

PERKINELMER INC
Form 10-K
February 26, 2019
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UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

Form 10-K
(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 30, 2018

or

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

For the transition period from _____ to _____
Commission file number 001-5075

PerkinElmer, Inc.

(Exact name of registrant as specified in its charter)

Massachusetts	04-2052042
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

940 Winter Street, Waltham, Massachusetts 02451

(Address of Principal Executive Offices) (Zip Code)

(Registrant's telephone number, including area code): (781) 663-6900

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

Title of Each Class	Name of Each Exchange on Which Registered
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Common Stock, \$1 Par Value	New York Stock Exchange
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Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

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

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

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

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

Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or 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.

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Large accelerated filer Accelerated filer

Non-accelerated filer Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark whether the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

The aggregate market value of the common stock, \$1 par value per share, held by non-affiliates of the registrant on June 29, 2018, was \$7,944,359,992 based upon the last reported sale of \$73.23 per share of common stock on June 29, 2018.

As of February 22, 2019, there were outstanding 110,800,020 shares of common stock, \$1 par value per share.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of PerkinElmer, Inc.'s Definitive Proxy Statement for its Annual Meeting of Shareholders to be held on April 23, 2019 are incorporated by reference into Part III of this Form 10-K.

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PART I

Item 1. Business

Overview

We are a leading provider of products, services and solutions for the diagnostics, life sciences and applied markets. Through our advanced technologies and differentiated solutions, we address critical issues that help to improve lives and the world around us.

We are a Massachusetts corporation, founded in 1947. Our headquarters are in Waltham, Massachusetts, and we market our products and services in more than 180 countries. As of December 30, 2018, we employed approximately 12,500 employees. Our common stock is listed on the New York Stock Exchange under the symbol “PKI” and we are a component of the S&P 500 Index.

We maintain a website with the address <http://www.perkinelmer.com>. We are not including the information contained in our website as part of, or incorporating it by reference into, this annual report on Form 10-K. We make available free of charge through our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports, as soon as reasonably practicable after we electronically file these materials with, or otherwise furnish them to, the Securities and Exchange Commission.

Our Strategy

Our strategy is to develop and deliver innovative products, services and solutions in high-growth markets that utilize our knowledge and expertise to address customers’ critical needs and drive scientific breakthroughs. To execute on our strategy and accelerate revenue growth, we focus on broadening our offerings through both the acquisition of innovative technology and investment in research and development. Our strategy includes:

- Achieving significant growth in both of our core business segments, Discovery & Analytical Solutions and Diagnostics, through strategic acquisitions and licensing;
- Accelerating innovation through both internal research and development and third-party collaborations and alliances;
- Strengthening our position within key markets, by expanding our global product and service offerings and maintaining superior product quality;
- Utilizing our share repurchase programs to help drive shareholder value; and
- Attracting, retaining and developing talented and engaged employees.

Recent Developments

As part of our strategy to grow our core businesses, we have recently taken the following actions:

Acquisitions in Fiscal Year 2018:

We completed the acquisition of four businesses for aggregate consideration of \$106.0 million. We reported the operations of these acquisitions within the results of our Discovery & Analytical Solutions or Diagnostics segments, as applicable, from the acquisition dates.

Restructuring:

During fiscal year 2018, we recorded pre-tax restructuring charges of \$6.6 million in our Discovery & Analytical Solutions segment and \$1.5 million in our Diagnostics segment related to a workforce reduction from restructuring activities. Our management approved these plans to realign resources to emphasize growth initiatives. We also terminated various contractual commitments in connection with certain disposal activities and have recorded charges, to the extent applicable, for the costs of terminating these contracts before the end of their terms and the costs that will continue to be incurred for the remaining terms without economic benefit to us. We recorded pre-tax charges of \$5.0 million in the Discovery & Analytical Solutions segment during fiscal year 2018 as a result of these contract terminations.

This pre-tax restructuring activity has been reported as restructuring and contract termination charges and is included as a component of income from continuing operations. We expect no significant impact on future operating results or cash flows from the restructuring activities executed in fiscal year 2018.

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Business Segments and Products

We report our business in two segments: Discovery & Analytical Solutions and Diagnostics.

Discovery & Analytical Solutions Segment

Our comprehensive portfolio of technologies helps life sciences researchers better understand diseases and develop treatments. In addition, we enable scientists to detect, monitor and manage contaminants and toxic chemicals that impact our environment and food supply. Our Discovery & Analytical Solutions segment serves the life sciences and applied markets.

Life Sciences Market:

The life sciences market consists of the life sciences research market and laboratory services market. In the life sciences market, we provide a broad suite of solutions including reagents, informatics, and detection and imaging technologies that enable scientists to work smarter, make research breakthroughs and transform those breakthroughs to real-world outcomes. These products, solutions and services support pharmaceutical and biotech companies and academic institutions globally in discovering and developing better treatments and therapeutics to fight disease, faster and more efficiently.

We also provide services designed to help customers in the laboratory services market increase efficiencies and production time while reducing lab maintenance costs. Our OneSource[®] laboratory service business is aligned with customers' needs, enabling them to accelerate scientific progress and commercial opportunities.

Applied Markets:

The applied markets consist of environmental, food and industrial markets. For the environmental markets, we develop and provide analytical technologies, solutions and services that enable our customers to understand the characterization and health of many aspects of our environment, including air, water and soil. Our solutions are used to detect and help reduce the impact products and industrial processes have on our environment. For example, our solutions help ensure compliance with regulatory standards that protect the purity of the world's water supply by detecting harmful substances, including trace metals such as lead, and organic pollutants such as pesticides and benzene. We provide the tools needed to test functionality, meet quality specifications and safety standards, and innovate for next generation products.

We also offer a variety of solutions that help farmers and food producers provide a growing population with food that is safe, nutritious and appealing, and assist manufacturers with product consistency and maximizing production yield. Our instruments confirm food quality, including the level of moisture in grain or the level of fat in butter, as well as detect the presence of potentially dangerous contaminants, such as lead and mercury in milk. Our solutions can also be used to identify the origin of food products such as olive oil, which helps prevent counterfeiting. Our methods and analyses are transferable throughout the supply chain to enable customers to keep pace with industry standards as well as governmental regulations and certifications.

We also provide analytical instrumentation for the industrial market which includes the chemical, semiconductor and electronics, energy, lubricant, petrochemical and polymer industries. Our technologies for this market are primarily used by customers focusing on quality assurance standards.

Principal Products:

Our principal products and services for Discovery & Analytical Solutions applications include the following:

Life Sciences Market:

Radiometric detection solutions, including over 1,100 radiochemicals and the Tri-carb[®] and Quantulus[™] GCT families of liquid scintillation analyzers, Wizard²[®] Gamma counters and MicroBeta²[®] plate based LSA, which are used for beta, gamma and luminescence counting in microplate and vial formats utilized in research, environmental and drug discovery applications.

• The Opera Phenix[®] high content screening system, which is used for sensitive and high speed phenotypic drug screening of complex cellular models.

