, that enable us to support our clients from target identification through non-clinical development. We also provide a suite of products and services to support our clients' manufacturing activities. Utilizing our broad portfolio of products and services enables our clients to create a more flexible drug development model, which reduces their costs, enhances their productivity and effectiveness, and increases speed to market.

Our client base includes all major global biopharmaceutical companies, many biotechnology companies, CROs, agricultural and industrial chemical companies, life science companies, veterinary medicine companies, contract manufacturing companies, medical device companies, and diagnostic and other commercial entities, as well as leading hospitals, academic institutions, and government agencies around the world. We currently operate approximately 80 facilities in 23 countries worldwide, which numbers exclude our Insourcing Solutions (IS) sites.

Segment Reporting

Our three reportable segments are Research Models and Services (RMS), Discovery and Safety Assessment (DSA), and Manufacturing Support (Manufacturing). Our RMS reportable segment includes the Research Models and Research Model Services businesses. Research Models includes the commercial production and sale of small research models, as well as the supply of large research models. Research Model Services includes: Genetically Engineered Models and Services (GEMS), which performs contract breeding and other services associated with genetically engineered research models; Research Animal Diagnostic Services (RADS), which provides health monitoring and diagnostics services related to research models; and Insourcing Solutions (IS), which provides colony management of our clients' research operations (including recruitment, training, staffing, and management services). Our DSA reportable segment includes services required to take a drug through the early development process including discovery services, which are non-regulated services to assist clients with the identification, screening, and selection of a lead compound for drug development, and regulated and non-regulated (GLP and non-GLP) safety assessment services. Our Manufacturing reportable segment includes Microbial Solutions, which provides in vitro (non-animal) lot-release testing products, microbial detection products, and species identification services; Biologics Testing Services (Biologics), which performs specialized testing of biologics; Avian Vaccine Services (Avian), which supplies specific-pathogen-free chicken eggs and chickens; and contract development and manufacturing (CDMO) services, which, until we divested this business on February 10, 2017, allowed us to provide formulation design and development, manufacturing, and analytical and stability testing for small molecules.

Recent Acquisitions and Divestiture

We continued to make strategic acquisitions designed to expand our portfolio of services to support the drug discovery and early-stage development continuum and position us as a market leader in the outsourced discovery services market. Our recent acquisitions and divestiture are described below.

On February 12, 2018, we entered into a definitive agreement to acquire MPI Research, a non-clinical CRO, providing comprehensive testing services to biopharmaceutical and medical device companies worldwide. Acquiring MPI Research will enhance our position as a leading global early-stage CRO by strengthening our ability to partner with clients across the drug discovery and development continuum. The transaction is expected to close early in the second quarter of 2018, subject to regulatory approvals and customary closing conditions. The preliminary purchase price will

be approximately $800 million in cash, subject to customary closing adjustments. The acquisition and associated fees are expected to be financed through an expansion of our credit facility and cash. We entered into a commitment letter, pursuant to which we will be provided up to $830 million under a bridge loan facility. This business is expected to be reported as part of our DSA reportable segment. In the

event the agreement is terminated under specified circumstances, we may be required to pay a termination fee of $48 million, increasing to $56 million based on other specific circumstances.

On January 11, 2018, we acquired KWS BioTest Limited (KWS BioTest), a CRO specializing in in vitro and in vivo discovery testing services for immuno-oncology, inflammatory and infectious diseases. The acquisition enhances our discovery expertise, with complementary offerings that provide our customers with additional tools in the active therapeutic research areas of oncology and immunology. The purchase price for KWS BioTest was $20.3 million in cash, subject to certain post-closing adjustments that may change the purchase price, and was funded by our various borrowings. In addition to the initial purchase price, the transaction includes aggregate, undiscounted contingent payments of up to £3.0 million (approximately $4.1 million based on recent exchange rates), based on future performance. This business will be reported as part of our DSA reportable segment.

On August 4, 2017, we acquired Brains On-Line, a leading CRO providing critical data that advances novel therapeutics for the treatment of central nervous system (CNS) diseases. Brains On-Line strategically expands our existing CNS capabilities and establishes us as a single-source provider for a broad portfolio of discovery CNS services. The purchase price for Brains On-Line was $21.3 million in cash, subject to certain post-closing adjustments. In addition to the initial purchase price, the transaction includes potential additional payments of up to €6.7 million (approximately $7.9 million based on recent exchange rates), based on future performance. The Brains On-Line business is reported as part of our DSA reportable segment.

On February 10, 2017, we completed the divestiture of our CDMO business to Quotient Clinical Ltd., based in London, England for $75.0 million in proceeds, net of cash, cash equivalents, and working capital adjustments. The CDMO business was acquired in April 2016 as part of the acquisition of WIL Research and was reported in our Manufacturing reportable segment. Following a strategic review that was finalized subsequent to December 31, 2016, we determined that the CDMO business was not optimized within our portfolio at its current scale, and that the capital could be better deployed in other long-term growth opportunities.

Fiscal Quarters

Our fiscal year is typically based on 52-weeks, with each quarter composed of 13 weeks ending on the last Saturday on, or closest to, March 31, June 30, September 30, and December 31. A 53rd week was included in the fourth quarter of fiscal year 2016, which is occasionally necessary to align with a December 31 calendar year-end.

Business Trends

The demand for our products and services increased in fiscal year 2017. Our pharmaceutical and biotechnology clients continued to intensify their use of strategic outsourcing to improve their operating efficiency and to access capabilities that they do not maintain internally. Many of our large biopharmaceutical clients have continued to increase investments in their drug discovery and early-stage development efforts and have strengthened their relationships with both CROs, like Charles River, and biotechnology companies to assist them in bringing new drugs to market. In addition, small and mid-size biopharmaceutical clients benefited from the continued strength in the biotechnology funding environment in fiscal year 2017, from capital markets, partnering with large biopharmaceutical companies, and investment by venture capital. Academia has also benefited from partnering activities, as large biopharmaceutical companies have increasingly utilized academic research capabilities to broaden the scope of their research activities. Our full service, early-stage portfolio continued to lead to additional client discussions in fiscal year 2017 regarding strategic relationships, where clients seek to outsource larger portions of their early-stage drug research programs to us.

The primary result of these trends was improved demand for our Safety Assessment services in fiscal year 2017, particularly from biotechnology clients. This improvement led to increased capacity utilization in our Safety Assessment facilities, which remained well utilized in fiscal year 2017. Price also improved slightly in fiscal year 2017, as industry capacity utilization continued to increase. In order to accommodate increasing client demand, we continued to open small amounts of new capacity in fiscal year 2017. We believe our scientific expertise, quality, and responsiveness remain key criteria when our clients make the decision to outsource to us. As our clients continue to pursue their goal of more efficient and effective drug research, they are evaluating outsourcing new areas of their research programs, such as discovery services. We have enhanced our Discovery Services capabilities over the past

four years to enable us to work with clients at the earliest stages of the discovery process. In fiscal year 2017, demand in our Discovery Services business was stable. The completion of a few large, integrated early discovery projects from biopharmaceutical clients in fiscal year 2016 was largely offset with improving demand from biotechnology clients as many of these clients either initiated or continued to work with us on integrated programs and other projects. Large biopharmaceutical companies continue to have significant internal discovery capabilities, on which they can choose to rely. In order for large biopharmaceutical clients to increasingly outsource more work to us, we must continue to

demonstrate that our services can augment and accelerate our clients' drug discovery processes. The business changes that we implemented in fiscal year 2016, including a small site consolidation and realignment of sales strategies in our early discovery business have been successful resulting in the stabilization of the business in fiscal year 2017 and in attracting new clients, including a growing base of biotechnology clients. Demand for our in vivo discovery services continued to increase in fiscal year 2017, and we acquired Brains On-Line in August 2017 to enhance our position as the premier single-source provider for a broad portfolio of discovery CNS services. In addition, we acquired KWS BioTest Limited in January 2018 to enhance our discovery expertise, with complementary offerings that provide our customers with additional tools in the active therapeutic research areas of oncology and immunology.

Demand for our products and services that support our clients' manufacturing activities was also robust in fiscal year 2017. Demand for our Microbial Solutions business remained strong as manufacturers continued to increase their use of our rapid microbial testing solutions. Our Biologics business continued to benefit from increased demand for services associated with the growing proportion of biologic drugs in the pipeline and on the market. To support this increased demand, we continue to expand the capacity of our Biologics business.

Demand for our Research Models and Services was stable in fiscal year 2017. Demand for research models in mature markets outside of China declined modestly, partially offset by improved pricing. The continued effect of the consolidation of internal infrastructure within our large biopharmaceutical clients and a longer-term trend towards more efficient use of research models has led to reduced demand for research models. Demand for research models in China continued to be robust in fiscal year 2017, as clients in this growing market continue to value our high-quality research models. To accommodate increased demand, we opened a new research models facility in China in late 2017. Demand for research models services also improved in fiscal year 2017, particularly for our GEMS and IS businesses. We are confident that research models and services will remain essential tools for our clients' drug discovery and early-stage development efforts, and the RMS business will continue to be an important source of cash flow generation for us.

Overview of Results of Operations and Liquidity

Revenue for fiscal year 2017 was $1,857.6 million compared to $1,681.4 million in fiscal year 2016. The 2017 increase as compared to the corresponding period in 2016 was $176.2 million, or 10.5%, and was primarily due to growth in our DSA and Manufacturing segments, as discussed in the above "Business Trends" section.

In fiscal year 2017, our operating income and operating income margin were $287.5 million and 15.5%, respectively, compared with $237.4 million and 14.1%, respectively, in fiscal year 2016. The increase in operating income and operating income margin was primarily due to increased demand in our DSA and Manufacturing segments, the effects of our recent acquisitions, and various productivity initiatives.

Net income attributable to common shareholders decreased to $123.4 million in fiscal year 2017, from $154.8 million in the corresponding period of 2016. The decrease in net income attributable to common shareholders of $31.4 million was primarily due to an increase in the provision for income taxes of $104.6 million as a result of U.S. Tax Reform, partially offset by an increase in operating income as discussed above, as well as a gain of $10.6 million on the CDMO divestiture and an increase of $12.6 million in gains on our venture capital investments.

During fiscal year 2017, our cash flows from operations was $318.1 million compared with $316.9 million for fiscal year 2016. The increase was primarily driven by positive changes in operating assets and liabilities due to the recognition of a tax payable in connection with the recent U.S. Tax Reform, and the timing of our accounts payable and accrued compensation payments. These increases were partially offset by a decrease in income from continuing operations.

In the fourth quarter of fiscal 2017, as part of our efficiency initiatives, we committed to a plan to close our RMS production facility in Maryland before the end of 2018, consolidate production in other facilities, and to reduce our workforce at certain other global RMS facilities. Total costs recognized in the fourth quarter of fiscal 2017 were $18.1 million, of which $17.7 million related to asset impairments and accelerated depreciation. Additional costs are expected to be incurred during 2018 resulting from accelerated lease obligations, severance and transition costs, and site consolidation costs in the range of $6.5 million to $7.5 million.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements prepared in accordance with generally accepted accounting principles in the United States (U.S.). The preparation of these financial statements requires us to make certain estimates and assumptions that may affect the reported amounts of assets and liabilities, the reported amounts of revenues and expenses during the reported periods and related disclosures. These

estimates and assumptions are monitored and analyzed by us for changes in facts and circumstances, and material changes in these estimates could occur in the future. We base our estimates on our historical experience, trends in the industry, and various other factors that are believed to be reasonable under the circumstances. Actual results may differ from our estimates under different assumptions or conditions.

We believe that the application of our accounting policies, each of which require significant judgments and estimates on the part of management, are the most critical to aid in fully understanding and evaluating our reported financial results. Our significant accounting policies are more fully described in Note 1, “Description of Business and Summary of Significant Accounting Policies”, to our consolidated financial statements contained in Item 8, “Financial Statements and Supplementary Data” in this Annual Report on Form 10-K.

We believe the following represent our critical accounting policies and estimates used in the preparation of our financial statements:

Revenue Recognition

We recognize revenue when all of the following conditions are satisfied: persuasive evidence of an arrangement exists, delivery has occurred or services have been provided, our price to the customer is fixed or determinable, and collectibility is reasonably assured.

Service revenue is generally evidenced by client contracts, which range in duration from a few weeks to a few years and typically take the form of an agreed upon rate per unit or fixed fee arrangements. Such contracts typically do not contain acceptance provisions based upon the achievement of certain study or laboratory testing results. Revenue of agreed upon rate per unit contracts is recognized as services are performed, based upon rates specified in the contract. In cases where performance spans reporting periods, revenue of fixed fee contracts is recognized as services are performed, measured on the ratio of outputs or performance obligations completed to the total contractual outputs or performance obligations to be provided. Changes in estimated effort to complete the fixed fee contract are reflected in the period in which the change becomes known. Changes in scope of work are common, especially under long-term contracts, and generally result in a change in contract value. Once the parties have agreed to the changes in scope and renegotiated pricing terms, the contract value is amended and revenue is typically recognized as described above. Most contracts are terminable by the client, either immediately or upon notice. These contracts often require payment to us of expenses to wind down the project, fees earned to date or, in some cases, a termination fee. Such payments are included in revenues when earned.

We recognize product revenue, net of allowances for estimated returns, rebates and discounts, when title and risk of loss pass to customers. When we sell equipment with specified acceptance criteria, we assess our ability to meet the acceptance criteria in order to determine the timing of revenue recognition. We defer revenue until completion of customer acceptance testing if we are not able to demonstrate the ability to meet such acceptance criteria.

A portion of our revenue is from multiple-element arrangements that include multiple products and/or services as deliverables in a single arrangement, with each deliverable, or a combination of the deliverables, representing a separate unit of accounting. We allocate revenues to each element in a multiple-element arrangement based upon the relative selling price of each deliverable. Revenue allocated to each deliverable is then recognized when all revenue recognition criteria are met. Judgments as to the identification of deliverables, units of accounting, the allocation of consideration to the deliverable, and the appropriate timing of revenue recognition are critical with respect to these arrangements.

At the inception of each arrangement that includes milestone payments, we evaluate whether each milestone is substantive. This evaluation includes an assessment of whether (a) the consideration is commensurate with either (1) our performance to achieve the milestone, or (2) the enhancement of the value of the delivered item(s) as a result of a specific outcome resulting from our performance to achieve the milestone; (b) the consideration relates solely to past performance; and (c) the consideration is reasonable relative to all of the deliverables and payment terms within the arrangement. We evaluate factors such as the scientific, clinical, regulatory, and other risks that must be overcome to achieve the respective milestone, the level of effort and investment required, and whether the milestone consideration is reasonable relative to all deliverables and payment terms in the arrangement in making this assessment. If a substantive milestone is achieved and collection of the related receivable is reasonably assured, we recognize revenue

related to the milestone in its entirety in the period in which the milestone is achieved. If we were to achieve milestones that we consider substantive under any of our revenue arrangements, we may experience significant fluctuations in our revenue from quarter to quarter and year to year depending on the timing of achieving such substantive milestones. In those circumstances where a milestone is not substantive, we recognize as revenue, on the date

the milestone is achieved, an amount equal to the applicable percentage of the performance period that had elapsed as of the date the milestone was achieved, with the balance being deferred and recognized over the remaining period of performance. As of December 30, 2017, we had no significant milestones that were deemed substantive.