• The Operetta[®] CLS[™] high content analysis system, which enables scientists to reveal fine sub-cellular details from everyday assays as well as more complex studies, for example using live cells, 3D and stem cells.

• The EnSight[®] multimode plate reader benchtop system, offering well plate imaging alongside labeled detection technologies for target-based and phenotypic assays.

• The EnVision[®] multimode plate reader, designed for high-throughput screening laboratories, including those using AlphaScreen[®], AlphaLISA[®] and/or AlphaPlex[®] technologies.

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A wide range of homogeneous biochemical and cell based assay reagents, including LANCE® Ultra™ and Alpha™ technology assay platforms used for the detection of drug discovery targets such as G-protein coupled receptors (“GPCR”), kinases, biomarkers and the modification of epigenetic enzymes.

A broad portfolio of recombinant GPCR and ion channel cell lines, including over 300 products and 120 ready-to-use frozen cell lines for a wide range of disease areas.

AlphaScreen®, AlphaLISA® and AlphaPlex® research assays, including over 500 no-wash biomarker detection kits for both biotherapeutics and small molecule drug discovery and development in a variety of therapeutic areas including cancer, inflammation, metabolic disorders, neurodegeneration and virology.

TSA™ Plus biotin kits, which can increase sensitivity of histochemistry and cytochemistry as much as 10 to 20 times.

In vivo imaging technologies and reagents for preclinical research, including the IVIS® Spectrum™ Series for 2D and 3D optical imaging, the FMT® series for 3D optical tomography and the IVIS® Lumina™ Series for 2D imaging, along with a suite of bioluminescent and fluorescent imaging agents, cell lines and dyes. These technologies are designed to provide non-invasive longitudinal monitoring of disease progression, cell trafficking and gene expression patterns in living animals and are complemented by a broad portfolio of fluorescent and bioluminescent in vivo imaging reagents that can be useful for identifying, characterizing and quantifying a range of disease biomarkers and therapeutic efficacy in living animal models.

The G8 PET/CT preclinical imaging system, delivering PET imaging with an intuitive user interface and efficient workflows, ensuring subject monitoring throughout preparation and imaging.

The Quantum™ GX2 system, which enables in vivo imaging of multiple species across multiple disease areas by delivering industry leading high resolution imaging. Low dose scanning allows subjects to be imaged over time to evaluate disease progression while minimizing the harmful effects of radiation that could impact the biology of the animal. With the Quantum™ GX2 system, data from the IVIS® and FMT® imaging platforms can be seamlessly co-registered with microCT to deliver more information on the disease state.

OneSource® laboratory services, a comprehensive portfolio of multivendor instrument management, QA/QC, lab relocation and regulatory compliance services. OneSource® programs are tailored to the specific needs and goals of individual customers and offer a series of informatics-based consulting, planning and management offerings to assist in laboratory productivity and the optimization of complex Information Technology platforms.

OneSource® Dashboard, a TIBCO® Spotfire® technology driven interactive graphical platform, providing visibility to a customer’s global asset population, service event and downtime distribution, as well as key performance indicators to assist in asset operation.

OneSource® Insights as a Service™, which leverages comprehensive OneSource® analytics and industry data to develop and deliver customer-need driven recommendations to optimize, integrate and accelerate lab operations.

PerkinElmer Signals Medical Review™ software, empowering medical monitors to detect safety signals faster and reduce overall time to submission by combining innovative medical review workflow with advanced analytics.

PerkinElmer Signals Lead Discovery™ software, which enables researchers to quickly gain new insights into chemical and biomolecular research data, featuring guided search and analysis workflows and dynamic data visualizations for on-the-fly exploration.

PerkinElmer Signals™ Notebook, a scientific research data management solution, allowing researchers to record research data and experiments in digital notebooks, drag & drop, store, organize, share, find and filter data easily.

PerkinElmer Signals™ Translational data management, aggregation and analysis platform, which offers out-of-the-box support for the complete precision medicine workflow from data acquisition to biomarker discovery and validation.

Applied Markets:

The Clarus® series of gas chromatographs, gas chromatographs/mass spectrometers and the TurboMatrix™ family of sample-handling equipment, which are used to identify and quantify compounds in the environmental, forensics, food and beverage, hydrocarbon processing/biofuels, materials testing, pharmaceutical and semiconductor industries.

The Flexar™ ultra-high performance liquid chromatography (UHPLC) and Flexar advanced liquid chromatography systems, which provide high throughput and resolution chromatographic separations.

• The QSight® Triple Quad LC/MS/MS, a flow-based mass spectrometry system that provides high sensitivity and enables high levels of efficiency and productivity to meet both standard and regulatory requirements.

• The Torion® T-9 portable GC/MS, a fast person-portable GC/MS system, enabling rapid detection and actionable results to potentially hazardous and emergency environmental conditions.

• Our atomic spectroscopy family of instruments, including the PinAAcle® family of atomic absorption spectrometers, the Avio® family of inductively coupled plasma (“ICP”) optical emission spectrometers and the

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NexION® family of ICP mass spectrometers, which are used in the environmental and chemical industries, among others, to determine the elemental content of a sample.

Our infrared spectroscopy (IR) family of instruments, the Spectrum Two™ IR & NIR spectrometers, which are compact and portable and used for high-speed infrared analysis for unknown substance identification, material qualification or concentration determination in fuel and lubricant analysis, polymer analysis and pharmaceutical and environmental applications. This includes the Frontier™ IR and NIR spectrometers designed to provide high sensitivity and flexibility to address a range of sample types. Spotlight™ IR systems are designed for scientists whose samples demand higher sensitivity and simpler analysis and workflows.

The LAMBDA™ UV/Vis, a series of spectrophotometers that provide sampling flexibility to enable measurement of a wide range of sample types, including liquids, powders and solid materials, both in regulated industries as well as QC/QA and research applications.

The 2400 Series II CHNS/O Elemental Analyzer, one of the leading organic elemental analyzers. It is ideal for the rapid determination of carbon, hydrogen, nitrogen, sulfur, and oxygen content in organic and other types of materials. Our thermal analysis family, including our Differential Scanning Calorimetry (DSC) series that offers exclusive HyperDSC™ capability for unparalleled sensitivity and new insights into material processes, our Thermogravimetric (TGA) and Simultaneous Thermal Analysis (STA) instruments, which can be coupled to Fourier Transform Infrared (FT-IR), Mass Spectrometry (MS), or Gas Chromatography/Mass Spectrometry (GC/MS) to provide greater analysis power and knowledge.

Perten's Falling Number® and Glutomatic® instruments, which determine the bread baking quality of wheat and flour, and Perten's DA NIR bench and in process analyzer determine constituent content for use across the food segment from meat to animal feed.

The Delta™ range of milk quality analyzers, which help ensure the quality of dairy products and are used at Central Milk Testing labs as well as dairy processing facilities around the world.

The Bioo Scientific® test kits for detection of toxins, veterinary drug residues and contaminants, which enable rapid and easy testing at different steps in the food value chain.

New Products:

New products introduced or acquired for Discovery & Analytical Solutions applications in fiscal year 2018 include the following:

Life Sciences Market:

- A range of new AlphaLISA®, Alpha SureFire® Ultra and LANCE® reagents and assay kits across key research and therapeutic areas, including cell signaling, inflammation, oncology, and biotherapeutics.

ChemDraw® 18 chemical structure drawing and visualization application, which is now available on the cloud.

Lead Discovery Premium software, which allows scientists to import, filter by, analyze and interpret chemical structures and biosequences alongside other related data in a highly visual and interactive environment for faster insights and better decisions.

- OneSource® Asset Genius™ Monitoring Solution, part of the Asset Genius family, which offers a 360° view of PC-driven laboratory instruments regardless of the manufacturer, correlating instrument usage, age and service data, allowing customers to visually pinpoint under-performing, ideally-performing and over-burdened assets, and to make informed decisions.

Applied Markets:

The FL 6500™ and FL 8500™ fluorescence spectrophotometers, which address the challenges of bioscience, industrial, chemical, environmental, pharmaceutical, agricultural and academic application. They are designed to improve lab productivity and ensure standard compliance regulations are met. The FL 6500™ provides a high-energy pulsed Xenon light source that preserves sample integrity and the FL 8500™ provides a high-sensitivity source for testing diluted or small samples.

The QSight® 400 series is a robust, powerful ready-to-implement triple quad LC/MS/MS system providing higher sensitivity and throughput that regulated food, cannabis and environmental testing labs need to meet their most stringent requirements.

Brand Names:

Our Discovery & Analytical Solutions segment offers additional products under various brand names, including:

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Life Sciences Market:

AlphaLISA[®], AlphaPlex[™], AlphaScreen[®], Alpha[™] SureFire[®] AngioSense[®], Annexin-Vivo[™], Cell carrier[®], cell::explorer[®], Chem3D[®], ChemDraw[®], ChemOffice[®], Columbus Elements[™], EnLite[™], EnSight[®], EnVision[®], FMT[®], FolateRSense[™], High Content Profiler[™], IntegriSense[™], IVIS[®], LANCE[®], Living Image[®], Lumina[™], MicroBeta[®], MMPsense[®], NEN[™], OneSource[®], Opera Phenix[®], Operetta[®] CLS[™], OsteoSense[®] PerkinElmer Signals[™] for Translational, ProSense[®], Quantulus[™] GCT, RediJect[™], Spectrum[™], Transferrin-Vivo Carb[®], VICTOR Nivo[™], ViewLux[™], VivoTag Wizard^{2®}, and Xenolight[™].

Applied Markets:

Altus[®], Aquamatic[™], Avio[®], AxION[®], Clarus[®], DairyGuard[™], Falling Number[®], Frontier[™], Glutomatic[®], Honigs Regression[™], HyperDSC[®], Inframatic[™] LAMBDA[™], NexION[®], OilExpress[™], OilPrep[™], Optima[®], Perten[®], Perten Instruments[®], PinAAcle[®], QSight[®], Spectrum[™], Spectrum Two[™], Spotlight[™], Supra-clean[®], Supra-d[™], Supra-poly[®], Syngistix[™], Torion[®] TurboMatrix[™] and Ultraspray[®].

Diagnostics Segment

We offer instruments, reagents, assay platforms, and software to hospitals, medical labs, clinicians, and medical research professionals to help improve the health of families. Our Diagnostics segment is especially focused on reproductive health, emerging market diagnostics, and applied genomics.

We provide early detection for genetic disorders from pregnancy to early childhood, and infectious disease testing for the diagnostics market. Our screening products are designed to provide early and accurate insights into the health of expectant mothers during pregnancy and into the health of their babies. Diagnostics labs use our instruments, reagents and software for testing and screening genetic abnormalities and certain disorders and diseases, including Down syndrome, hypothyroidism, infertility and various metabolic conditions. We also develop technologies that enable and support genomic workflows using PCR and next-generation DNA sequencing for applications in oncology and drug discovery.

Principal Products:

Our principal products and services for Diagnostics applications include the following:

The DELFIA[®] Xpress screening platform, a complete solution for prenatal and maternal health screening, which includes a fast continuous loading system. It is supported by kits for first, second and third trimester analyses for prenatal screening and clinically validated LifeCycle[™] Software.

The NeoBase[™] non-derivatized MS/MS AAAC kit, which is used to support detection of metabolic disorders in newborns through tandem mass spectrometry. The kit analyzes newborn dry blood spot samples for measurement of amino acids and other metabolic analytes for specific diseases.

The GSP[®] Neonatal hTSH, T4 17 α -OHP, GALT IRT, BTD, PKU, Total Galactose, CK-MM and G6PD kits, used for screening congenital neonatal conditions from a drop of blood.

The Specimen Gate[®] informatics data management solution, designed specifically for newborn screening laboratories.

ViaCord[®] umbilical cord blood banking services for the banking of stem cells harvested from umbilical cord blood and cord tissue, for potential therapeutic application in transplant and regenerative medicine.

An expanded portfolio of molecular-based infectious disease screening technologies for blood bank and clinical laboratory settings in China. The tools include a qualitative 3-in-1 assay for the detection of hepatitis B, hepatitis C and HIV, as well as assays for other communicable diseases.

- The EnLite[™] Neonatal TREC[™] System, a screening test for Severe Combined Immunodeficiency, consisting of EnLite[™] Neonatal TREC[™] reagent kits, the Victor EnLite[™] instrument and EnLite[™] workstation software.
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NeoLSD™ MSMS kit, the first commercial IVD kit for screening of Pompe, MPS-I, Fabry, Gaucher, Niemann-Pick A/B and Krabbe disorders from a single DBS sample.

QSight® Triple Quad MSMS instrument, which is used for newborn screening.

•TRF based Anti HBs/HCV/TP kits for infectious disease testing.

•The chemagic™ Prime™ instrument, a fully automated, LIMS-compatible solution for primary sample transfer, DNA and RNA isolation, optional normalization, and the setup of PCR and NGS applications.

•Immune fluorescence testing (IFT), enzyme-linked immunosorbent assay (ELISA), chemiluminescence-based immunotesting, immunoblots, molecular microarrays, PCR, liquid handlers and software solutions.

•Autoimmune testing covering rheumatology, hepatology, gastroenterology, endocrinology, neurology, nephrology, dermatology and infertility.

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Infectious disease testing covering bacteria, viruses and parasites.

IFT, ELISA and EUROLINE™ assays for veterinary medical diagnostics.

Automated liquid handling platforms (JANUS®, Sciclone® and Zephyr®) that offer a choice of robotic solutions in genomics, biotherapeutics, high throughput screening and high content analysis to assist life science research from bench to clinic.

JANUS® BioTx™ workstation for automated small scale purification, offering column, tip and plate based chromatography on a single platform.

The LabChip GXII® Touch™ platform, which provides a means of characterizing multiple protein product attributes for research labs through QC.

The explorer® automated workstation, which allows integration of multiple laboratory instrumentation using a centralized robotic interface, allowing high throughput and turnkey-application focused solutions.