We record shipping charges billed to customers in total revenue and record shipping costs in cost of revenue (excluding amortization of intangible assets) for all periods presented.

Income Taxes

We prepare and file income tax returns based on our interpretation of each jurisdiction's tax laws and regulations. In preparing our consolidated financial statements, we estimate our income tax liability in each of the jurisdictions in which we operate by estimating our actual current tax expense together with assessing temporary differences resulting from differing treatment of items for tax and financial reporting purposes. These differences result in deferred tax assets and liabilities, which are included in our consolidated balance sheets. Significant management judgment is required in assessing the realizability of our deferred tax assets. In performing this assessment, we consider whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. In making this determination, under the applicable financial accounting standards, we are allowed to consider the scheduled reversal of deferred tax liabilities, projected future taxable income, and the effects of tax planning strategies. In the event that actual results differ from our estimates, we adjust our estimates in future periods and we may need to establish a valuation allowance, which could materially impact our financial position and results of operations.

We account for uncertain tax positions using a "more-likely-than-not" threshold for recognizing and resolving uncertain tax positions. We evaluate uncertain tax positions on a quarterly basis and consider various factors, that include, but are not limited to, changes in tax law, the measurement of tax positions taken or expected to be taken in tax returns, the effective settlement of matters subject to audit, information obtained during in process audit activities and changes in facts or circumstances related to a tax position. We adjust the level of the liability to reflect any subsequent changes in the relevant facts surrounding the uncertain positions. Our liabilities for uncertain tax positions can be relieved only if the contingency becomes legally extinguished through either payment to the taxing authority or the expiration of the statute of limitations, the recognition of the benefits associated with the position meet the "more-likely-than-not" threshold or the liability becomes effectively settled through the controversy process. We consider matters to be effectively settled once the taxing authority has completed all of its required or expected examination procedures, including all appeals and administrative reviews; we have no plans to appeal or litigate any aspect of the tax position; and we believe that it is highly unlikely that the taxing authority would re-examine the related tax position. We also accrue for potential interest and penalties related to unrecognized tax benefits in income tax expense.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as U.S. Tax Reform. U.S. Tax Reform makes broad and complex changes to the U.S. tax code, including, but not limited to, (i) reducing the U.S. federal statutory tax rate from 35% to 21%; (ii) requiring companies to pay a one-time transition tax on certain unrepatriated earnings of foreign subsidiaries; (iii) generally eliminating U.S federal income taxes on dividends from foreign subsidiaries; (iv) requiring a current inclusion in U.S. federal taxable income of certain earnings of controlled foreign corporations; (v) eliminating the corporate alternative minimum tax (AMT) and changing how existing AMT credits can be realized; (vi) creating the base erosion anti-abuse tax (BEAT), a new minimum tax; (vii) creating a new limitation on deductible interest expense; (viii) changing rules related to uses and limitations of net operating loss carryforwards created in tax years beginning after December 31, 2017, and (ix) modifying the officer's compensation limitation.

The provision for income taxes for fiscal year 2017 includes a $78.5 million estimate for the impact of the enactment of U.S. Tax Reform. The estimated impact of U.S. Tax Reform consists of $73.5 million relating to the one-time transition tax on unrepatriated earnings, $18.2 million of withholding and state taxes relating to withdrawal of our indefinite reinvestment assertion regarding unremitted earnings, and $13.2 million tax benefit for the revaluation of U.S. federal net deferred tax liabilities from 35% to 21%. The final impact of U.S. Tax Reform may differ from these estimates, due to, among other things, changes in interpretations, analysis and assumptions made by management,

additional guidance that may be issued by the U.S. Department of the Treasury and the Internal Revenue Service, and any updates or changes to estimates we have utilized to calculate the transition impact. Therefore, our accounting for the elements of U.S. Tax Reform is incomplete. However, we were able to make reasonable estimates of the effects of U.S. Tax Reform.

Prior to the fourth quarter of fiscal year 2017, we asserted that the unremitted earnings of our foreign subsidiaries were deemed indefinitely reinvested as they were required to fund needs outside of the U.S. As a result of the deemed repatriation toll tax and

other effects of U.S. Tax Reform enacted during the fourth quarter of fiscal year 2017, we have withdrawn our indefinite reinvestment assertion for all of our unremitted foreign earnings and have provided deferred taxes of $18.2 million for future withholding and state income taxes upon the repatriation of these earnings. In light of the reduced incremental tax cost of repatriating unremitted earnings, as well as other effects of U.S. Tax Reform, we have determined we can no longer overcome the presumption that all undistributed foreign earnings will ultimately be transferred to the U.S. parent entity.

In fiscal 2017, we adopted Accounting Standard Update (ASU) 2016-09, “Improvements to Employee Share-Based Payment Accounting.” The standard reduces complexity in several aspects of the accounting for employee share-based compensation, including certain income tax consequences. Excess tax benefits and tax deficiencies are recognized in the consolidated statements of income on a prospective basis. The adoption to recognize excess tax benefits and tax deficiencies within the consolidated statements of income on a prospective basis could result in fluctuations in the effective tax rate period-over-period, depending on how many awards vest and the volatility of our stock price. During fiscal year 2017, the impact to the provision for income taxes within the consolidated statements of income was an excess tax benefit of $11.0 million. Further, for fiscal year 2017, we excluded the effect of windfall tax benefits from the hypothetical proceeds used to calculate the repurchase of shares under the treasury stock method for the calculation of diluted earnings per share.

Goodwill and Intangible Assets

We use assumptions and estimates in determining the fair value of assets acquired and liabilities assumed in a business combination. The determination of the fair value of intangible assets, which represent a significant portion of the purchase price in many of our acquisitions, requires the use of significant judgment with regard to (i) the fair value; and (ii) whether such intangibles are amortizable or non-amortizable and, if the former, the period and the method by which the intangible asset will be amortized. We utilize commonly accepted valuation techniques, such as the income approach and the cost approach, as appropriate, in establishing the fair value of intangible assets. Typically, key assumptions include projections of cash flows that arise from identifiable intangible assets of acquired businesses as well as discount rates based on an analysis of our weighted average cost of capital, adjusted for specific risks associated with the assets.

We review definite-lived intangible assets for impairment when indication of potential impairment exists, such as a significant reduction in cash flows associated with the assets. Actual cash flows arising from a particular intangible asset could vary from projected cash flows which could imply different carrying values from those established at the dates of acquisition and which could result in impairment of such asset.

During fiscal year 2016, we determined that the carrying values of certain DSA intangible assets were not recoverable and recorded an impairment charge of $1.9 million, which was included in costs of services provided (excluding amortization of intangible assets).

We evaluate goodwill for impairment annually, during the fourth quarter, and when events occur or circumstances change that may reduce the fair value of the asset below its carrying amount. Events or circumstances that might require an interim evaluation include unexpected adverse business conditions, economic factors, unanticipated technological changes or competitive activities, loss of key personnel and acts by governments and courts. Estimates of future cash flows require assumptions related to revenue and operating income growth, asset-related expenditures, working capital levels and other factors. Different assumptions from those made in our analysis could materially affect projected cash flows and our evaluation of goodwill for impairment.

We have the option to first assess qualitative factors to determine whether it is necessary to perform the two-step goodwill impairment test. If we elect this option and believe, as a result of the qualitative assessment, that it is more-likely-than-not that the carrying value of goodwill is not recoverable, the quantitative two-step impairment test is required; otherwise, no further testing is required. Alternatively, we may elect to not first assess qualitative factors and immediately perform the quantitative two-step impairment test. In the first step, we compare the fair value of our reporting units to their carrying values. If the carrying values of the net assets assigned to the reporting units exceed the fair values of the reporting units, then the second step of the impairment test is performed in order to determine the implied fair value of our goodwill. If the carrying value of the reporting unit’s goodwill exceeds its implied fair value,

then we would record an impairment loss equal to the difference.

In fiscal years 2017, 2016 and 2015, we performed the first step of the two-step goodwill impairment test for our reporting units. Fair value was determined by using a weighted combination of a market-based approach and an income approach, as this combination was deemed to be the most indicative of our fair value in an orderly transaction between market participants. Under the market-based approach, we utilized information about our Company as well as publicly available industry information to determine earnings multiples and sales multiples that are used to value our reporting units. Under the income approach, we determined fair value based on the estimated future cash flows of each reporting unit, discounted by an estimated

weighted-average cost of capital, which reflects the overall level of inherent risk of the reporting unit and the rate of return an outside investor would expect to earn.

Our 2017, 2016 and 2015 impairment tests indicated that goodwill was not impaired.

In the second quarter of 2016, we revised the composition of our reportable segments to align with the view of the business following our acquisition of WIL Research. As a result, goodwill was allocated from our RMS reportable segment to our Manufacturing reportable segment based on the fair value of each business group within its original reporting unit relative to the fair value of that reporting unit. In addition, we completed an assessment of any potential goodwill impairment for all reporting units immediately prior to the reallocation and determined that no impairment existed.

Valuation and Impairment of Long-Lived Assets

Long-lived assets to be held and used, including property, plant, and equipment, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets or asset group may not be recoverable. Factors we consider important which could trigger an impairment review include, but are not limited to, the following:

- significant underperformance relative to expected historical or projected future operating results;
- significant negative industry or economic trends; or
- significant changes or developments in strategy or operations that negatively affect the utilization of our long-lived assets.

Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset, net of any sublease income, if applicable, and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, the assets are written-down to their fair values. We measure any impairment based on a projected discounted cash flow method using a discount rate determined by management to be commensurate with the risk inherent in our current business model. Significant judgments are required to estimate future cash flows, including the selection of appropriate discount rates and other assumptions. We may also estimate fair value based on market prices for similar assets, as appropriate. Changes in these estimates and assumptions could materially affect the determination of fair value for these assets.

In fiscal 2017, we recognized $17.7 million of asset impairment and accelerated depreciation charges on the RMS facility in Frederick, Maryland in connection with our global RMS restructuring initiatives.

Pension and Other Post-Retirement Benefit Plans

Several of our U.S. and non-U.S. subsidiaries sponsor defined benefit pension and other post-retirement benefit plans. We recognize the funded status of our defined benefit pension and other postretirement benefit plans as an asset or liability. This amount is defined as the difference between the fair value of plan assets and the benefit obligation. We measure plan assets and benefit obligations as of the date of our fiscal year end.

The cost and obligations of these arrangements are calculated using many assumptions to estimate the benefits that the employee earns while working, the amount of which cannot be completely determined until the benefit payments cease. Major assumptions used in the accounting for these employee benefit plans include the expected return on plan assets, withdrawal and mortality rates, discount rate, and rate of increase in employee compensation levels. Assumptions are determined based on our data and appropriate market indicators, and are evaluated each year as of the plans' measurement date. Should any of these assumptions change, they would have an effect on net periodic pension costs and the unfunded benefit obligation.

The expected long-term rate of return on plan assets reflects the average rate of earnings expected on the funds invested, or to be invested, to provide for the benefits included in the projected benefit obligations. In determining the expected long-term rate of return on plan assets, we consider the relative weighting of plan assets, the historical performance of total plan assets and individual asset classes and economic and other indicators of future performance. The discount rate reflects the rate we would have to pay to purchase high-quality investments that would provide cash sufficient to settle our current pension obligations.

The rate of compensation increase reflects the expected annual salary increases for the plan participants based on historical experience and the current employee compensation strategy.

In fiscal year 2017, new mortality improvement scales were issued in the U.S. and United Kingdom (U.K) reflecting a decline in longevity projection from the 2016 releases that we adopted, which decreased our benefit obligations by $5.2 million as of

December 30, 2017. In fiscal year 2016, new mortality improvement scales were issued in the U.S. reflecting a decline in longevity projection from the 2015 releases that we adopted, which decreased our benefit obligations by $1.3 million as of December 31, 2016.

Stock-Based Compensation

We grant stock options, restricted stock, restricted stock units (RSUs), and performance share units (PSUs) to employees, and stock options, restricted stock, and RSUs to non-employee directors under stock-based compensation plans. We make certain assumptions in order to value and record expense associated with awards made under our stock-based compensation arrangements. Changes in these assumptions may lead to variability with respect to the timing and amount of expense we recognize in connection with share-based payments.

Determining the appropriate valuation model and related assumptions requires judgment. The fair value of stock options granted is calculated using the Black-Scholes model and the fair value of PSUs is calculated using a lattice model with a Monte Carlo simulation, both of which require the use of subjective assumptions including volatility and expected term, among others.

Determining the appropriate amount to expense based on the anticipated achievement of PSU's performance targets requires judgment, including forecasting the achievement of future financial targets. The estimate of expense is revised periodically based on the probability of achieving the required performance targets. The cumulative impact of any changes to our estimates is reflected in the period of change.

Due to our adoption in fiscal 2017 of ASU 2016-09, "Improvements to Employee Share-Based Payment Accounting", we elected to change our accounting policy to account for forfeitures when they occur on a modified retrospective basis, which resulted in an immaterial impact on our consolidated financial statements and related disclosures.

New Accounting Pronouncements

For a discussion of new accounting pronouncements, refer to Note 1, "Description of Business and Summary of Significant Accounting Policies" to our consolidated financial statements contained in Item 8, "Financial Statements and Supplementary Data," in this Annual Report on Form 10-K.

Results of Operations

Fiscal Year 2017 Compared to Fiscal Year 2016

Revenue

The following tables present consolidated revenue by reportable segment and by type:

	Fiscal Year				
	2017	2016	$ change	% change	Impact of FX
	(in millions, except percentages)				
RMS	$493.6	$494.0	$(0.4)	(0.1)%	(0.2)%
DSA	980.0	836.6	143.4	17.1 %	(0.2)%
Manufacturing	384.0	350.8	33.2	9.5 %	0.7 %
Total revenue	$1,857.6	$1,681.4	$176.2	10.5 %	0.0 %

	Fiscal Year			
	2017	2016	$ change	% change
	(in millions, except percentages)			
Service revenue	$1,298.3	$1,130.7	$167.6	14.8 %
Product revenue	559.3	550.7	8.6	1.6 %
Total revenue	$1,857.6	$1,681.4	$176.2	10.5 %

RMS revenue decreased $0.4 million due to lower research model revenue outside of China, lower service revenue in the RADS business, and the negative effect of changes in foreign currency exchange rates; partially offset by higher research model product revenue in China, and higher research model services revenue attributable to the IS and GEMS businesses.

DSA revenue increased $143.4 million due primarily to increased demand from mid-tier biotechnology clients and global biopharmaceuticals clients. The Safety Assessment business had higher service revenue as a result of the WIL Research acquisition, which contributed $62.5 million to service revenue growth, as well as growth of the legacy business, including favorable volume, mix of services, and pricing; and the Discovery Services business had higher service revenue, primarily as a result of the acquisitions of Agilux and Brains On-Line that contributed $28.6 million and $4.9 million to service revenue growth, respectively; partially offset by the negative effect of changes in foreign currency exchange rates.