New Products:

Significant new products introduced or acquired for Diagnostics applications in fiscal year 2018 include the following:

Vanadis®NIPT, a breakthrough cfDNA technology for use in genetic and biochemistry laboratories for screening common trisomies in pregnant population.

Allergy testing covering allergen-specific immunoglobulin e (IgE) measuring the level of different IgE antibodies in blood using ELISA and EUROLINE™ assays.

PG-Seq™ and DOPlify® kits for preimplantation genetic testing.

New NextFLEX® library prep kits and barcode for next generation sequencing.

ProteinEXact™ assay for protein quantitation and sizing applications.

Brand Names:

Our Diagnostics segment offers additional products under various brand names, including AutoDELFI A®, BACS-on-Beads®, BIOCHIPS, Bioo Scientific®, BoBs®, chemagic™, Datalyze™, DELFI A®, DELFI A® Xpress, DOPlify®, EUROArray™, EUROIMMUN®, EUROLabWorkstation™, EUROline™, EUROPattern™, Evolution™, explorer™, FragilEase®, Genoglyphix®, GSP®, iLab™, JANUS®, LabChip®, LifeCycle™, LimsLink™, MultiPROBE®, NEXTFLEX®, NextPrep™, Pannoramix™, PG-Seq™, PG-Find™, Protein Clear™, ProteinEXact™, QSight®, Sciclone®, Specimen Gate®, Symbio™, Twister®, Vanadis™, VariSpec™, ViaCord®, and Zephyr®.

Marketing

All of our businesses market their products and services primarily through their own specialized sales forces. As of December 30, 2018, we employed approximately 4,800 sales and service representatives operating in approximately 35 countries and marketing products and services in more than 180 countries. In geographic regions where we do not have a sales and service presence, we utilize distributors to sell our products.

Raw Materials, Key Components and Supplies

Each of our businesses uses a wide variety of raw materials, key components and supplies that are generally available from alternate sources of supply and in adequate quantities from domestic and foreign sources. We generally have multi-year contracts, with no minimum purchase requirements, with our suppliers. For certain critical raw materials, key components and supplies required for the production of some of our principal products, we have qualified only a limited or a single source of supply. We periodically purchase quantities of some of these critical raw materials in excess of current requirements, in anticipation of future manufacturing needs. With sufficient lead times, we believe we would be able to qualify alternative suppliers for each of these raw materials and key components. See the applicable risk factor in “Item 1A. Risk Factors” for an additional description of this risk.

Intellectual Property

We own numerous United States and foreign patents and have patent applications pending in the United States and abroad. We also license intellectual property rights to and from third parties, some of which bear royalties and are terminable in specified circumstances. In addition to our patent portfolio, we possess a wide array of unpatented proprietary technology and know-how. We also own numerous United States and foreign trademarks and trade names for a variety of our product names, and have applications for the registration of trademarks and trade names pending in the United States and abroad. We believe that patents and other proprietary rights are important to the development of both of our reporting segments, but we also rely upon trade secrets, know-how, continuing technological innovations and licensing opportunities to develop and maintain the

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competitive position of both of our reporting segments. We do not believe that the loss of any one patent or other proprietary right would have a material adverse effect on our overall business or on any of our reporting segments.

In some cases, we may participate in litigation or other proceedings to defend against or assert claims of infringement, to enforce our patents or our licensors' patents, to protect our trade secrets, know-how or other intellectual property rights, or to determine the scope and validity of our or third parties' intellectual property rights. Litigation of this type could result in substantial cost to us and diversion of our resources. An adverse outcome in any litigation or proceeding could subject us to significant liabilities or expenses, require us to cease using disputed intellectual property or cease the sale of a product, or require us to license the disputed intellectual property from third parties.

Backlog

We believe that backlog is not a meaningful indicator of future business prospects for either of our business segments due to the short lead time required for a majority of our sales. Therefore, we believe that backlog information is not material to an understanding of our business.

Competition

Due to the range and diversity of our products and services, we face many different types of competition and competitors. Our competitors range from foreign and domestic organizations, which produce a comprehensive array of goods and services and that may have greater financial and other resources than we do, to more narrowly focused firms producing a limited number of goods or services for specialized market segments.

We compete on the basis of service level, price, technological innovation, operational efficiency, product differentiation, product availability, quality and reliability. Competitors range from multinational organizations with a wide range of products to specialized firms that in some cases have well-established market positions. We expect the proportion of large competitors to increase through the continued consolidation of competitors.

Research and Development

We have a broad product base, and we do not expect any single research and development project to have significant costs. To accelerate our growth initiatives, we directed our research and development efforts in fiscal years 2018, 2017 and 2016 primarily toward our Diagnostics segment, and the life sciences and applied markets within our Discovery & Analytical Solutions segment. We expect to continue our strong investments in research and development to drive growth during fiscal year 2019, and to continue to emphasize the Diagnostics segment, and the life sciences and applied markets within our Discovery & Analytical Solutions segment.

Environmental Matters

Our operations are subject to various foreign, federal, state and local environmental and safety laws and regulations. These requirements include those governing uses, emissions and discharges of hazardous substances, the remediation of contaminated soil and groundwater, the regulation of radioactive materials, and the health and safety of our employees.

We may have liability under the Comprehensive Environmental Response Compensation and Liability Act and comparable state statutes that impose liability for investigation and remediation of contamination without regard to fault, in connection with materials that we or our former businesses sent to various third-party sites. We have incurred,

and expect to incur, costs pursuant to these statutes.

We are conducting a number of environmental investigations and remedial actions at our current and former locations and, along with other companies, have been named a potentially responsible party (“PRP”) for certain waste disposal sites. We accrue for environmental issues in the accounting period that our responsibility is established and when the cost can be reasonably estimated. We have accrued \$7.9 million and \$9.4 million as of December 30, 2018 and December 31, 2017, respectively, which represents our management’s estimate of the cost of the remediation of known environmental matters, and does not include any potential liability for related personal injury or property damage claims. Our environmental accrual is not discounted and does not reflect the recovery of any material amounts through insurance or indemnification arrangements. The cost estimates are subject to a number of variables, including the stage of the environmental investigations, the magnitude of the possible contamination, the nature of the potential remedies, possible joint and several liability, the time period over which remediation may occur, and the possible effects of changing laws and regulations. For sites where we have been named a PRP, our management does not currently anticipate any additional liability to result from the inability of other significant named

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parties to contribute. We expect that the majority of such accrued amounts could be paid out over a period of up to ten years. As assessment and remediation activities progress at each individual site, these liabilities are reviewed and adjusted to reflect additional information as it becomes available. There have been no environmental problems to date that have had, or are expected to have, a material adverse effect on our consolidated financial statements. While it is possible that a loss exceeding the amounts recorded in the consolidated financial statements may be incurred, the potential exposure is not expected to be materially different from those amounts recorded.

We may become subject to new or unforeseen environmental costs or liabilities. Compliance with new or more stringent laws or regulations, stricter interpretations of existing laws, or the discovery of new contamination could cause us to incur additional costs.

Employees

As of December 30, 2018, we employed approximately 12,500 employees. Several of our subsidiaries are parties to contracts with labor unions and workers' councils. As of December 30, 2018, we estimate that we employed an aggregate of approximately 1,700 union and workers' council employees. We consider our relations with our employees to be satisfactory.

Item 1A. Risk Factors

The following important factors affect our business and operations generally or affect multiple segments of our business and operations:

If the markets into which we sell our products decline or do not grow as anticipated due to a decline in general economic conditions, or there are uncertainties surrounding the approval of government or industrial funding proposals, or there are unfavorable changes in government regulations, we may see an adverse effect on the results of our business operations.

Our customers include pharmaceutical and biotechnology companies, laboratories, academic and research institutions, public health authorities, private healthcare organizations, doctors and government agencies. Our quarterly revenue and results of operations are highly dependent on the volume and timing of orders received during the quarter. In addition, our revenues and earnings forecasts for future quarters are often based on the expected trends in our markets. However, the markets we serve do not always experience the trends that we may expect. Negative fluctuations in our customers' markets, the inability of our customers to secure credit or funding, restrictions in capital expenditures, general economic conditions, cuts in government funding or unfavorable changes in government regulations would likely result in a reduction in demand for our products and services. In addition, government funding is subject to economic conditions and the political process, which is inherently fluid and unpredictable. Our revenues may be adversely affected if our customers delay or reduce purchases as a result of uncertainties surrounding the approval of government or industrial funding proposals. Such declines could harm our consolidated financial position, results of operations, cash flows and trading price of our common stock, and could limit our ability to sustain profitability. Our growth is subject to global economic and political conditions, and operational disruptions at our facilities. Our business is affected by global economic and political conditions as well as the state of the financial markets, particularly as the United States and other countries balance concerns around debt, inflation, growth and budget allocations in their policy initiatives. There can be no assurance that global economic conditions and financial markets will not worsen and that we will not experience any adverse effects that may be material to our consolidated cash flows, results of operations, financial position or our ability to access capital, such as the adverse effects resulting from a prolonged shutdown in government operations both in the United States and internationally. Our business is also affected by local economic environments, including inflation, recession, financial liquidity and currency volatility or devaluation. Political changes, some of which may be disruptive, could interfere with our supply chain, our customers and all of our activities in a particular location.

While we take precautions to prevent production or service interruptions at our global facilities, a major earthquake, fire, flood, power loss or other catastrophic event that results in the destruction or delay of any of our critical business operations could result in our incurring significant liability to customers or other third parties, cause significant reputational damage or have a material adverse effect on our business, operating results or financial condition. Certain of these risks can be hedged to a limited degree using financial instruments, or other measures, and some of these risks are insurable, but any such mitigation efforts are costly and may not always be fully successful. Our ability to engage in such mitigation efforts has decreased or become even more costly as a result of recent market developments.

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If we do not introduce new products in a timely manner, we may lose market share and be unable to achieve revenue growth targets.

We sell many of our products in industries characterized by rapid technological change, frequent new product and service introductions, and evolving customer needs and industry standards. Many of the businesses competing with us in these industries have significant financial and other resources to invest in new technologies, substantial intellectual property portfolios, substantial experience in new product development, regulatory expertise, manufacturing capabilities, and established distribution channels to deliver products to customers. Our products could become technologically obsolete over time, or we may invest in technology that does not lead to revenue growth or continue to sell products for which the demand from our customers is declining, in which case we may lose market share or not achieve our revenue growth targets. The success of our new product offerings will depend upon several factors, including our ability to:

- accurately anticipate customer needs,
- innovate and develop new reliable technologies and applications,
- receive regulatory approvals in a timely manner,
- successfully commercialize new technologies in a timely manner,
- price our products competitively, and manufacture and deliver our products in sufficient volumes and on time, and
- differentiate our offerings from our competitors' offerings.

Many of our products are used by our customers to develop, test and manufacture their products. We must anticipate industry trends and consistently develop new products to meet our customers' expectations. In developing new products, we may be required to make significant investments before we can determine the commercial viability of the new product. If we fail to accurately foresee our customers' needs and future activities, we may invest heavily in research and development of products that do not lead to significant revenue. We may also suffer a loss in market share and potential revenue if we are unable to commercialize our technology in a timely and efficient manner. In addition, some of our licensed technology is subject to contractual restrictions, which may limit our ability to develop or commercialize products for some applications.

We may not be able to successfully execute acquisitions or divestitures, license technologies, integrate acquired businesses or licensed technologies into our existing businesses, or make acquired businesses or licensed technologies profitable.

We have in the past supplemented, and may in the future supplement, our internal growth by acquiring businesses and licensing technologies that complement or augment our existing product lines, such as our various acquisitions during fiscal year 2018. However, we may be unable to identify or complete promising acquisitions or license transactions for many reasons, such as:

- competition among buyers and licensees,
- the high valuations of businesses and technologies,
- the need for regulatory and other approval, and
- our inability to raise capital to fund these acquisitions.

Some of the businesses we acquire may be unprofitable or marginally profitable, or may increase the variability of our revenue recognition. If, for example, we are unable to successfully commercialize products and services related to significant in-process research and development that we have capitalized, we may have to impair the value of such assets. Accordingly, the earnings or losses of acquired businesses may dilute our earnings. For these acquired businesses to achieve acceptable levels of profitability, we would have to improve their management, operations, products and market penetration. We may not be successful in this regard and may encounter other difficulties in integrating acquired businesses into our existing operations, such as incompatible management, information or other systems, cultural differences, loss of key personnel, unforeseen regulatory requirements, previously undisclosed liabilities or difficulties in predicting financial results. Additionally, if we are not successful in selling businesses we seek to divest, the activity of such businesses may dilute our earnings and we may not be able to achieve the expected benefits of such divestitures. As a result, our financial results may differ from our forecasts or the expectations of the investment community in a given quarter or over the long term.

To finance our acquisitions, we may have to raise additional funds, either through public or private financings. We may be unable to obtain such funds or may be able to do so only on terms unacceptable to us. We may also incur expenses related to

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completing acquisitions or licensing technologies, or in evaluating potential acquisitions or technologies, which may adversely impact our profitability.

We may not be successful in adequately protecting our intellectual property.

Patent and trade secret protection is important to us because developing new products, processes and technologies gives us a competitive advantage, although it is time-consuming and expensive. We own many United States and foreign patents and intend to apply for additional patents. Patent applications we file, however, may not result in issued patents or, if they do, the claims allowed in the patents may be narrower than what is needed to protect fully our products, processes and technologies. The expiration of our previously issued patents may cause us to lose a competitive advantage in certain of the products and services we provide. Similarly, applications to register our trademarks may not be granted in all countries in which they are filed. For our intellectual property that is protected by keeping it secret, such as trade secrets and know-how, we may not use adequate measures to protect this intellectual property.