Manufacturing revenue increased $33.2 million due primarily to higher demand for endotoxin products in the Microbial Solutions business; increased demand in the Biologics business, which included the acquisition of Blue Stream that contributed $3.5 million to service revenue growth; and positive effect of changes in foreign current exchange rates; partially offset by the absence of $10.9 million of service revenue related to the CDMO business; and lower product revenue in the Avian business.

Cost of Services Provided and Products Sold (Excluding Amortization of Intangible Assets)

The following tables present consolidated costs of services provided and products sold (excluding amortization of intangible assets) (Costs) by reportable segment and by type:

	Fiscal Year				
	2017	2016	$ change	% change	
	(in millions, except percentages)				
RMS	$317.0	$292.8	$24.2	8.3	%
DSA	660.6	572.4	88.2	15.4	%
Manufacturing	177.7	169.5	8.2	4.8	%
Total cost of services provided and products sold (excluding amortization of intangible assets)	$1,155.3	$1,034.7	$120.6	11.6	%

	Fiscal Year				
	2017	2016	$ change	% change	
	(in millions, except percentages)				
Cost of services provided	$865.6	$757.7	$107.9	14.2	%
Cost of products sold	289.7	277.0	12.7	4.6	%
Total cost of services provided and products sold (excluding amortization of intangible assets)	$1,155.3	$1,034.7	$120.6	11.6	%

Costs for fiscal year 2017 increased $120.6 million, or 11.6%, compared to fiscal year 2016. Costs as a percentage of revenue for fiscal year 2017 were 62.2%, an increase of 0.7%, from 61.5% for fiscal year 2016.

RMS Costs increased $24.2 million due primarily to higher restructuring costs associated with the planned closure of our production facility in Maryland; increased employee compensation costs and increased facility investments in China; partially offset by the favorable effect of changes in foreign currency exchange rates. RMS Costs as a percentage of revenue for fiscal year 2017 were 64.2%, an increase of 4.9%, from 59.3% for fiscal year 2016, due primarily to lower research model volume, higher restructuring charges, higher compensation costs, and facility investments.

DSA Costs increased $88.2 million due primarily to an increase in Safety Assessment Costs, which included a higher service cost base due to the WIL Research acquisition and the growth of the legacy services business, and higher compensation; an increase in Discovery Services Costs, which included a higher service cost base due to the acquisitions of Agilux and Brains On-Line, and higher compensation costs; partially offset by higher restructuring costs incurred during 2016 associated with site consolidations to help improve productivity; and the favorable effect of changes in foreign currency exchange rates. DSA Costs as a percentage of revenue for fiscal year 2017 were 67.4%, a decrease of 1.0%, from 68.4% for fiscal year 2016, due primarily to higher volume, favorable pricing, and productivity improvements.

Manufacturing Costs increased $8.2 million due primarily to an increase in Microbial Solutions Costs resulting from higher demand of endotoxin products; an increase in Biologics Costs resulting from the growth of the business and the acquisition of Blue Stream; and the unfavorable effect of changes in foreign currency exchange rates; partially offset by a decrease in CDMO Costs related to the divestiture of the CDMO business. Manufacturing Costs as a percentage of revenue for fiscal year 2017 were 46.3%, a decrease of 2.0%, from 48.3% for fiscal year 2016, due primarily to higher volume, favorable pricing, and productivity improvements.

Selling, General and Administrative Expenses

	Fiscal Year			
	2017	2016	$ change	% change
	(in millions, except percentages)			
RMS	$60.2	$62.5	$ (2.3)	(3.7)%
DSA	105.5	98.3	7.2	7.3 %
Manufacturing	72.5	65.1	7.4	11.4 %
Unallocated corporate	135.2	141.6	(6.4)	(4.6)%
Total selling, general and administrative	$373.4	$367.5	$ 5.9	1.6 %

Selling, general and administrative expenses (SG&A) for fiscal year 2017 increased $5.9 million, or 1.6%, compared with fiscal year 2016. SG&A as a percentage of revenue for fiscal year 2017 was 20.1%, a decrease of 1.8%, from 21.9% for fiscal year 2016, which was driven by the RMS and DSA segments, as well as a reduction in unallocated corporate spend, as discussed below.

The decrease in RMS SG&A of $2.3 million was primarily related to a decrease in operating expenses, including information technology infrastructure and facility expenses. RMS SG&A as a percentage of revenue for fiscal year 2017 was 12.2%, a decrease of 0.4%, from 12.6% for fiscal year 2016.

The increase in DSA SG&A of $7.2 million was primarily related to an increase in compensation, benefits, and other employee-related expenses to support the growth of the business. DSA SG&A as a percentage of revenue for fiscal year 2017 was 10.8%, a decrease of 1.0%, from 11.8% for fiscal year 2016.

The increase in Manufacturing SG&A of $7.4 million was primarily related to an increase in compensation, benefits, and other employee-related expenses to support the growth of the business. Manufacturing SG&A as a percentage of revenue for fiscal year 2017 was 18.9%, an increase of 0.3%, from 18.6% for fiscal year 2016.

The decrease in unallocated corporate SG&A of $6.4 million was primarily related to a decrease in costs associated with the evaluation and integration of acquisitions, and decrease in information technology infrastructure related expenses; partially offset by an increase in compensation, benefits, and other employee-related expenses.

Amortization of Intangible Assets Amortization of intangible assets for fiscal year 2017 was $41.4 million, a decrease of $0.3 million, or 0.8%, from $41.7 million for fiscal year 2016, due primarily to certain intangible assets becoming fully amortized and the disposal of certain amortizable intangible assets in connection with the CDMO business divestiture; partially offset by the amortization of certain intangible assets acquired in connection with our recent acquisitions.

Interest Income Interest income, which represents earnings on cash, cash equivalents, and time deposits was $0.7 million for fiscal year 2017, a decrease of $0.6 million, or 47.5%, compared to $1.3 million for fiscal year 2016.

Interest Expense Interest expense for fiscal year 2017 was $29.8 million, an increase of $2.1 million, or 7.5%, compared to $27.7 million for fiscal year 2016. The increase was due primarily to higher average balances outstanding and higher average interest rates under our $1.65B Credit Facility; partially offset by the increase in fiscal year 2016 attributed to the write-off of a portion of debt issuance costs in connection with the modification of our prior $1.3B Credit Facility.

Other Income, Net Other income, net, was $38.5 million for fiscal year 2017, an increase of $26.6 million, or 224.0%, compared to $11.9 million for fiscal year 2016. The increase in other income, net was driven by an increase of $12.6 million in gains recognized related to our venture capital investments, a $10.6 million gain recognized as a result of the divestiture of the CDMO business, and higher net gains on life insurance policy investments of $2.0 million.

Income Taxes Income tax expense was $171.4 million for fiscal year 2017, an increase of $104.6 million, compared to $66.8 million for fiscal year 2016. Our effective tax rate was 57.7% for fiscal year 2017, compared to 30.0% for fiscal year 2016. The increase was primarily driven by the one-time transition tax on unrepatriated foreign earnings mandated by U.S. Tax Reform, the change of our assertion of indefinite reinvestment of foreign earnings, and a gain on the divestiture of the CDMO business. These increases are net of decreases relating to the excess tax benefits from stock-based compensation due to the adoption of ASU 2016-09, as well as the revaluation of U.S. net deferred tax

liabilities to 21% based on enacted U.S. Tax Reform.

Fiscal Year 2016 Compared to Fiscal Year 2015

Revenue

The following tables present consolidated revenue by reportable segment and by type:

	Fiscal Year				
	2016	2015	$ change	% change	Impact of FX
	(in millions, except percentages)				
RMS	$494.0	$470.4	$23.6	5.0 %	(0.2)%
DSA	836.6	612.2	224.4	36.7 %	(2.7)%
Manufacturing	350.8	280.7	70.1	25.0 %	(0.8)%
Total revenue	$1,681.4	$1,363.3	$318.1	23.3 %	(1.5)%

	Fiscal Year			
	2016	2015	$ change	% change
	(in millions, except percentages)			
Service revenue	$1,130.7	$858.2	$272.5	31.7 %
Product revenue	550.7	505.1	45.6	9.0 %
Total revenue	$1,681.4	$1,363.3	$318.1	23.3 %

Revenue for fiscal year 2016 increased $318.1 million, or 23.3%, compared with fiscal year 2015. The negative effect of changes in foreign currency exchange rates decreased revenue by $20.0 million, or 1.5%, when compared to the prior year.

RMS revenue increased $23.6 million due to higher research model services revenue in North America, Europe, and Japan and higher research model product revenue in North America, Europe, and Asia; partially offset by the negative effect of changes in foreign currency exchange rates.

DSA revenue increased $224.4 million due to higher service revenue in the Safety Assessment business, primarily as a result of the WIL Research acquisition that contributed $163.5 million to service revenue growth, and increased study volume, mix of services, and pricing in our legacy business; and higher service revenue in Discovery Services' In Vivo business, which includes the acquisitions of Oncotest and Agilux that contributed $14.6 million to service revenue growth; partially offset by lower Early Discovery service revenue due primarily to softer demand from global clients; and the negative effect of changes in foreign currency exchange rates.

Manufacturing revenue increased $70.1 million due to higher revenue in the Microbial Solutions business, which includes the acquisition of the Celsis business that contributed $17.9 million to revenue product growth; higher service revenue in the Biologics business, which includes the Blue Stream acquisition that contributed $4.1 million to service revenue growth; higher product revenue in the Avian business, primarily due to the acquisition of the Sunrise business that contributed $4.9 million to product revenue growth; and Contract Manufacturing service revenue related to the CDMO services of WIL Research acquired in April 2016 that contributed $12.6 million to service revenue growth; partially offset by the negative effect of changes in foreign currency exchange rates.

Cost of Services Provided and Products Sold (Excluding Amortization of Intangible Assets)

The following tables presents consolidated cost of services provided and products sold (excluding amortization of intangible assets) by reportable segment:

	Fiscal Year			
	2016	2015	$ change	% change
	(in millions, except percentages)			
RMS	$292.8	$284.2	$8.6	3.0 %
DSA	572.4	407.0	165.4	40.6 %
Manufacturing	169.5	141.0	28.5	20.3 %
Total cost of services provided and products sold (excluding amortization of intangible assets)	$1,034.7	$832.2	$202.5	24.3 %

	Fiscal Year			
	2016	2015	$ change	% change
	(in millions, except percentages)			
Cost of services provided	$757.7	$568.2	$189.5	33.4 %
Cost of products sold	277.0	264.0	13.0	4.9 %
Total cost of services provided and products sold (excluding amortization of intangible assets)	$1,034.7	$832.2	$202.5	24.3 %

Costs for fiscal year 2016 increased $202.5 million, or 24.3%, compared with fiscal year 2015. Costs as a percentage of revenue for fiscal year 2016 were 61.5%, an increase of 0.5%, from 61.0% for fiscal year 2015.

RMS Costs increased $8.6 million due primarily to the growth of the business, partially offset by cost savings achieved as a result of our efficiency initiatives. RMS Costs as a percentage of revenue for fiscal year 2016 were 59.3%, a decrease of 1.1%, from 60.4% for fiscal year 2015.

DSA Costs increased $165.4 million due primarily to an increase in Safety Assessment Costs, which included a higher service cost base due to the acquisition of WIL Research, the growth of the legacy business; an increase in Discovery Services Costs, which included a higher service cost base due to the acquisitions of Oncotest and Agilux; a charge of $1.9 million related to an impairment of certain intangibles; and a restructuring charge of $9.4 million related to the consolidation of small DSA facilities in the U.S., Ireland, and the U.K.; partially offset by the favorable effect of changes in foreign currency exchange rates. DSA Costs as a percentage of revenue for fiscal year 2016 were 68.4%, an increase of 1.9%, from 66.5% for fiscal year 2015, primarily due to the acquisition of WIL Research.

Manufacturing Costs increased $28.5 million due primarily to an increase in Biologics Costs resulting from the growth of the business and the acquisition of Blue Stream; an increase in Contract Manufacturing Costs related to the CDMO services of WIL Research acquired in April 2016; an increase in Microbial Solutions Costs resulting from the acquisition of Celsis and the growth of the legacy business; and an increase in Avian Costs, primarily due to the acquisition of the Sunrise business; partially offset by $4.1 million due to lower amortization of inventory fair value adjustments related to the Celsis acquisition. Manufacturing Costs as a percentage of revenue for fiscal year 2016 were 48.3%, a decrease of 1.9%, from 50.2% for fiscal year 2015.

Selling, General and Administrative Expenses

	Fiscal Year			
	2016	2015	$ change	% change
	(in millions, except percentages)			
RMS	$62.5	$62.1	$ 0.4	0.5 %
DSA	98.3	69.2	29.1	42.0 %
Manufacturing	65.1	57.9	7.2	12.5 %
Unallocated corporate	141.6	111.2	30.4	27.4 %
Total selling, general and administrative	$367.5	$300.4	$ 67.1	22.3 %

SG&A for fiscal year 2016 increased $67.1 million, or 22.3%, compared with fiscal year 2015. SG&A as a percentage of revenue for fiscal year 2016 was 21.9%, a decrease of 0.1%, from 22.0% for fiscal year 2015.

The increase in RMS SG&A of $0.4 million was related to an increase of $1.3 million in external consulting and other service expenses; an increase of $0.5 million in operating expenses, including information technology infrastructure and facility expenses; an increase of $0.3 million in compensation, benefits, and other employee-related expenses; and an increase of $0.2 million in stock-based compensation expense; partially offset by a decrease of $0.8 million in severance expense; a decrease of $0.3 million in costs associated with the evaluation and integration of acquisitions; a decrease of $0.2 million in bad debt expense; and a decrease of $0.6 million in other expenses. RMS SG&A as a percentage of revenue for fiscal year 2016 was 12.6%, a decrease of 0.6%, from 13.2% for fiscal year 2015.

The increase in DSA SG&A of $29.1 million was related to an increase of $12.5 million in compensation, benefits, and other employee-related expenses; an increase of $5.9 million in operating expenses, including information

technology infrastructure and facility expenses; an increase of $5.7 million in costs associated with the evaluation and integration of acquisitions; an increase of $2.9 million in severance expense; an increase of $1.5 million in external consulting and other service expenses; an increase of $1.3 million in depreciation expense; an increase of $1.2 million in stock-based compensation expense; and an increase of $0.3 million in other expenses; partially offset by a decrease of $2.2 million in bad debt expense. DSA SG&A as a percentage of revenue for fiscal year 2016 was 11.8%, an increase of 0.5%, from 11.3% for fiscal year 2015.

The increase in Manufacturing SG&A of $7.2 million was related to an increase of $6.7 million in compensation, benefits, and other employee-related expenses; an increase of $1.2 million in external consulting and other service expenses; an increase of $1.0 million in operating expenses, including information technology infrastructure and facility expenses; an increase of $0.7 million in stock-based compensation; and an increase of $0.6 million in other expenses; partially offset by a decrease of $1.8 million in severance expense; a decrease of $1.0 million in costs associated with the evaluation and integration of acquisitions; and a decrease of $0.2 million in depreciation expense. Manufacturing SG&A as a percentage of revenue for fiscal year 2016 was 18.6%, a decrease of 2.0%, from 20.6% for fiscal year 2015.