Third parties may also challenge the validity of our issued patents, may circumvent or “design around” our patents and patent applications, or may claim that our products, processes or technologies infringe their patents. In addition, third parties may assert that our product names infringe their trademarks. We may incur significant expense in legal proceedings to protect our intellectual property against infringement by third parties or to defend against claims of infringement by third parties. Claims by third parties in pending or future lawsuits could result in awards of substantial damages against us or court orders that could effectively prevent us from manufacturing, using, importing or selling our products in the United States or other countries.

If we are unable to renew our licenses or otherwise lose our licensed rights, we may have to stop selling products or we may lose competitive advantage.

We may not be able to renew our existing licenses, or licenses we may obtain in the future, on terms acceptable to us, or at all. If we lose the rights to a patented or other proprietary technology, we may need to stop selling products incorporating that technology and possibly other products, redesign our products or lose a competitive advantage.

Potential competitors could in-license technologies that we fail to license and potentially erode our market share.

Our licenses typically subject us to various economic and commercialization obligations. If we fail to comply with these obligations, we could lose important rights under a license, such as the right to exclusivity in a market, or incur losses for failing to comply with our contractual obligations. In some cases, we could lose all rights under the license. In addition, rights granted under the license could be lost for reasons out of our control. For example, the licensor could lose patent protection for a number of reasons, including invalidity of the licensed patent, or a third-party could obtain a patent that curtails our freedom to operate under one or more licenses.

If we do not compete effectively, our business will be harmed.

We encounter aggressive competition from numerous competitors in many areas of our business. We may not be able to compete effectively with all of these competitors. To remain competitive, we must develop new products and periodically enhance our existing products. We anticipate that we may also have to adjust the prices of many of our products to stay competitive. In addition, new competitors, technologies or market trends may emerge to threaten or reduce the value of entire product lines.

Our quarterly operating results could be subject to significant fluctuation, and we may not be able to adjust our operations to effectively address changes we do not anticipate, which could increase the volatility of our stock price and potentially cause losses to our shareholders.

Given the nature of the markets in which we participate, we cannot reliably predict future revenue and profitability. Changes in competitive, market and economic conditions may require us to adjust our operations, and we may not be able to make those adjustments or make them quickly enough to adapt to changing conditions. A high proportion of our costs are fixed in the short term, due in part to our research and development and manufacturing costs. As a result, small declines in sales could disproportionately affect our operating results in a quarter. Factors that may affect our quarterly operating results include:

- demand for and market acceptance of our products,
- competitive pressures resulting in lower selling prices,

- changes in the level of economic activity in regions in which we do business,
- changes in general economic conditions or government funding,
- settlements of income tax audits,

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- expenses incurred in connection with claims related to environmental conditions at locations where we conduct or formerly conducted operations,
- contract termination and litigation costs,
- differing tax laws and changes in those laws, or changes in the countries in which we are subject to taxation,
- changes in our effective tax rate,
- changes in industries, such as pharmaceutical and biomedical,
- changes in the portions of our revenue represented by our various products and customers,
- our ability to introduce new products,
- our competitors' announcement or introduction of new products, services or technological innovations,
- costs of raw materials, energy or supplies,
- changes in healthcare or other reimbursement rates paid by government agencies and other third parties for certain of our products and services,
- our ability to realize the benefit of ongoing productivity initiatives,
- changes in the volume or timing of product orders,
- fluctuation in the expense related to the mark-to-market adjustment on postretirement benefit plans,
- changes in our assumptions underlying future funding of pension obligations,
- changes in assumptions used to determine contingent consideration in acquisitions, and
- changes in foreign currency exchange rates.

A significant disruption in third-party package delivery and import/export services, or significant increases in prices for those services, could interfere with our ability to ship products, increase our costs and lower our profitability.

We ship a significant portion of our products to our customers through independent package delivery and import/export companies, including UPS and Federal Express in the United States; TNT, UPS and DHL in Europe; and UPS in Asia. We also ship our products through other carriers, including national trucking firms, overnight carrier services and the United States Postal Service. If one or more of the package delivery or import/export providers experiences a significant disruption in services or institutes a significant price increase, we may have to seek alternative providers and the delivery of our products could be prevented or delayed. Such events could cause us to incur increased shipping costs that could not be passed on to our customers, negatively impacting our profitability and our relationships with certain of our customers.

Disruptions in the supply of raw materials, certain key components and other goods from our limited or single source suppliers could have an adverse effect on the results of our business operations, and could damage our relationships with customers.

The production of our products requires a wide variety of raw materials, key components and other goods that are generally available from alternate sources of supply. However, certain critical raw materials, key components and other goods required for the production and sale of some of our principal products are available from limited or single sources of supply. We generally have multi-year contracts with no minimum purchase requirements with these suppliers, but those contracts may not fully protect us from a failure by certain suppliers to supply critical materials or from the delays inherent in being required to change suppliers and, in some cases, validate new raw materials. Such raw materials, key components and other goods can usually be obtained from alternative sources with the potential for an increase in price, decline in quality or delay in delivery. A prolonged inability to obtain certain raw materials, key components or other goods is possible and could have an adverse effect on our business operations, and could damage our relationships with customers.

We are subject to the rules of the Securities and Exchange Commission requiring disclosure as to whether certain materials known as conflict minerals (tantalum, tin, gold, tungsten and their derivatives) that may be contained in our products are mined from the Democratic Republic of the Congo and adjoining countries. As a result of these rules, we may incur additional costs in complying with the disclosure requirements and in satisfying those customers who require that the components used in our products be certified as conflict-free, and the potential lack of availability of these materials at competitive prices could increase our production costs.

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The manufacture and sale of products and services may expose us to product and other liability claims for which we could have substantial liability.

We face an inherent business risk of exposure to product and other liability claims if our products, services or product candidates are alleged or found to have caused injury, damage or loss. We may be unable to obtain insurance with adequate levels of coverage for potential liability on acceptable terms or claims of this nature may be excluded from coverage under the terms of any insurance policy that we obtain. If we are unable to obtain such insurance or the amounts of any claims successfully brought against us substantially exceed our coverage, then our business could be adversely impacted.

If we fail to maintain satisfactory compliance with the regulations of the United States Food and Drug Administration and other governmental agencies in the United States and abroad, we may be forced to recall products and cease their manufacture and distribution, and we could be subject to civil, criminal or monetary penalties.

Our operations are subject to regulation by different state and federal government agencies in the United States and other countries, as well as to the standards established by international standards bodies. If we fail to comply with those regulations or standards, we could be subject to fines, penalties, criminal prosecution or other sanctions. Some of our products are subject to regulation by the United States Food and Drug Administration and similar foreign and domestic agencies. These regulations govern a wide variety of product activities, from design and development to labeling, manufacturing, promotion, sales and distribution. If we fail to comply with those regulations or standards, we may have to recall products, cease their manufacture and distribution, and may be subject to fines or criminal prosecution.

We are also subject to a variety of laws, regulations and standards that govern, among other things, the importation and exportation of products, the handling, transportation and manufacture of toxic or hazardous substances, and our business practices in the United States and abroad such as anti-bribery, anti-corruption and competition laws. This requires that we devote substantial resources to maintaining our compliance with those laws, regulations and standards. A failure to do so could result in the imposition of civil, criminal or monetary penalties having a material adverse effect on our operations.