The increase in unallocated corporate SG&A of $30.4 million was related to an increase of $8.0 million in external consulting and other service expenses; an increase of $6.2 million in compensation, benefits, and other employee-related expenses; an increase of $4.8 million in information technology expenses; an increase of $4.0 million in costs associated with the evaluation and integration of acquisitions; an increase of $1.5 million in stock-based compensation; an increase of $1.0 million in depreciation expense; and an increase of $4.9 million in other expenses.

Amortization of Intangible Assets Amortization of intangibles for fiscal year 2016 was $41.7 million, an increase of $17.5 million, or 72.1%, from $24.2 million for fiscal year 2015, due primarily to certain intangibles acquired in connection with the Agilux, Blue Stream, WIL Research, Oncotest, Celsis, and Sunrise acquisitions.

Interest Income Interest income, which represents earnings on held cash, cash equivalents, and time deposits was $1.3 million for fiscal year 2016, an increase of $0.3 million, or 26.0%, compared to $1.0 million for fiscal year 2015.

Interest Expense Interest expense for fiscal year 2016 was $27.7 million, an increase of $12.6 million, or 83.8%, compared to $15.1 million for fiscal year 2015. The increase was primarily due to the write-off of a portion of debt issuance costs in connection with the modification of our $1.3B Credit Facility, a higher average debt balance outstanding as a result of business acquisitions, a higher average interest rate as a result of a higher leverage ratio, and an increased interest expense related to capital leases.

Other Income, Net Other income, net, was $11.9 million for fiscal year 2016, an increase of $8.9 million, or 295.5%, compared to $3.0 million for fiscal year 2015. The increase in other income, net was driven by the absence of an expense of $10.4 million due to a reversal of the indemnification asset associated with a previous acquisition in the corresponding period in 2015; an increase of $6.5 million in gains on our venture capital investments accounted for under the equity method; a higher net gain of $2.1 million on life insurance policy investments; a $0.7 million gain on remeasurement of previously held equity interest in an entity acquired in a step acquisition; and an increase of $0.6 million in other activity; partially offset by the absence of a bargain purchase gain of $9.9 million associated with the acquisition of Sunrise in May 2015; and a $1.5 million charge recorded in connection with the modification of the option to purchase the remaining 13% equity interest in Vital River.

Income Taxes Income tax expense was $66.8 million for fiscal year 2016, an increase of $23.4 million, compared to $43.4 million for fiscal year 2015. Our effective tax rate was 30.0% in the fiscal year 2016, compared to 22.2% in the fiscal year 2015. The increase was primarily driven by non-deductible expenses associated with acquisitions and restructurings. In addition, we recognized a reduction in unrecognized tax benefits and related interest of $10.4 million due to the expiration of the statute of limitations associated with pre-acquisition tax positions on the forgiveness of debt and a non-taxable bargain purchase gain of $9.9 million associated with the acquisition of Sunrise in fiscal year 2015.

Liquidity and Capital Resources

We currently require cash to fund our working capital needs, capital expansion, acquisitions, pay our debt and pension obligations. Our principal sources of liquidity have been our cash flows from operations, supplemented by long-term borrowings. Based on our current business plan, we believe that our existing funds, when combined with cash generated from operations and our access to financing resources, are sufficient to fund our operations for the foreseeable future.

The following table presents our cash, cash equivalents and investments:

	December 30, 2017	December 31, 2016
	(in millions)	
Cash and cash equivalents:		
Held in U.S. entities	$30.6	$ 10.6
Held in non-U.S. entities	133.2	107.0
Total cash and cash equivalents	163.8	117.6
Investments:		
Held in U.S. entities	—	—
Held in non-U.S. entities	28.5	3.8
Total cash, cash equivalents and investments	$192.3	$ 121.4

Borrowings

On March 30, 2016, we amended and restated our $1.3 billion credit facility, creating our $1.65B Credit Facility which (1) extended the maturity date for the credit facility, and (2) made certain other amendments in connection with our acquisition of WIL Research. The $1.65B Credit Facility provides for up to $1.65 billion in financing, including a $650.0 million term loan facility and a $1.0 billion multi-currency revolving credit facility. The term loan facility matures in 19 quarterly installments, with the last installment due March 30, 2021. The revolving credit facility matures on March 30, 2021, and requires no scheduled payment before that date.

Amounts outstanding under the $1.65B Credit Facility were as follows:

	December 30, 2017	December 31, 2016
	(in millions)	
Term loans	$601.3	$ 633.8
Revolving credit facility	501.0	578.8
Total	$1,102.3	$ 1,212.6

Under specified circumstances, we have the ability to increase the term loan facility and/or revolving credit facility by up to $500.0 million in the aggregate. The interest rates applicable to the term loan and revolving loans under the $1.65B Credit Facility are, at our option, equal to either the base rate (which is the higher of (1) the prime rate, (2) the federal funds rate plus 0.50%, or (3) the one-month adjusted LIBOR rate plus 1%) or the adjusted LIBOR rate, plus an interest rate margin based upon our leverage ratio.

In connection with our plan to acquire MPI Research, our intention is to increase our debt level by approximately $830 million as we obtained a commitment for a bridge loan facility. We are evaluating fixed-rate debt financing alternatives which could be used to finance the acquisition and for general corporate purposes.

Repurchases of Common Stock

On May 9, 2017, our Board of Directors increased the stock repurchase authorization by $150.0 million, to an aggregate amount of $1.3 billion. During fiscal year 2017, we repurchased 1.0 million shares for $90.6 million under our authorized stock repurchase program. As of December 30, 2017, we had $129.1 million remaining on the authorized stock repurchase program. Our stock-based compensation plans permit the netting of common stock upon vesting of restricted stock, RSUs, and PSUs in order to satisfy individual statutory tax withholding requirements. During fiscal year 2017, we acquired 0.2 million shares for $16.3 million through such netting.

44

Cash Flows

The following table presents our net cash provided by operating activities:

	Fiscal Year		
	2017	2016	2015
	(in millions)		
Income from continuing operations	$125.6	$156.1	$152.0
Adjustments to reconcile net income from continuing operations to net cash provided by operating activities	186.6	174.3	126.6
Changes in assets and liabilities	5.9	(13.5)	28.2
Net cash provided by operating activities	$318.1	$316.9	$306.8

Net cash provided by cash flows from operating activities represents the cash receipts and disbursements related to all of our activities other than investing and financing activities. Operating cash flow is derived by adjusting our income from continuing operations for (1) non-cash operating items such as depreciation and amortization, stock-based compensation, deferred income taxes, gains on venture capital investments and divestiture, and impairment charges, as well as (2) changes in operating assets and liabilities, which reflect timing differences between the receipt and payment of cash associated with transactions and when they are recognized in our results of operations. Net cash provided by operating activities increased from fiscal year 2016 to 2017. The increase was primarily driven by positive changes in operating assets and liabilities due to the recognition of a tax payable in connection with the recent U.S. Tax Reform, and the timing of our accounts payable and accrued compensation payments. These increases were partially offset by a decrease in income from continuing operations. The increase in net cash provided by operating activities from fiscal year 2015 to 2016 was primarily driven by higher income from continuing operations partially offset by a negative change in operating assets and liabilities. Our days sales outstanding, which includes deferred revenue as an offset to accounts receivable but is not adjusted for an allowance for doubtful accounts in the calculation, was 60 days as of December 30, 2017, compared to 52 days as of December 31, 2016, and 51 days as of December 26, 2015. The increase was primarily driven by changes in the timing of certain working capital items related to integration of the information systems of WIL Research, which the Company acquired in 2016, and timing of deferred revenue.

The following table presents our net cash used in investing activities:

	Fiscal Year		
	2017	2016	2015
	(in millions)		
Acquisition of businesses and assets, net of cash acquired	$(25.0)	$(648.5)	$(247.7)
Capital expenditures	(82.4)	(55.3)	(63.3)
Investments, net	(37.2)	7.4	(14.4)
Proceeds from divestiture	72.5	—	—
Other, net	(0.5)	3.7	(2.2)
Net cash used in investing activities	$(72.6)	$(692.7)	$(327.6)

The primary use of cash used in investing activities in fiscal year 2017 related to our capital expenditures to support the growth of the business, net investment activity, and our acquisition of Brains On-Line, partially offset by the proceeds from the divestiture of the CDMO business. The primary use of cash in fiscal year 2016 was related to our acquisitions of WIL Research for $577.4 million, net of cash acquired; Agilux for $62.0 million, net of cash acquired; and Blue Stream for $8.7 million, net of cash acquired; as well as our capital expenditures; partially offset by proceeds from the sale of investments, net of purchases of investments and contributions to venture capital investments. The principal use of cash in fiscal year 2015 was related to our acquisitions of Celsis for $202.0 million, net of cash acquired; Oncotest for $35.2 million, net of cash acquired; and Sunrise for $9.6 million, net of cash acquired; as well as our capital expenditures.

The following table presents our net cash (used in) provided by financing activities:

	Fiscal Year		
	2017	2016	2015
	(in millions)		
Proceeds from long-term debt and revolving credit facility	$236.8	$1,044.7	$492.5
Proceeds from exercises of stock options	38.9	23.2	39.3
Payments on long-term debt, revolving credit facility, and capital lease obligations	(372.4)	(656.6)	(417.3)
Purchase of treasury stock	(106.9)	(12.3)	(117.5)
Other, net	(4.9)	(18.2)	(4.3)
Net cash (used in) provided by financing activities	$(208.5)	$380.8	$(7.3)

For fiscal year 2017, cash used in financing activities reflected net payments of $135.6 million on long-term debt, revolving credit facility, and capital lease obligations; and treasury stock purchases of $106.9 million made pursuant to our authorized stock repurchase program and the netting of common stock upon vesting of stock-based awards in order to satisfy individual statutory tax withholding requirements; partially offset by proceeds from exercises of employee stock options of $38.9 million. For fiscal year 2016, cash provided by financing activities reflected net borrowings of $388.0 million and proceeds from exercises of employee stock options of $23.2 million; partially offset by treasury stock purchases of $12.3 million due to the netting of common stock upon vesting of stock-based awards in order to satisfy individual statutory tax withholding requirements and other activity. For fiscal year 2015, cash used in financing activities reflected treasury stock purchases of $117.5 million made pursuant to our authorized stock repurchase program; partially offset by net borrowings of $75.2 million; proceeds from exercises of employee stock options of $39.3 million, and other activity.

Contractual Commitments and Obligations

Minimum future payments of our contractual obligations as of December 30, 2017 are as follows:

	Payments Due by Period				
	Total	Less than 1 Year	1 - 3 Years	3 - 5 Years	More Than 5 Years
	(in millions)				
Notes payable [1]	$1,102.4	$28.5	$134.1	$939.8	$—
Operating leases [2]	144.1	25.4	43.9	29.7	45.1
Capital leases	43.2	3.6	6.2	5.1	28.3
Redeemable noncontrolling interest [3]	15.8	—	15.8	—	—
Venture capital investment commitments [4]	37.0	26.8	10.2		—
Contingent payments [5]	26.5	3.0	23.5	—	—
Unconditional purchase obligations [6]	90.3	70.5	11.5	8.3	—
Total contractual cash obligations	$1,459.3	$157.8	$245.2	$982.9	$73.4

(1) Notes payable includes the principal payments on our debt.

(2) We lease properties and equipment for use in our operations. In addition to rent, the leases may require us to pay additional amounts for taxes, insurance, maintenance, and other operating expenses. Amounts reflected within the table detail future minimum rental commitments under non-cancellable operating leases, net of income from subleases, for each of the periods presented.

(3) The estimated cash obligation for redeemable noncontrolling interest is based on the amount that would be paid if settlement occurred as of the balance sheet date based on the contractually defined redemption value as of December 30, 2017.

(4) The timing of the remaining capital commitment payments to venture capital funds is subject to the procedures of the limited liability partnerships and limited liability companies; the above table reflects the earliest possible date the payment can be required under the relevant agreements.

(5) In connection with certain business and asset acquisitions, we agreed to make additional payments aggregating to $26.5 million based upon the achievement of certain financial targets in connection with each acquisition. The contingent payment obligations included in the table above have not been probability adjusted or discounted.

(6) Unconditional purchase obligations include agreements to purchase goods or services that are enforceable and legally binding and that specify all significant terms, including fixed or minimum quantities to be purchased, fixed, minimum or variable price provisions, and the approximate timing of the transaction. Purchase obligations exclude agreements that are cancellable at any time without penalty.

The above table excludes obligations related to our pension and other post-retirement benefit plans. Refer to Item 8, “Financial Statements and Supplementary Data,” in this Annual Report on Form 10-K for more details.

Tax Related Obligations

We excluded liabilities pertaining to uncertain tax positions from our summary of contractual obligations presented above, as we cannot make a reliable estimate of the period of cash settlement with the respective taxing authorities. As of December 30, 2017, we had $24.7 million of liabilities associated with uncertain tax positions.

Additionally, we excluded federal and state income tax liabilities of $73.5 million, which is net of a federal benefit of state income tax, from our summary of contractual obligations presented above, relating to the one-time transition tax on unrepatriated earnings under U.S. Tax Reform, of which $12.9 million is expected to be paid within one year. The transition tax will be paid over an eight-year period starting in 2018 and will not accrue interest.

Off-Balance Sheet Arrangements

As of December 30, 2017, we did not have any significant off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K promulgated under the Exchange Act, except as disclosed below.

MPI Research

On February 12, 2018, we entered into a definitive agreement to acquire MPI Research. In the event the agreement is terminated under specified circumstances, we may be required to pay a termination fee of $48 million, increasing to $56 million based on other specific circumstances. Refer to Item 8. “Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for more details.

Venture Capital Investments

We invest in several venture capital funds that invest in start-up companies, primarily in the life sciences industry. Our total commitment to the funds as of December 30, 2017 was $88.2 million, of which we funded $51.2 million through December 30, 2017. Refer to Note 4, “Venture Capital Investments and Marketable Securities,” to our consolidated financial statements contained in Item 8, “Financial Statements and Supplementary Data,” in this Annual Report on Form 10-K for further details.

Letters of Credit

Our off-balance sheet commitments related to our outstanding letters of credit as of December 30, 2017 were $4.9 million.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risk from changes in interest rates and currency exchange rates, which could affect our future results of operations and financial condition. We manage our exposure to these risks through our regular operating and financing activities.

Interest Rate Risk

We are exposed to changes in interest rates while conducting normal business operations as a result of ongoing financing activities. As of December 30, 2017, our debt portfolio was comprised primarily of floating interest rate borrowings. A 100-basis point increase in interest rates would increase our annual pre-tax interest expense by $11.0 million.

Foreign Currency Exchange Rate Risk

We operate on a global basis and have exposure to some foreign currency exchange rate fluctuations for our financial position, results of operations, and cash flows.

While the financial results of our global activities are reported in U.S. dollars, our foreign subsidiaries typically conduct their operations in their respective local currency. The principal functional currencies of the Company’s foreign subsidiaries are the Euro, British Pound, Canadian Dollar, Chinese Yuan Renminbi, and Japanese Yen. During fiscal year 2017, the most significant drivers of foreign currency translation adjustment the Company recorded as part of other comprehensive income (loss) were the Euro, British Pound, Canadian Dollar, Chinese Yuan Renminbi, and Japanese Yen.

Fluctuations in the foreign currency exchange rates of the countries in which we do business will affect our financial position, results of operations, and cash flows. As the U.S. dollar strengthens against other currencies, the value of our non-U.S. revenue, expenses, assets, liabilities, and cash flows will generally decline when reported in U.S. dollars. The impact to net income as a result of a U.S. dollar strengthening will be partially mitigated by the value of non-U.S. expenses, which will decline when reported in U.S. dollars. As the U.S. dollar weakens versus other currencies, the

value of the non-U.S. revenue, expenses, assets, liabilities, and cash flows will generally increase when reported in U.S. dollars. For fiscal year 2017, our revenue would have increased by approximately $72.0 million and our operating income would have increased by approximately $5.2 million, if the U.S. dollar exchange rate had strengthened by 10%, with all other variables held constant.

We attempt to minimize this exposure by using certain financial instruments in accordance with our overall risk management and our hedge policy. We do not enter into speculative derivative agreements.

During fiscal year 2017, we utilized foreign exchange contracts, principally to hedge certain balance sheet exposures resulting from currency fluctuations. No foreign currency contracts were open as of December 30, 2017.

Item 8. Financial Statements and Supplementary Data

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Charles River Laboratories International, Inc.:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Charles River Laboratories International, Inc. and its subsidiaries as of December 30, 2017 and December 31, 2016, and the related consolidated statements of income, comprehensive income, changes in equity and cash flows for each of the three years in the period ended December 30, 2017, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company's internal control over financial reporting as of December 30, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 30, 2017 and December 31, 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 30, 2017 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 30, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company's internal control over financial reporting 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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As described in Management’s Report on Internal Control over Financial Reporting, management has excluded Brains On-Line from its assessment of internal control over financial reporting as of December 30, 2017 because it was acquired by the Company in a purchase business combination during 2017. We have also excluded Brains On-Line from our audit of internal control over financial reporting. Brains On-Line is a wholly-owned subsidiary whose total assets and total revenues excluded from management’s assessment and our audit of internal control over financial reporting each represent less than 1% of the related consolidated financial statement amounts as of and for the year ended December 30, 2017.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit

preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) 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 financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. 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.

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts
February 13, 2018

We have served as the Company's auditor since 1999.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except per share amounts)

	Fiscal Year		
	2017	2016	2015
Service revenue	$1,298,298	$1,130,733	$858,244
Product revenue	559,303	550,699	505,058
Total revenue	1,857,601	1,681,432	1,363,302
Costs and expenses:			
Cost of services provided (excluding amortization of intangible assets)	865,618	757,732	568,227
Cost of products sold (excluding amortization of intangible assets)	289,669	277,034	263,983
Selling, general and administrative	373,446	367,548	300,414
Amortization of intangible assets	41,370	41,699	24,229
Operating income	287,498	237,419	206,449
Other income (expense):			
Interest income	690	1,314	1,043
Interest expense	(29,777)	(27,709)	(15,072)
Other income, net	38,544	11,897	3,008
Income from continuing operations, before income taxes	296,955	222,921	195,428
Provision for income taxes	171,369	66,835	43,391
Income from continuing operations, net of income taxes	125,586	156,086	152,037
Income (loss) from discontinued operations, net of income taxes	(137)	280	(950)
Net income	125,449	156,366	151,087
Less: Net income attributable to noncontrolling interests	2,094	1,601	1,774
Net income attributable to common shareholders	$123,355	$154,765	$149,313
Earnings (loss) per common share			
Basic:			
Continuing operations attributable to common shareholders	$2.60	$3.28	$3.23
Discontinued operations	$—	$0.01	$(0.02)
Net income attributable to common shareholders	$2.60	$3.29	$3.21
Diluted:			
Continuing operations attributable to common shareholders	$2.54	$3.22	$3.15
Discontinued operations	$—	$0.01	$(0.02)
Net income attributable to common shareholders	$2.54	$3.23	$3.13

See Notes to Consolidated Financial Statements.

52

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in thousands)

	Fiscal Year		
	2017	2016	2015
Net income	$125,449	$156,366	$151,087
Other comprehensive income (loss):			
Foreign currency translation adjustment and other	78,084	(73,243)	(61,982)
Cumulative translation adjustment related to intercompany loan forgiveness	—	—	(2,341)
Pension and other post-retirement benefit plans (Note 10):			
Prior service cost and gains (losses) arising during the period	36,593	(60,678)	(302)
Amortization of net loss and prior service benefit included in net periodic pension cost	3,344	1,711	2,617
Comprehensive income, before income taxes	243,470	24,156	89,079
Income tax expense (benefit) related to items of other comprehensive income (Note 8)	7,954	(12,369)	530
Comprehensive income, net of income taxes	235,516	36,525	88,549
Less: Comprehensive income (loss) related to noncontrolling interest, net of income taxes	3,128	(24)	537
Comprehensive income attributable to common shareholders, net of income taxes	$232,388	$36,549	$88,012

See Notes to Consolidated Financial Statements.

53

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except per share amounts)

	December 30, 2017	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	$ 163,794	$ 117,626
Trade receivables, net	430,016	364,050
Inventories	114,956	95,833
Prepaid assets	36,544	34,315
Other current assets	81,315	45,008
Total current assets	826,625	656,832
Property, plant and equipment, net	781,973	755,827
Goodwill	804,906	787,517
Client relationships, net	301,891	320,157
Other intangible assets, net	67,871	74,291
Deferred tax assets	22,654	28,746
Other assets	124,002	88,430
Total assets	$ 2,929,922	$ 2,711,800
Liabilities, Redeemable Noncontrolling Interest and Equity		
Current liabilities:		
Current portion of long-term debt and capital leases	$ 30,998	$ 27,313
Accounts payable	77,838	68,485
Accrued compensation	101,044	93,471
Deferred revenue	117,569	127,731
Accrued liabilities	89,780	84,470
Other current liabilities	44,460	26,500
Current liabilities of discontinued operations	1,815	1,623
Total current liabilities	463,504	429,593
Long-term debt, net and capital leases	1,114,105	1,207,696
Deferred tax liabilities	89,540	55,717
Other long-term liabilities	194,815	159,239
Long-term liabilities of discontinued operations	3,942	5,771
Total liabilities	1,865,906	1,858,016
Commitments and contingencies (Notes 2, 7, 9, 10, and 13)		
Redeemable noncontrolling interest	16,609	14,659
Equity:		
Preferred stock, $0.01 par value; 20,000 shares authorized; no shares issued and outstanding	—	—
Common stock, $0.01 par value; 120,000 shares authorized; 87,495 shares issued and 47,402 shares outstanding as of December 30, 2017 and 86,301 shares issued and 47,363 shares outstanding as of December 31, 2016	875	863
Additional paid-in capital	2,560,192	2,477,371
Retained earnings	288,658	165,303
Treasury stock, at cost, 40,093 shares and 38,938 shares as of December 30, 2017 and December 31, 2016, respectively	(1,659,914)	(1,553,005)
Accumulated other comprehensive loss	(144,731)	(253,764)
Total equity attributable to common shareholders	1,045,080	836,768
Noncontrolling interest	2,327	2,357

Total equity	1,047,407	839,125
Total liabilities, redeemable noncontrolling interest and equity	$ 2,929,922	$ 2,711,800

See Notes to Consolidated Financial Statements.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Fiscal Year		
	2017	2016	2015
Cash flows relating to operating activities			
Net income	$125,449	$156,366	$151,087
Less: Income (loss) from discontinued operations, net of income taxes	(137)	280	(950)
Income from continuing operations, net of income taxes	125,586	156,086	152,037
Adjustments to reconcile net income from continuing operations to net cash provided by operating activities:			
Depreciation and amortization	131,159	126,658	94,881
Stock-based compensation	44,003	43,642	40,122
Deferred income taxes	28,254	1,945	2,689
Gain on venture capital investments	(22,867)	(10,284)	(3,823)
Gain on divestiture	(10,577)	—	—
Impairment charges	17,239	6,717	196
(Gain) loss on bargain purchase	(277)	16	(9,837)
Other, net	(389)	5,613	2,352
Changes in assets and liabilities:			
Trade receivables, net	(48,279)	(52,780)	(16,963)
Inventories	(17,838)	(4,021)	3,364
Accounts payable	34	22,076	1,174
Accrued compensation	3,666	9,298	8,414
Long-term payable on Transition Tax (Notes 3 and 9)	61,038	—	—
Other assets and liabilities, net	7,322	11,933	32,227
Net cash provided by operating activities	318,074	316,899	306,833
Cash flows relating to investing activities			
Acquisition of businesses and assets, net of cash acquired	(25,012)	(648,482)	(247,651)
Capital expenditures	(82,431)	(55,288)	(63,252)
Purchases of investments and contributions to venture capital investments	(46,217)	(40,248)	(34,235)
Proceeds from sale of investments	9,128	47,652	19,743
Proceeds from divestiture	72,462	—	—
Other, net	(516)	3,694	(2,221)
Net cash used in investing activities	(72,586)	(692,672)	(327,616)
Cash flows relating to financing activities			
Proceeds from long-term debt and revolving credit facility	236,856	1,044,666	492,514
Proceeds from exercises of stock options	38,870	23,197	39,367
Payments on long-term debt, revolving credit facility, and capital lease obligations	(372,435)	(656,636)	(417,331)
Purchase of treasury stock	(106,909)	(12,267)	(117,478)
Other, net	(4,858)	(18,204)	(4,330)
Net cash (used in) provided by financing activities	(208,476)	380,756	(7,258)
Discontinued operations			
Net cash used in operating activities from discontinued operations	(1,809)	(2,056)	(1,876)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	11,234	(2,996)	(12,695)
Net change in cash, cash equivalents, and restricted cash	46,437	(69)	(42,612)
Cash, cash equivalents, and restricted cash, beginning of period	119,894	119,963	162,575
Cash, cash equivalents, and restricted cash, end of period	$166,331	$119,894	$119,963

See Notes to Consolidated Financial Statements.

55

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS (continued)
(in thousands)

	Fiscal Year		
	2017	2016	2015
Supplemental cash flow information:			
Cash and cash equivalents	$163,794	$117,626	$117,947
Restricted cash included in Other current assets	592	532	271
Restricted cash included in Other assets	1,945	1,736	1,745
Cash, cash equivalents, and restricted cash, end of period	$166,331	$119,894	$119,963
Cash paid for income taxes	$60,377	$42,868	$24,436
Cash paid for interest	$27,417	$22,756	$11,101
Non-cash investing and financing activities:			
Capitalized interest	$36	$4	$424
Additions to property, plant and equipment, net	$38,199	$5,333	$6,720
Assets acquired under capital lease	$722	$1,335	$10,281

See Notes to Consolidated Financial Statements.

56

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(in thousands)

	Common stock		Additional Paid-In Capital	Retained Earnings (Accumulated Deficit)	Accumulated Other Comprehensive Income (Loss)	Treasury Stock		Total Equity Attributable to Common Shareholders	Noncontrolling Interest	Total Equity
	Shares	Amount				Shares	Amount			
December 27, 2014	84,503	$845	$2,307,640	$(138,775)	$(74,247)	37,176	$(1,423,260)	$672,203	$3,724	$675,927
Net income	—	—	—	149,313	—	—	—	149,313	936	150,249
Other comprehensive loss	—	—	—	—	(61,301)	—	—	(61,301)	(171)	(61,472)
Adjustment of redeemable noncontrolling interest to fair value	—	—	183	—	—	—	—	183	—	183
Tax benefit associated with stock issued under employee compensation plans	—	—	10,608	—	—	—	—	10,608	—	10,608
Issuance of stock under employee compensation plans	961	10	39,407	—	—	—	—	39,417	—	39,417
Acquisition of treasury shares	—	—	—	—	—	1,590	(117,478)	(117,478)	—	(117,478)
Stock-based compensation	—	—	40,122	—	—	—	—	40,122	—	40,122
December 26, 2015	85,464	855	2,397,960	10,538	(135,548)	38,766	(1,540,738)	733,067	4,489	737,556
Net income	—	—	—	154,765	—	—	—	154,765	924	155,689
Other comprehensive loss	—	—	—	—	(118,216)	—	—	(118,216)	(154)	(118,370)
Dividends declared to noncontrolling interest	—	—	—	—	—	—	—	—	(2,902)	(2,902)
Adjustment of redeemable noncontrolling interest to fair	—	—	1,690	—	—	—	—	1,690	—	1,690

value										
Purchase of additional equity in redeemable noncontrolling interest	—	—	1,593	—	—	—	—	1,593	—	1,593
Tax benefit associated with stock issued under employee compensation plans	—	—	9,274	—	—	—	—	9,274	—	9,274
Issuance of stock under employee compensation plans	837	8	23,212	—	—	—	—	23,220	—	23,220
Acquisition of treasury shares	—	—	—	—	—	172	(12,267)	(12,267)	—	(12,267)
Stock-based compensation	—	—	43,642	—	—	—	—	43,642	—	43,642
December 31, 2016	86,301	863	2,477,371	165,303	(253,764)	38,938	(1,553,005)	836,768	2,357	839,125
Net income	—	—	—	123,355	—	—	—	123,355	1,179	124,534
Other comprehensive income	—	—	—	—	109,033	—	—	109,033	—	109,033
Dividends declared to noncontrolling interest	—	—	—	—	—	—	—	—	(1,209)	(1,209)
Issuance of stock under employee compensation plans	1,194	12	38,818	—	—	—	—	38,830	—	38,830
Acquisition of treasury shares	—	—	—	—	—	1,155	(106,909)	(106,909)	—	(106,909)
Stock-based compensation	—	—	44,003	—	—	—	—	44,003	—	44,003
December 30, 2017	87,495	$875	$2,560,192	$288,658	$(144,731)	40,093	$(1,659,914)	$1,045,080	$2,327	$1,047,407

See Notes to Consolidated Financial Statements.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. DESCRIPTION OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of Business

Charles River Laboratories International, Inc. (the Company), together with its subsidiaries, is a full service, early-stage contract research organization (CRO). The Company has built upon its core competency of laboratory animal medicine and science (research model technologies) to develop a diverse portfolio of discovery and safety assessment services, both Good Laboratory Practice (GLP) and non-GLP, that enable the Company to support its clients from target identification through non-clinical development. The Company also provides a suite of products and services to support its clients' manufacturing activities.

Principles of Consolidation

The Company's consolidated financial statements reflect its financial statements and those of its subsidiaries in which the Company holds a controlling financial interest. For consolidated entities in which the Company owns or is exposed to less than 100% of the economics, the Company records net income (loss) attributable to noncontrolling interests in its consolidated statements of income equal to the percentage of the economic or ownership interest retained in such entities by the respective noncontrolling parties. Intercompany balances and transactions are eliminated in consolidation.

The Company's fiscal year is typically based on 52-weeks, with each quarter composed of 13 weeks ending on the last Saturday on, or closest to, March 31, June 30, September 30, and December 31. A 53rd week was included in the fourth quarter of fiscal year 2016, which is occasionally necessary to align with a December 31 calendar year-end.