Changes in governmental regulations may reduce demand for our products or increase our expenses.

We compete in markets in which we or our customers must comply with federal, state, local and foreign regulations, such as environmental, health and safety, and food and drug regulations. We develop, configure and market our products to meet customer needs created by these regulations. Any significant change in these regulations could reduce demand for our products or increase our costs of producing these products.

The healthcare industry is highly regulated and if we fail to comply with its extensive system of laws and regulations, we could suffer fines and penalties or be required to make significant changes to our operations which could have a significant adverse effect on the results of our business operations.

The healthcare industry, including the genetic screening market, is subject to extensive and frequently changing international and United States federal, state and local laws and regulations. In addition, legislative provisions relating to healthcare fraud and abuse, patient privacy violations and misconduct involving government insurance programs provide federal enforcement personnel with substantial powers and remedies to pursue suspected violations. We believe that our business will continue to be subject to increasing regulation as the federal government continues to strengthen its position on healthcare matters, the scope and effect of which we cannot predict. If we fail to comply with applicable laws and regulations, we could suffer civil and criminal damages, fines and penalties, exclusion from participation in governmental healthcare programs, and the loss of various licenses, certificates and authorizations necessary to operate our business, as well as incur liabilities from third-party claims, all of which could have a significant adverse effect on our business.

Economic, political and other risks associated with foreign operations could adversely affect our international sales and profitability.

Because we sell our products worldwide, our businesses are subject to risks associated with doing business internationally. Our sales originating outside the United States represented the majority of our total revenue in fiscal year 2018. We anticipate that sales from international operations will continue to represent a substantial portion of our

total revenue. In addition, many of our manufacturing facilities, employees and suppliers are located outside the United States. Accordingly, our future results of operations could be harmed by a variety of factors, including:

- changes in actual, or from projected, foreign currency exchange rates,
- changes in a country's or region's political or economic conditions, particularly in developing or emerging markets,
- longer payment cycles of foreign customers and timing of collections in foreign jurisdictions,

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trade protection measures including embargoes and tariffs, such as the tariffs recently implemented by the U.S. government on certain imports from China and by the Chinese government on certain imports from the U.S., the extent and impact of which have yet to be fully determined,

- import or export licensing requirements and the associated potential for delays or restrictions in the shipment of our products or the receipt of products from our suppliers,
- policies in foreign countries benefiting domestic manufacturers or other policies detrimental to companies headquartered in the United States,
- differing tax laws and changes in those laws, or changes in the countries in which we are subject to tax,
- adverse income tax audit settlements or loss of previously negotiated tax incentives,
- differing business practices associated with foreign operations,
- difficulty in transferring cash between international operations and the United States,
- difficulty in staffing and managing widespread operations,
- differing labor laws and changes in those laws,
- differing protection of intellectual property and changes in that protection,
- expanded enforcement of laws related to data protection and personal privacy,
 - increasing global enforcement of anti-bribery and anti-corruption laws, and
- differing regulatory requirements and changes in those requirements.

If we do not retain our key personnel, our ability to execute our business strategy will be limited.

Our success depends to a significant extent upon the continued service of our executive officers and key management and technical personnel, particularly our experienced engineers and scientists, and on our ability to continue to attract, retain, and motivate qualified personnel. The competition for these employees is intense. The loss of the services of key personnel could have a material adverse effect on our operating results. In addition, there could be a material adverse effect on us should the turnover rates for key personnel increase significantly or if we are unable to continue to attract qualified personnel. We do not maintain any key person life insurance policies on any of our officers or employees.

Our success also depends on our ability to execute leadership succession plans. The inability to successfully transition key management roles could have a material adverse effect on our operating results.

If we experience a significant disruption in, or breach in security of, our information technology systems or those of our customers, suppliers or other third parties, or cybercrime, resulting in inappropriate access to or inadvertent transfer of information or assets, or if we fail to implement new systems, software and technologies successfully, our business could be adversely affected.

We rely on several centralized information technology systems throughout our company to develop, manufacture and provide products and services, keep financial records, process orders, manage inventory, process shipments to customers and operate other critical functions. Our information technology systems may be susceptible to damage, disruptions or shutdowns due to power outages, hardware failures, computer viruses, attacks by computer hackers, telecommunication failures, user errors, catastrophes or other unforeseen events. If we were to experience a prolonged system disruption in the information technology systems that involve our interactions with customers, suppliers or other third parties, it could result in the loss of sales and customers and significant incremental costs, which could adversely affect our business. In addition, security breaches of our information technology systems or cybercrime, resulting in inappropriate access to or inadvertent transfer of information or assets, could result in losses or misappropriation of assets or unauthorized disclosure of confidential information belonging to us or to our employees, partners, customers or suppliers, which could result in our suffering significant financial or reputational damage. We have a substantial amount of outstanding debt, which could impact our ability to obtain future financing and limit our ability to make other expenditures in the conduct of our business.

We have a substantial amount of debt and other financial obligations. Our debt level and related debt service obligations could have negative consequences, including:

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requiring us to dedicate significant cash flow from operations to the payment of principal and interest on our debt, which reduces the funds we have available for other purposes, such as acquisitions and stock repurchases; reducing our flexibility in planning for or reacting to changes in our business and market conditions; and exposing us to interest rate risk since a portion of our debt obligations are at variable rates.

In addition, we may incur additional indebtedness in the future to meet future financing needs. If we add new debt, the risks described above could increase.

Restrictions in our senior unsecured revolving credit facility and other debt instruments may limit our activities.

Our senior unsecured revolving credit facility, senior unsecured notes due in April 2021 ("April 2021 Notes"), senior unsecured notes due in November 2021 ("November 2021 Notes") and senior unsecured notes due in 2026 ("2026 Notes") include restrictive covenants that limit our ability to engage in activities that could otherwise benefit our company. These include restrictions on our ability and the ability of our subsidiaries to:

pay dividends on, redeem or repurchase our capital stock,

sell assets,

incur obligations that restrict our subsidiaries' ability to make dividend or other payments to us,

guarantee or secure indebtedness,

enter into transactions with affiliates, and

consolidate, merge or transfer all, or substantially all, of our assets and the assets of our subsidiaries on a consolidated basis.

We are also required to meet specified financial ratios under the terms of certain of our existing debt instruments. Our ability to comply with these financial restrictions and covenants is dependent on our future performance, which is subject to prevailing economic conditions and other factors, including factors that are beyond our control, such as foreign exchange rates, interest rates, changes in technology and changes in the level of competition. In addition, if we are unable to maintain our investment grade credit rating, our borrowing costs would increase and we would be subject to different and potentially more restrictive financial covenants under some of our existing debt instruments. Any future indebtedness that we incur may include similar or more restrictive covenants. Our failure to comply with any of the restrictions in our senior unsecured revolving credit facility, the April 2021 Notes, the November 2021 Notes, the 2026 Notes or any future indebtedness may result in an event of default under those debt instruments, which could permit acceleration of the debt under those debt instruments, and require us to prepay that debt before its scheduled due date under certain circumstances.