Reclassifications

Certain reclassifications have been made in the consolidated statements of cash flows for prior periods to conform to the current year presentation. See "Newly Adopted Accounting Pronouncements" below for further discussion.

Segment Reporting

The Company reports its results in three reportable segments: Research Models and Services (RMS), Discovery and Safety Assessment (DSA), and Manufacturing Support (Manufacturing). The Company's RMS reportable segment includes the Research Models and Research Model Services businesses. Research Models includes the commercial production and sale of small research models, as well as the supply of large research models. Research Model Services includes: Genetically Engineered Models and Services (GEMS), which performs contract breeding and other services associated with genetically engineered research models; Research Animal Diagnostic Services (RADS), which provides health monitoring and diagnostics services related to research models; and Insourcing Solutions (IS), which provides colony management of its clients' research operations (including recruitment, training, staffing, and management services). The Company's DSA reportable segment includes services required to take a drug through the early development process including discovery services, which are non-regulated services to assist clients with the identification, screening, and selection of a lead compound for drug development, and regulated and non-regulated (GLP and non-GLP) safety assessment services. The Company's Manufacturing reportable segment includes Microbial Solutions, which provides in vitro (non-animal) lot-release testing products, microbial detection products, and species identification services; Biologics Testing Services (Biologics), which performs specialized testing of biologics; Avian Vaccine Services (Avian), which supplies specific-pathogen-free chicken eggs and chickens; and contract development and manufacturing (CDMO) services, which, until the Company divested this business on February 10, 2017, allowed it to provide formulation design and development, manufacturing, and analytical and stability testing for small molecules.

Use of Estimates

The preparation of consolidated financial statements in accordance with generally accepted accounting principles in the United States (U.S. GAAP) requires that the Company make estimates and judgments that may affect the reported amounts of assets, liabilities, revenues, expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, the Company evaluates its estimates, judgments and methodologies. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these

estimates under different assumptions or conditions. Changes in estimates are reflected in reported results in the period in which they become known.

Cash and Cash Equivalents

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Cash equivalents include money market funds, time deposits and other investments with remaining maturities at the purchase date of three months or less.

Investments

Marketable securities are reported at fair value. Realized gains and losses on marketable securities are included in other income, net and are determined using the specific identification method. Unrealized gains and losses on available-for-sale marketable securities are included in accumulated other comprehensive loss. Time deposits with original maturities of greater than three months are reported as investments.

Trade Receivables, Net

The Company records trade receivables net of an allowance for doubtful accounts. An allowance for doubtful accounts is established based on historical collection information, a review of major client accounts receivable balances and current economic conditions in the geographies in which it operates. Amounts determined to be uncollectible are charged or written off against the allowance.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents, investments and trade receivables. The Company places cash and cash equivalents and investments in various financial institutions with high credit rating and limits the amount of credit exposure to any one financial institution. Trade receivables are primarily from clients in the pharmaceutical and biotechnology industries, as well as academic and government institutions. Concentrations of credit risk with respect to trade receivables, which are typically unsecured, are limited due to the wide variety of customers using the Company’s products and services as well as their dispersion across many geographic areas. No single client accounted for more than 5% of revenue or trade receivables for the periods ended December 30, 2017 and December 31, 2016.

Fair Value Measurements

The accounting standard for fair value measurements defines fair value, establishes a framework for measuring fair value in accordance with U.S. GAAP, and requires certain disclosures about fair value measurements. Under this standard, fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company has certain financial assets and liabilities recorded at fair value, which have been classified as Level 1, 2 or 3 within the fair value hierarchy:

- Level 1 - Fair values are determined utilizing prices (unadjusted) in active markets for identical assets or liabilities that the Company has the ability to access,
- Level 2 - Fair values are determined by utilizing quoted prices for identical or similar assets and liabilities in active markets or other market observable inputs such as interest rates, yield curves, and foreign currency spot rates,
- Level 3 - Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable.

The fair value hierarchy level is determined by asset, liability and redeemable noncontrolling interest class based on the lowest level of significant input. The observability of inputs may change for certain assets or liabilities. This condition could cause an asset or liability to be reclassified between levels. The Company recognizes transfers between levels within the fair value hierarchy, if any, at the end of each quarter.

Valuation methodologies used for assets and liabilities measured or disclosed at fair value are as follows:

- Cash equivalents - Valued at market prices determined through third-party pricing services;
- Mutual funds - Valued at the unadjusted quoted net asset value of shares held by the Company;
- Foreign currency forward contracts - Valued using market observable inputs, such as forward foreign exchange points and foreign exchanges rates;
- Life insurance policies - Valued at cash surrender value based on the fair value of underlying investments;
- Debt instruments - The book value of the Company’s term and revolving loans, which are variable rate loans carried at amortized cost, approximates the fair value based on current market pricing of similar debt;

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

- Contingent consideration - Valued based on a probability weighting of the future cash flows associated with the potential outcomes; and
- Redeemable noncontrolling interest - Valued using the income approach based on estimated future cash flows of the underlying business discounted by a weighted average cost of capital.

Inventories

Inventories are stated at the lower of cost or net realizable value. Cost is determined on the average cost method for the small model business and first-in-first-out for the Company's large model and Microbial Solutions businesses. For the small model business, cost includes direct materials such as feed and bedding, costs of personnel directly involved in the care of the models, and an allocation of facility overhead. For the large model business, cost is primarily the external cost paid to acquire the model. Certain businesses value inventory based on standard costs, which are periodically compared to and adjusted to actual costs. Inventory costs are charged to cost of revenue in the period the products are sold to an external party. The Company analyzes its inventory levels on a quarterly basis and writes down inventory that is determined to be damaged, obsolete or otherwise unmarketable, with a corresponding charge to cost of products sold.

Property, Plant and Equipment, Net

Property, plant and equipment, net, including improvements that significantly add to productive capacity or extend useful life, are carried at cost and are subject to review for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. The cost of normal, recurring, or periodic repairs and maintenance activities related to property, plant and equipment is expensed as incurred. In addition, the Company capitalizes certain internal use computer software development costs. Costs incurred during the preliminary project stage are expensed as incurred, while costs incurred during the application development stage are capitalized and amortized over the estimated useful life of the software. The Company also capitalizes costs related to specific upgrades and enhancements when it is probable the expenditures will result in additional functionality. Maintenance and training costs related to software obtained for internal use are expensed as incurred.

Interest costs incurred during the construction of major capital projects are capitalized until the underlying asset is ready for its intended use, at which point the interest costs are amortized as depreciation expense over the life of the underlying asset.

The Company generally depreciates the cost of its property, plant and equipment using the straight-line method over the estimated useful lives of the respective assets as follow:

	Estimated Useful Lives (in years)
Land	Indefinite
Buildings	20 - 40
Machinery and equipment	3 - 20
Furniture and fixtures	5 - 10
Computer hardware and software	3 - 8
Vehicles	3 - 5

Leasehold improvements are amortized over the shorter of the estimated useful life of the asset or the lease term. Capital lease assets are amortized over the lease term, however, if ownership is transferred by the end of the capital lease, or there is a bargain purchase option, such capital lease assets are amortized over the useful life that would be assigned if such assets were owned.

When the Company disposes of property, plant and equipment, it removes the associated cost and accumulated depreciation from the related accounts on its consolidated balance sheet and includes any resulting gain or loss in its consolidated statement of income.

Business Acquisitions

The Company accounts for business combinations under the acquisition method of accounting. The Company allocates the amounts that it pays for each acquisition to the assets it acquires and liabilities it assumes based on their

fair values at the dates of acquisition, including identifiable intangible assets. The Company bases the fair value of identifiable intangible assets

acquired in a business combination on valuations that use information and assumptions determined by management and which consider management's best estimates of inputs and assumptions that a market participant would use.

Contingent Consideration

The consideration for the Company's acquisitions often includes future payments that are contingent upon the occurrence of a particular event. The Company records an obligation for such contingent payments at fair value on the acquisition date. The Company estimates the fair value of contingent consideration obligations through valuation models that incorporate probability adjusted assumptions related to the achievement of the milestones and the likelihood of making related payments. The Company revalues these contingent consideration obligations each reporting period. Changes in the fair value of the contingent consideration obligations are recognized in the Company's consolidated statements of income as a component of selling, general and administrative expenses. Changes in the fair value of the contingent consideration obligations can result from changes to one or multiple inputs, including adjustments to the discount rates and changes in the assumed probabilities of successful achievement of certain financial targets.

Discount rates in the Company's valuation models represent a measure of the credit risk associated with settling the liability. The period over which the Company discounts its contingent obligations is typically based on when the contingent payments would be triggered. These fair value measurements are based on significant inputs not observable in the market. See Note 5, "Fair Value."

Goodwill and Intangible Assets

Goodwill represents the difference between the purchase price and the fair value of the identifiable tangible and intangible net assets when accounted for using the acquisition method of accounting. Goodwill is not amortized, but reviewed for impairment on an annual basis, during the fourth quarter, or more frequently if an event occurs or circumstances change that would more-likely-than-not reduce the fair value of the Company's reporting units below their carrying amounts.

The Company has the option to first assess qualitative factors to determine whether it is necessary to perform the two-step impairment test. If the Company elects this option and believes, as a result of the qualitative assessment, that it is more-likely-than-not that the carrying value of goodwill is not recoverable, the quantitative two-step impairment test is required; otherwise, no further testing is required. Alternatively, the Company may elect to not first assess qualitative factors and immediately perform the quantitative two-step impairment test. In the first step, the Company compares the fair value of its reporting units to their carrying values. If the carrying values of the net assets assigned to the reporting units exceed the fair values of the reporting units, then the second step of the impairment test is performed in order to determine the implied fair value of the Company's goodwill. If the carrying value of the reporting unit's goodwill exceeds its implied fair value, then the Company would record an impairment loss equal to the difference.

Definite-lived intangible assets, including client relationships, are amortized over the pattern in which the economic benefits of the intangible assets are utilized and reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets or asset group may not be recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset, which requires the use of customer attribution rates and other assumptions. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the definite-lived intangible assets, the definite-lived intangible assets are written-down to their fair values.

Valuation and Impairment of Long-Lived Assets

Long-lived assets to be held and used are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets or asset group may not be recoverable.

Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, the assets are written-down to their fair values.

Long-lived assets to be disposed of are carried at fair value less costs to sell.

Venture Capital Investments

The Company invests in several venture capital funds that invest in start-up companies, primarily in the life sciences industry. The Company's ownership interest in these funds ranges from 0.6% to 12.0%. The Company accounts for the investments in limited partnerships (LPs), which are variable interest entities, under the equity or cost method of accounting. The Company is not the primary beneficiary because it has no power to direct the activities that most significantly affect the LPs' economic

performance. The Company accounts for the investments in limited liability companies, which are not variable interest entities, under the equity method of accounting.

Under the equity method of accounting, the Company's portion of the investment gains and losses, as reported in the fund's financial statements on a quarterly lag each reporting period, is recorded in other income, net. In addition, the Company adjusts the carrying value of these investments to reflect its estimate of changes to fair value since the fund's financial statements are based on information from the fund's management team, market prices of known public holdings of the fund and other information.

Under the cost method of accounting, the Company's investment is initially measured at cost, with distributions recognized in other income, net. Distributions received in excess of earnings subsequent to the date of investment are considered a return of investment and are recorded as reductions of cost of the investment. The Company reviews its cost method investments to determine whether a decline in fair value below the cost basis is other-than-temporary. If the decline in fair value is determined to be other-than-temporary, the cost basis of the investment is written down to fair value.

Life Insurance Contracts

Investments in life insurance contracts are recorded at cash surrender value. The initial investment at the transaction price is recognized and remeasured based on fair value of underlying investments or contractual value each reporting period. Investments in and redemptions of these life insurance contracts are reported as cash flows from investing activities in the consolidated statement of cash flows. The Company held 43 contracts at both December 30, 2017 and December 31, 2016, with a face value of $66.4 million and $61.4 million, respectively.

Stock-Based Compensation

The Company grants stock options, restricted stock, restricted stock units (RSUs), and performance share units (PSUs) to employees and stock options, restricted stock, and RSUs to non-employee directors under stock-based compensation plans. Stock-based compensation is recognized as an expense in the consolidated statements of income based on the grant date fair value, adjusted for forfeitures, over the requisite service period. In connection with the adoption of Accounting Standard Update (ASU 2016-09), "Improvements to Employee Share-Based Payment Accounting" (see further discussion in Newly Adopted Accounting Pronouncements), beginning in fiscal 2017, the Company elected to change its accounting policy to account for forfeitures when they occur on a modified retrospective basis, which resulted in an immaterial impact to the Company's consolidated financial statements and related disclosures.

For stock options, restricted stock and RSUs that vest based on service conditions, the Company uses the straight-line method to allocate compensation expense to reporting periods. Where awards are made with non-substantive vesting periods, where a portion of the award continues to vest after the employee's retirement, the Company recognizes expense based on the period from the grant date to the date on which the employee is retirement eligible. The Company records the expense for PSU grants subject to performance and/or market conditions using the accelerated attribution method over the remaining service period when management determines that achievement of the performance-based milestone is probable.

The fair value of stock options granted is calculated using the Black-Scholes option-pricing model and the fair value of PSUs is estimated using a lattice model with a Monte Carlo simulation, both of which require the use of subjective assumptions including volatility and expected term, among others. The expected volatility assumption is typically determined using the historical volatility of the Company's common stock over the expected life of the stock-based award. The expected term is determined using historical option exercise activity. The fair value of restricted stock and RSUs is based on the market value of the Company's common stock on the date of grant.

Revenue Recognition

The Company recognizes revenue when all of the following conditions are satisfied: persuasive evidence of an arrangement exists, delivery has occurred or services have been provided, the price to the customer is fixed or determinable, and collectability is reasonably assured.

Service revenue is generally evidenced by client contracts, which range in duration from a few weeks to a few years and typically take the form of an agreed upon rate per unit or fixed fee arrangements. Such contracts typically do not

contain acceptance provisions based upon the achievement of certain study or laboratory testing results. Revenue of agreed upon rate per unit contracts is recognized as services are performed, based upon rates specified in the contract. In cases where performance spans reporting periods, revenue of fixed fee contracts is recognized as services are performed, measured on the ratio of outputs or performance obligations completed to the total contractual outputs or performance obligations to be provided. Changes in estimated effort to complete the fixed fee contract are reflected in the period in which the change

becomes known. Changes in scope of work are common, especially under long-term contracts, and generally result in a change in contract value. Once the client has agreed to the changes in scope and renegotiated pricing terms, the contract value is amended and revenue is typically recognized as described above.

Billing schedules and payment terms are generally negotiated on a contract-by-contract basis. Payments received in excess of revenue recognized are recorded as deferred revenue. As the contracted services are subsequently performed and the associated revenue is recognized, the deferred revenue balance is reduced by the amount of revenue recognized during the period. In other cases, services may be provided and revenue is recognized before the client is invoiced. In these cases, revenue recognized will exceed amounts billed and the difference, representing amounts which are currently unbillable to the customer pursuant to contractual terms, is recorded as an unbilled receivable. Once the client is invoiced, the unbilled receivable is reduced for the amount billed, and a corresponding trade receivable is recorded.

Most contracts are terminable by the client, either immediately or upon notice. These contracts often require payment to the Company of expenses to wind down the project, fees earned to date or, in some cases, a termination fee. Such payments are included in revenues when earned.

The Company recognizes product revenue net of allowances for estimated returns, rebates and discounts when title and risk of loss pass to customers. When the Company sells equipment with specified acceptance criteria, it assesses its ability to meet the acceptance criteria in order to determine the timing of revenue recognition. The Company would defer revenue until completion of customer acceptance testing if it is not able to demonstrate the ability to meet such acceptance criteria.

A portion of the Company’s revenue is from multiple-element arrangements that include multiple products and/or services as deliverables in a single arrangement with each deliverable, or a combination of the deliverables, representing a separate unit of accounting. The Company allocates revenue to each element in a multiple-element arrangement based upon the relative selling price of each deliverable. Revenue allocated to each deliverable is then recognized when all revenue recognition criteria are met. Judgments as to the identification of deliverables, units of accounting, the allocation of consideration to the deliverable, and the appropriate timing of revenue recognition are critical with respect to these arrangements.

At the inception of each arrangement that includes milestone payments, the Company evaluates whether each milestone is substantive. This evaluation includes an assessment of whether (a) the consideration is commensurate with either (1) the Company’s performance to achieve the milestone, or (2) the enhancement of the value of the delivered item(s) as a result of a specific outcome resulting from the Company’s performance to achieve the milestone; (b) the consideration relates solely to past performance; and (c) the consideration is reasonable relative to all of the deliverables and payment terms within the arrangement. If a substantive milestone is achieved and collection of the related receivable is reasonably assured, the Company recognizes revenue related to the milestone in its entirety in the period in which the milestone is achieved. In those circumstances where a milestone is not substantive, the Company recognizes as revenue, on the date the milestone is achieved, an amount equal to the applicable percentage of the performance period that had elapsed as of the date the milestone was achieved, with the balance being deferred and recognized over the remaining period of performance. As of December 30, 2017, the Company had no significant milestones that were deemed substantive.

The Company records shipping charges billed to customers in total revenue and records shipping costs in cost of revenue (excluding amortization of intangible assets) for all periods presented.

Advertising Costs

Advertising costs are expensed as incurred. For fiscal years 2017, 2016 and 2015, advertising costs totaled $1.6 million, $1.4 million and $1.2 million, respectively.

Income Taxes

The provision for income taxes includes federal, state, local and foreign taxes. Income taxes are accounted for under the liability method. Deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial statements carrying amounts and their respective tax basis. The Company measures deferred tax assets and liabilities using the enacted tax rates in effect when the temporary differences are

expected to be settled. The Company evaluates the realizability of its deferred tax assets and establishes a valuation allowance when it is more likely than not that all or a portion of deferred tax assets will not be realized.

The Company accounts for uncertain tax positions using a “more-likely-than-not” threshold for recognizing and resolving uncertain tax positions. The Company evaluates uncertain tax positions on a quarterly basis and considers various factors, including, but not limited to, changes in tax law, the measurement of tax positions taken or expected to be taken in tax returns, the effective settlement of matters subject to audit, information obtained during in-process audit activities and changes in facts

or circumstances related to a tax position. The Company also accrues for potential interest and penalties related to unrecognized tax benefits in income tax expense.

Foreign Currency Contracts

Foreign currency contracts are recorded at fair value in the Company's consolidated balance sheets and are not designated as hedging instruments. Any gains or losses on such contracts are immediately recognized in other income, net.

Translation of Foreign Currencies

For the Company's subsidiaries that transact in a functional currency other than the U.S. dollar, assets and liabilities are translated at current rates of exchange as of the balance sheet date. Income and expense items are translated at the average foreign exchange rates for the period. Adjustments resulting from the translation of the financial statements of the Company's foreign operations into U.S. dollars are excluded from the determination of net income and are recorded in accumulated other comprehensive loss, a separate component of equity.

Pension and Other Post-Retirement Benefit Plans

The Company recognizes the funded status of its defined benefit pension and other post-retirement benefit plans as an asset or liability. This amount is defined as the difference between the fair value of plan assets and the benefit obligation. The Company measures plan assets and benefit obligations as of its fiscal year end.

The key assumptions used to calculate benefit obligations and related pension costs include expected long-term rate of return on plan assets, withdrawal and mortality rates, expected rate of increase in employee compensation levels and a discount rate. Assumptions are determined based on the Company's data and appropriate market indicators, and evaluated each year as of the plan's measurement date.

The expected long-term rate of return on plan assets reflects the average rate of earnings expected on the funds invested, or to be invested, to provide for the benefits included in the projected benefit obligations. In determining the expected long-term rate of return on plan assets, the Company considers the relative weighting of plan assets, the historical performance of total plan assets and individual asset classes and economic and other indicators of future performance.

In fiscal year 2017, new mortality improvement scales were issued in the U.S. and the United Kingdom (U.K.) reflecting a decline in longevity projection from the 2016 releases that the Company adopted, which decreased the Company's benefit obligations by $5.2 million as of December 30, 2017. In fiscal year 2016, new mortality improvement scales were issued in the U.S. reflecting a decline in longevity projection from the 2015 releases that the Company adopted, which decreased the Company's benefit obligations by $1.3 million as of December 31, 2016.

The discount rate reflects the rate the Company would have to pay to purchase high-quality investments that would provide cash sufficient to settle its current pension obligations.

The rate of compensation increase reflects the expected annual salary increases for the plan participants based on historical experience and the current employee compensation strategy.

The Company is required to recognize as a component of other comprehensive income, net of tax, the actuarial gains or losses and prior service costs or credits that arise but were not previously required to be recognized as components of net periodic benefit cost. Other comprehensive income is adjusted as these amounts are later recognized in income as components of net periodic benefit cost.

Earnings Per Share

Basic earnings per share are calculated by dividing net income attributable to common shareholders by the weighted average number of common shares outstanding during the period. Except where the result would be anti-dilutive to income from continuing operations, diluted earnings per share is computed using the treasury stock method, assuming the exercise of stock options and the vesting of restricted stock awards, RSUs, or PSUs, as well as their related income tax effects.

Newly Adopted Accounting Pronouncements

In November 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2016-18, "Restricted Cash." The standard addresses the classification and presentation of restricted cash and restricted cash equivalents within the statement of cash flows. The Company elected to early adopt this standard in fiscal year

2017 and applied the changes retrospectively to all prior periods presented in its consolidated statements of cash flows.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The Company historically excluded restricted cash balances, recorded in current and long-term other assets, from cash and cash equivalents within the consolidated statements of cash flows, reflecting transfers between cash, cash equivalents, and restricted cash as a cash flow classified within cash flows relating to operating activities. As a result of the adoption of this standard, the Company combined restricted cash balances of $2.3 million, $2.0 million, and $2.6 million as of December 31, 2016, December 26, 2015, and December 27, 2014, respectively, with cash and cash equivalents when reconciling the beginning and ending balances within the consolidated statements of cash flows for the fiscal years ended December 31, 2016 and December 26, 2015.

In August 2016, the FASB issued ASU 2016-15, “Classification of Certain Cash Receipts and Cash Payments.” The standard addresses the classification of certain transactions within the statement of cash flows, including cash payments for debt prepayment or debt extinguishment costs, contingent consideration payments made after a business combination, and distributions received from equity method investments. The Company elected to early adopt this standard in fiscal year 2017 and applied the changes retrospectively to all prior periods presented within its consolidated statements of cash flows. As a result of the adoption of this standard, the Company reclassified $6.3 million and $7.3 million, respectively, from investing activities to operating activities within the consolidated statements of cash flows that related to distributions received from equity method investments for the fiscal years ended December 31, 2016 and December 26, 2015.

In March 2016, the FASB issued ASU 2016-09, “Improvements to Employee Share-Based Payment Accounting.” The standard reduces complexity in several aspects of the accounting for employee share-based compensation, including the income tax consequences, classification of awards as either equity or liabilities, and classification within the statement of cash flows. The Company adopted this standard in fiscal year 2017, and applied the changes as required by each amendment to its consolidated financial statements and related disclosures.

Under ASU 2016-09, the Company adopted the amendment to recognize excess tax benefits and tax deficiencies in the consolidated statements of income on a prospective basis, to present excess tax benefits within operating activities within the consolidated statements of cash flows on a retrospective basis, and elected to change its accounting policy to account for forfeitures as they occur on a modified retrospective basis.

The adoption to recognize excess tax benefits and tax deficiencies within the consolidated statements of income on a prospective basis could result in fluctuations in the effective tax rate period-over-period, depending on how many awards vest and the volatility of the Company’s stock price. During fiscal year 2017, the impact to the provision for income taxes within the consolidated statements of income was an excess tax benefit of $11.0 million. Further, for fiscal year 2017, the Company excluded the effect of windfall tax benefits from the hypothetical proceeds used to calculate the repurchase of shares under the treasury stock method for the calculation of diluted earnings per share.

The adoption of the amendment to present excess tax benefits within operating activities within the consolidated statements of cash flows on a retrospective basis resulted in the reclassification of a cash inflow of $10.0 million and $11.8 million, respectively, from cash provided by financing activities to cash provided by operating activities for fiscal years 2016 and 2015. The Company had previously classified cash paid for tax withholding purposes as a financing activity within the consolidated statements of cash flows; therefore, there was no change related to this requirement under the amendment.

The Company’s election to change its accounting policy to account for forfeitures when they occur on a modified retrospective basis resulted in an immaterial impact on its consolidated financial statements and related disclosures.

Newly Issued Accounting Pronouncements

In August 2017, the FASB issued ASU 2017-12, “Derivatives and Hedging (Topic 815) Targeted Improvements to Accounting for Hedging Activities.” ASU 2017-12 refines and expands hedge accounting for both financial and commodity risks. It also creates more transparency around how economic results are presented, both on the face of the financial statements and in the disclosures. In addition, this ASU makes certain targeted improvements to simplify the application of hedge accounting guidance. This ASU is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, and requires the modified retrospective approach. Early adoption is permitted. This ASU applies to all existing hedging relationships on the date of adoption with the cumulative effect of adoption being reflected as of the beginning of the fiscal year of adoption. The Company is still evaluating the impact

this standard will have on its consolidated financial statements and related disclosures.

In March 2017, the FASB issued ASU 2017-07, “Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.” The standard requires an employer to disaggregate the service cost component from the other components of net benefit cost and provides explicit guidance on the presentation of the service cost component and the other components of net benefit cost in the statements of income. The ASU is effective for annual periods beginning after December

15, 2017, including interim periods within those fiscal years, and should be applied retrospectively for the presentation of the service cost component and the other components of net periodic pension cost in the statements of income. Early adoption is permitted within the first interim period of the fiscal year. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial statements and related disclosures.

In January 2017, the FASB issued ASU 2017-04, "Simplifying the Test for Goodwill Impairment." The standard simplifies the accounting for goodwill impairment by removing Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. The ASU is effective for annual or interim goodwill impairment tests in fiscal years beginning after December 15, 2019, and will be applied on a prospective basis. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial statements and related disclosures.

In January 2017, the FASB issued ASU 2017-01, "Clarifying the Definition of a Business." The standard clarifies the definition of a business by adding guidance to assist entities in evaluating whether transactions should be accounted for as acquisitions of assets or businesses. The ASU is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted for certain transactions. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial statements and related disclosures.

In October 2016, the FASB issued ASU 2016-16, "Intra-Entity Transfers of Assets Other Than Inventory." The standard requires the immediate recognition of tax effects for an intra-entity asset transfer other than inventory. The ASU is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial statements and related disclosures.

In February 2016, the FASB issued ASU 2016-02, "Leases." The standard established the principles that lessees and lessors will apply to report useful information to users of financial statements about the amount, timing and uncertainty of cash flows arising from a lease. This ASU is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted. The Company is still evaluating the full impact this standard will have on its consolidated financial statements and related disclosures, but expects to recognize substantially all of its leases on the balance sheet by recording a right-to-use asset and a corresponding lease liability.

In January 2016, the FASB issued ASU 2016-01, "Recognition and Measurement of Financial Assets and Liabilities." This guidance requires equity investments that are not accounted for under the equity method of accounting to be measured at fair value with changes recognized in net income, simplifies the impairment assessment of certain equity investments, and updates certain presentation and disclosure requirements. This ASU is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted. The adoption of this standard is not expected to have a material impact on the Company's consolidated financial statements and related disclosures.

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers." The standard, including subsequently issued amendments, will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective and permits the use of either a modified retrospective or cumulative effect transition method. The standard will require an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The standard will be effective for annual and interim periods beginning after December 15, 2017. The Company formed an implementation team during fiscal year 2016 to oversee adoption of the new standard. The implementation team has substantially completed its assessment of the new standard, including a detailed review of the Company's contract portfolio, revenue streams to identify potential differences in accounting as a result of the new standard, and selected the modified retrospective transition method. The Company assessed the impact on the existing revenue accounting policies, newly required financial statement disclosures, and executed on the project plan. Currently, the Company finalized contract reviews, worked through anticipated changes to systems and business processes, and internal controls to support the adoption of the new standard. The Company expects the

opening balance sheet adoption impact and prospective changes in the timing of revenue recognition across all reportable segments to be insignificant with the adoption of the new standard.

2. BUSINESS ACQUISITIONS AND DIVESTITURE

KWS BioTest Limited

On January 11, 2018, the Company acquired KWS BioTest Limited (KWS BioTest), a CRO specializing in in vitro and in vivo discovery testing services for immuno-oncology, inflammatory and infectious diseases. The acquisition enhances the Company's discovery expertise, with complementary offerings that provide the Company's customers with additional tools in the active therapeutic research areas of oncology and immunology. The purchase price for KWS BioTest was $20.3 million in

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

cash, subject to certain post-closing adjustments that may change the purchase price, and was funded by the Company's various borrowings. In addition to the initial purchase price, the transaction includes aggregate, undiscounted contingent payments of up to £3.0 million (approximately $4.1 million based on recent exchange rates), based on future performance. This business will be reported as part of the Company's DSA reportable segment. Due to the limited time between the acquisition date and the filing of this Annual Report on Form 10-K, it is not practicable for the Company to disclose the preliminary allocation of purchase price to assets acquired and liabilities assumed. The Company incurred transaction and integration costs in connection with the acquisition of $0.5 million during fiscal year 2017, which were included in selling, general and administrative expenses.

Brains On-Line

On August 4, 2017, the Company acquired Brains On-Line, a CRO providing critical data that advances novel therapeutics for the treatment of central nervous system (CNS) diseases. Brains On-Line strategically expands the Company's existing CNS capabilities and establishes the Company as a single-source provider for a broad portfolio of discovery CNS services. The purchase price for Brains On-Line was $21.3 million in cash, subject to certain post-closing adjustments that may change the purchase price, and was funded by the Company's various borrowings. In addition to the initial purchase price, the transaction includes aggregate, undiscounted contingent payments of up to €6.7 million (approximately $7.9 million based on recent exchange rates), based on future performance. The Brains On-Line business is reported as part of the Company's DSA reportable segment.

The contingent payments become payable based on the achievement of certain revenue and earnings targets. If achieved, the payments become due in the first quarter of fiscal year 2019. The Company estimated the fair value of this contingent consideration based on a probability-weighted set of outcomes.

The purchase price allocation of $20.1 million, net of $0.6 million of cash acquired, was as follows:

	August 4, 2017 (in thousands)
Trade receivables (contractual amount of $1,146)	$ 1,146
Other current assets (excluding cash)	640
Property, plant and equipment	664
Other long-term assets	29
Definite-lived intangible assets	9,300
Goodwill	11,762
Current liabilities	(863)
Deferred revenue	(405)
Long-term liabilities	(2,151)
Total purchase price allocation	$ 20,122

The purchase price allocation is subject to change as additional information becomes available concerning the fair value and tax basis of the assets acquired and liabilities assumed. Any additional adjustments to the purchase price allocation will be made as soon as practicable but no later than one year from the date of acquisition. From the date of the acquisition through December 30, 2017, the Company recorded measurement-period adjustments related to the acquisition that resulted in an immaterial change to the purchase price allocation on a consolidated basis.

The breakout of definite-lived intangible assets acquired was as follows:

	Definite-Lived Intangible Assets (in thousands)	Weighted Average Amortization Life (in years)
Client relationships	$ 7,000	13
Other intangible assets	2,300	10
Total definite-lived intangible assets	$ 9,300	12

67

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The goodwill resulting from the transaction is primarily attributable to the potential growth of the Company's DSA businesses from customers and technology introduced through Brains On-Line and the assembled workforce of the acquired business. The goodwill attributable to Brains On-Line is not deductible for tax purposes.

The Company incurred transaction and integration costs of $2.6 million in connection with the acquisition during fiscal year 2017, which were included in selling, general and administrative expenses, within the consolidated statements of income.

Pro forma financial information as well as actual revenue and operating income (loss) have not been included because Brains On-Line's financial results are not significant when compared to the Company's consolidated financial results.

Agilux

On September 28, 2016, the Company acquired Agilux Laboratories, Inc. (Agilux), a CRO that provides a suite of integrated discovery bioanalytical services for small and large molecules, drug metabolism and pharmacokinetic services, and pharmacology services. The acquisition supports the Company's strategy to offer clients a broader, integrated portfolio that provides services continuously from the earliest stages of drug research through the non-clinical development process. The purchase price for Agilux was $64.9 million in cash and was funded by borrowings on the Company's revolving credit facility. The business is reported as part of the Company's DSA reportable segment.

The purchase price allocation of $62.0 million, net of $2.9 million of cash acquired, was as follows:

	September 28, 2016 (in thousands)
Trade receivables (contractual amount of $4,799)	$ 4,799
Other current assets (excluding cash)	794
Property, plant and equipment	3,907
Other long-term assets	11
Definite-lived intangible assets	21,900
Goodwill	44,517
Current liabilities	(3,812)
Long-term liabilities	(10,091)
Total purchase price allocation	$ 62,025

From the date of the acquisition through September 30, 2017, the Company recorded measurement-period adjustments related to the acquisition that resulted in an immaterial change to the purchase price allocation on a consolidated basis. No further adjustments will be made to the purchase price allocation.

The breakout of definite-lived intangible assets acquired was as follows:

	Definite-Lived Intangible Assets (in thousands)	Weighted Average Amortization Life (in years)
Client relationships	$ 16,700	17
Other intangible assets	5,200	4
Total definite-lived intangible assets	$ 21,900	14

The goodwill resulting from the transaction is primarily attributable to the potential growth of the Company's DSA businesses from customers and technology introduced through Agilux and the assembled workforce of the acquired business. The goodwill attributable to Agilux is not deductible for tax purposes.

The Company incurred transaction and integration costs of $0.3 million and $1.7 million, respectively, in connection with the acquisition during fiscal years 2017 and 2016, which were included in selling, general and administrative expenses, within the consolidated statements of income.

Pro forma financial information as well as actual revenue and operating income (loss) have not been included because Agilux's financial results are non-significant when compared with the Company's consolidated financial results.

Blue Stream

68

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

On June 27, 2016, the Company acquired Blue Stream Laboratories, Inc. (Blue Stream), an analytical CRO supporting the development of complex biologics and biosimilars. Combining Blue Stream with the Company's existing discovery, safety assessment, and biologics capabilities creates a leading CRO that has the ability to support biologic and biosimilar development from characterization through clinical testing and commercialization. The purchase price for Blue Stream was $11.7 million, including $3.0 million in contingent consideration, and was subject to certain customary adjustments. The acquisition was funded by borrowings on the Company's revolving credit facility. The business is reported in the Company's Manufacturing reportable segment.

The Company estimated the fair value of this contingent consideration based on a probability-weighted set of outcomes. The contingent consideration is a one-time payment payable based on the achievement of a revenue target. The target was achieved and the Company paid the $3.0 million in contingent consideration in the third quarter of fiscal year 2017.

The purchase price allocation of $11.7 million, net of a non-significant amount of cash acquired, was as follows:

	June 27, 2016 (in thousands)
Trade receivables (contractual amount of $1,104)	$ 1,104
Other current assets (excluding cash)	15
Property, plant and equipment	912
Other long-term assets	187
Definite-lived intangible assets	1,230
Goodwill	10,334
Current liabilities	(1,132)
Long-term liabilities	(901)
Total purchase price allocation	$ 11,749

From the date of the acquisition through July 1, 2017, the Company recorded measurement-period adjustments related to the acquisition that resulted in an immaterial change to the purchase price allocation on a consolidated basis. No further adjustments will be made to the purchase price allocation.

The breakout of definite-lived intangible assets acquired was as follows:

	Definite-Lived Intangible Assets (in thousands)	Weighted Average Amortization Life (in years)
Client relationships	$ 650	10
Other intangible assets	580	5
Total definite-lived intangible assets	$ 1,230	7

The goodwill resulting from the transaction is primarily attributable to the potential growth of the Company's Manufacturing segment from customers and technology introduced through Blue Stream, the assembled workforce of the acquired business, expected synergies, and the development of future proprietary processes. The goodwill attributable to Blue Stream is not deductible for tax purposes.

The Company incurred non-significant transaction and integration costs in connection with the acquisition during fiscal year 2017, which were included in selling, general and administrative expenses, within the consolidated statements of income. The Company incurred $0.6 million of transaction and integration costs in connection with the acquisition during fiscal year 2016, which were included in selling, general and administrative expenses, within the consolidated statements of income.

Pro forma financial information as well as actual revenue and operating income (loss) have not been included because Blue Stream's financial results are non-significant when compared with the Company's consolidated financial results.

WIL Research

On April 4, 2016, the Company acquired WIL Research, a provider of safety assessment and CDMO services to biopharmaceutical and agricultural and industrial chemical companies worldwide. The acquisition enhanced the Company's position as a leading, global, early-stage CRO by strengthening its ability to partner with clients across the drug discovery and

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

development continuum. The purchase price for WIL Research was $604.8 million, including assumed liabilities of $0.4 million. The purchase price included payment for actual working capital of the acquired business. The acquisition was funded by cash on hand and borrowings on the Company's $1.65B Credit Facility. See Note 7, "Long-Term Debt and Capital Lease Obligations." WIL Research's safety assessment and CDMO businesses are reported in the Company's DSA and Manufacturing reportable segments, respectively. On February 10, 2017, the Company divested the CDMO business.

The purchase price allocation of $577.4 million, net of $27.4 million of cash acquired, was as follows:

	April 4, 2016 (in thousands)
Trade receivables (contractual amount of $48,625)	$48,157
Inventories	2,296
Other current assets (excluding cash)	3,814
Property, plant and equipment	129,066
Other long-term assets	1,060
Definite-lived intangible assets	164,800
Goodwill	330,175
Deferred revenue	(39,103)
Other current liabilities	(27,386)
Long-term liabilities	(35,488)
Total purchase price allocation	$577,391

From the date of the acquisition through April 1, 2017, the Company recorded measurement-period adjustments related to the acquisition that resulted in an immaterial change to the purchase price allocation on a consolidated basis. No further adjustments will be made to the purchase price allocation.

The breakout of definite-lived intangible assets acquired was as follows:

	Definite-Lived Intangible Assets (in thousands)	Weighted Average Amortization Life (in years)
Client relationships	$ 137,500	15
Developed technology	20,700	3
Backlog	6,600	1
Total definite-lived intangible assets	$ 164,800	13

The goodwill resulting from the transaction, $19.0 million of which was deductible for tax purposes due to a prior asset acquisition, was primarily attributed to the potential growth of the Company's DSA and Manufacturing businesses from clients introduced through WIL Research, the assembled workforce of the acquired business, and expected cost synergies. Subsequent to the divestiture of the CDMO business on February 10, 2017, $14.8 million of the goodwill was deductible for tax purposes.

The Company incurred transaction and integration costs in connection with the acquisition of $1.7 million, $15.5 million and $3.2 million during fiscal years 2017, 2016 and 2015, respectively, which were included in selling, general and administrative expenses within the consolidated statements of income.

WIL Research revenue and operating income from April 4, 2016 through December 31, 2016 was $176.1 million and $12.5 million, respectively. Beginning on April 4, 2016, WIL Research has been included in the operating results of the Company.

The following selected unaudited pro forma consolidated results of operations are presented as if the WIL Research acquisition had occurred as of the beginning of the period immediately preceding the period of acquisition after giving effect to certain adjustments. For fiscal year 2016, these adjustments included additional amortization of intangible

assets and depreciation of fixed assets of $0.4 million, reversal of interest expense on borrowings of $2.6 million, elimination of intercompany activity and other one-time costs, and the tax impacts of these adjustments. For fiscal year 2015, these adjustments included additional amortization of intangible assets and depreciation of fixed assets of $13.6 million, reversal of interest expense on borrowings of

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

$10.5 million, inclusion of acquisition-related transaction costs of $11.5 million, elimination of intercompany activity and other one-time costs, and the tax impacts of these adjustments.

	Fiscal Year	
	2016	2015
	(in thousands, except per share amounts)	
	(unaudited)	
Revenue	$1,741,964	$1,578,133
Net income attributable to common shareholders	175,779	153,974
Earnings per common share:		
Basic	$3.74	$3.31
Diluted	$3.67	$3.23

These unaudited pro forma results of operations have been prepared for comparative purposes only, and they do not purport to be indicative of the results of operations that actually would have resulted had the acquisition occurred on the date indicated or that may result in the future. No effect has been given for synergies, if any, that may have been realized through the acquisition.

Contract Manufacturing

On February 10, 2017, the Company completed the divestiture of its CDMO business to Quotient Clinical Ltd., based in London, England, for $75.0 million in proceeds, net of $0.6 million in cash and cash equivalents transferred in conjunction with the sale and $0.3 million of working capital adjustments.

The CDMO business was acquired in April 2016 as part of the acquisition of WIL Research and was reported in the Company’s Manufacturing reportable segment. Following a strategic review that was finalized subsequent to December 31, 2016, the Company determined that the CDMO business was not optimized within the Company’s portfolio at its current scale, and that the capital could be better deployed in other long-term growth opportunities. During the three months ended April 1, 2017, the Company recorded a gain on the divestiture of the CDMO business of $10.6 million, which was included in other income, net within the Company’s consolidated statements of income.

As of February 10, 2017, the carrying amounts of the major classes of assets and liabilities associated with the divestiture of the CDMO business were as follows (in thousands):

Assets	
Current assets	$5,505
Property, plant and equipment, net	11,174
Goodwill	35,857
Long-term assets	17,154
Total assets	$69,690
Liabilities	
Deferred revenue	$4,878
Other current liabilities	1,158
Total liabilities	$6,036

Oncotest

On November 18, 2015, the Company acquired Oncotest GmbH (Oncotest), a German CRO providing discovery services for oncology, one of the largest therapeutic areas for biopharmaceutical research and development spending. With this acquisition, the Company has expanded its oncology services capabilities, enabling it to provide clients with access to a more comprehensive portfolio of technologies, including patient-derived xenograft (PDX) and syngeneic models. The purchase price for Oncotest was $36.0 million, including $0.3 million in contingent consideration. The acquisition was funded by borrowings on the Company's revolving credit facility. The business is reported in the Company’s DSA reportable segment.

The contingent consideration earn-out period ended in the fourth quarter of 2016. As a result, the related contingent consideration liability was reversed and a gain of $0.3 million was recorded in selling, general and administrative

expenses, as no payments were made. The contingent consideration was a one-time payment that could have become payable based on the

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

achievement of a revenue target for fiscal year 2016. If achieved, the payment would have become due in the first quarter of fiscal year 2017. The aggregate, undiscounted amount of contingent consideration that the Company could have paid was €2.0 million ($2.1 million as of December 31, 2016). The Company estimated the fair value of this contingent consideration based on a probability-weighted set of outcomes.

The purchase price allocation of $35.4 million, net of $0.6 million of cash acquired, was as follows:

	November 18, 2015 (in thousands)
Trade receivables (contractual amount of $3,546)	$ 3,520
Inventories	129
Other current assets (excluding cash)	706
Property, plant and equipment	2,528
Definite-lived intangible assets	13,330
Goodwill	22,894
Other long-term assets	250
Current liabilities	(3,456)
Long-term liabilities	(4,470)
Total purchase price allocation	$ 35,431

The breakout of definite-lived intangible assets acquired was as follows:

	Definite-Lived Intangible Assets (in thousands)	Weighted Average Amortization Life (in years)
Client relationships	$ 7,146	19
Developed technology	5,960	19
Other intangible assets	224	3
Total definite-lived intangible assets	$ 13,330	19

The goodwill resulting from the transaction is primarily attributed to the potential growth in the Company's DSA businesses from customers and technology introduced through Oncotest, the assembled workforce of the acquired business and expected cost synergies. The goodwill attributable to Oncotest is not deductible for tax purposes.

The Company incurred non-significant transaction and integration costs in connection with the acquisition during fiscal years 2017 and 2016 and costs of $2.1 million during fiscal year 2015, which were included in selling, general and administrative expenses, within the consolidated statements of income.

Pro forma financial information as well as actual revenue and operating income (loss) have not been included because Oncotest’s financial results are non-significant when compared with the Company’s consolidated financial results.

Celsis

On July 24, 2015, the Company acquired Celsis Group Limited (Celsis), a leading provider of rapid testing systems for non-sterile bacterial contamination for the biopharmaceutical and consumer products industries. The purpose of this acquisition was to enhance the Company’s portfolio of rapid microbial detection products and services with the addition of a rapid bioburden testing product. The purchase price for Celsis was $214.5 million, including assumed debt and certain liabilities of $10.3 million. The acquisition was funded by cash on hand and borrowings on the Company’s revolving credit facility. The business is reported in the Company’s Manufacturing reportable segment.

CHARLES RIVER LABORATORIES INTERNATIONAL, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The purchase price allocation of $212.2 million, net of $2.3 million of cash acquired, was as follows:

	July 24, 2015 (in thousands)
Trade receivables (contractual amount of $5,410)	$ 5,288
Inventories	10,103
Other current assets (excluding cash)	13,269
Property, plant and equipment	4,639
Definite-lived intangible assets	118,140