The United Kingdom's vote in favor of withdrawing from the European Union could adversely impact our results of operations.

Nearly 3% of our net sales from continuing operations in fiscal year 2018 came from the United Kingdom. Following the referendum vote in the United Kingdom in June 2016 in favor of leaving the European Union (commonly referred to as "Brexit"), on March 29, 2017, the country formally notified the European Union of its intention to withdraw. Brexit has involved a process of lengthy negotiations between the United Kingdom and European Union member states to determine the future terms of the United Kingdom's relationship with the European Union. The potential effects of Brexit remain uncertain. Brexit has caused, and may continue to create, volatility in global stock markets and regional and global economic uncertainty particularly in the United Kingdom financial and banking markets. Weakening of economic conditions or economic uncertainties tend to harm our business, and if such conditions worsen in the United Kingdom or in the rest of Europe, it may have a material adverse effect on our operations and sales.

Any significant weakening of the Great Britain Pound to the U.S. dollar will have an adverse impact on our European revenues due to the importance of our sales in the United Kingdom. Currency exchange rates in the pound sterling and the euro with respect to each other and the U.S. dollar have already been adversely affected by Brexit and that may continue to be the case. In addition, depending on the terms of Brexit, the United Kingdom could lose the benefits of global trade agreements negotiated by the European Union on behalf of its members, which may result in increased trade barriers which could make our doing business in Europe more difficult.

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Our results of operations will be adversely affected if we fail to realize the full value of our intangible assets.

As of December 30, 2018, our total assets included \$4.2 billion of net intangible assets. Net intangible assets consist principally of goodwill associated with acquisitions and costs associated with securing patent rights, trademark rights, customer relationships, core technology and technology licenses and in-process research and development, net of accumulated amortization. We test certain of these items—specifically all of those that are considered “non-amortizing”—at least annually for potential impairment by comparing the carrying value to the fair market value of the reporting unit to which they are assigned. All of our amortizing intangible assets are also evaluated for impairment should events occur that call into question the value of the intangible assets.

Adverse changes in our business, adverse changes in the assumptions used to determine the fair value of our reporting units, or the failure to grow our Discovery & Analytical Solutions and Diagnostics segments may result in impairment of our intangible assets, which could adversely affect our results of operations.

Our share price will fluctuate.

Over the last several years, stock markets in general and our common stock in particular have experienced significant price and volume volatility. Both the market price and the daily trading volume of our common stock may continue to be subject to significant fluctuations due not only to general stock market conditions but also to a change in sentiment in the market regarding our operations and business prospects. In addition to the risk factors discussed above, the price and volume volatility of our common stock may be affected by:

- operating results that vary from our financial guidance or the expectations of securities analysts and investors,
- the financial performance of the major end markets that we target,
- the operating and securities price performance of companies that investors consider to be comparable to us,
- announcements of strategic developments, acquisitions and other material events by us or our competitors, and
- changes in global financial markets and global economies and general market conditions, such as interest or foreign exchange rates, commodity and equity prices and the value of financial assets.

Dividends on our common stock could be reduced or eliminated in the future.

On October 24, 2018, we announced that our Board had declared a quarterly dividend of \$0.07 per share for the fourth quarter of fiscal year 2018 that was paid in February 2019. On January 24, 2019, we announced that our Board had declared a quarterly dividend of \$0.07 per share for the first quarter of fiscal year 2019 that will be payable in May 2019. In the future, our Board may determine to reduce or eliminate our common stock dividend in order to fund investments for growth, repurchase shares or conserve capital resources.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 2. Properties

As of December 30, 2018, our continuing operations occupied 3,347,929 square feet in over 215 locations. We own 879,799 square feet of this space, and lease the balance. We conduct our operations in manufacturing and assembly plants, research laboratories, administrative offices and other facilities located in 15 states and 33 foreign countries.

Facilities outside of the United States account for approximately 2,458,302 square feet of our owned and leased property, or approximately 75% of our total occupied space.

Our real property leases are both short-term and long-term. We believe that our properties are well-maintained and are adequate for our present requirements.

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The following table indicates the approximate square footage of real property owned and leased attributable to the continuing operations of our reporting segments as of December 30, 2018:

	Owned	Leased	Total
	(In square feet)		
Discovery & Analytical Solutions	158,285	1,319,811	1,478,096
Diagnostics	721,514	1,093,652	1,815,166
Corporate offices	—	54,667	54,667
Continuing operations	879,799	2,468,130	3,347,929

Item 3. Legal Proceedings

We are subject to various claims, legal proceedings and investigations covering a wide range of matters that arise in the ordinary course of our business activities. Although we have established accruals for potential losses that we believe are probable and reasonably estimable, in the opinion of our management, based on its review of the information available at this time, the total cost of resolving these contingencies at December 30, 2018 should not have a material adverse effect on our consolidated financial statements included in this annual report on Form 10-K. However, each of these matters is subject to uncertainties, and it is possible that some of these matters may be resolved unfavorably to us.

Item 4. Mine Safety Disclosures

Not applicable.

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EXECUTIVE OFFICERS OF THE REGISTRANT

Listed below are our executive officers as of February 26, 2019. No family relationship exists between any one of these executive officers and any of the other executive officers or directors.

Name	Position	Age
Robert F. Friel	Chairman and Chief Executive Officer	63
Prahlad Singh	President and Chief Operating Officer	54
James Corbett	Executive Vice President and President, Discovery & Analytical Solutions	56
James M. Mock	Senior Vice President and Chief Financial Officer	42
Joel S. Goldberg	Senior Vice President, Administration, General Counsel and Secretary	50
Daniel R. Tereau	Senior Vice President, Strategy and Business Development	52
Deborah Butters	Senior Vice President, Chief Human Resources Officer	49
Tajinder Vohra	Senior Vice President, Global Operations	53
Andrew Okun	Vice President and Chief Accounting Officer	49

Robert F. Friel, 63. Mr. Friel currently serves as Chairman and Chief Executive Officer of PerkinElmer, having also served as our President from August 2007 through December 2018. Prior to being appointed President and Chief Executive Officer in February 2008 and Chairman in April 2009, Mr. Friel had served as President and Chief Operating Officer since August 2007, and as Vice Chairman and President of our Life and Analytical Sciences unit since January 2006. Mr. Friel was our Executive Vice President and Chief Financial Officer, with responsibility for business development and information technology in addition to his oversight of the finance functions, from October 2004 until January 2006. Mr. Friel joined PerkinElmer in February 1999 as our Senior Vice President and Chief Financial Officer. Prior to joining PerkinElmer, he held several senior management positions with AlliedSignal, Inc., now Honeywell International. He received a Bachelor of Arts degree in economics from Lafayette College and a Master of Science degree in taxation from Fairleigh Dickinson University. Mr. Friel is currently a director of NuVasive, Inc. and Xylem Inc., and previously served as a director of CareFusion Corporation until its acquisition by Becton, Dickinson and Company in March 2015. He also previously served on the national board of trustees for the March of Dimes Foundation.

Prahlad Singh, 54. Dr. Singh was elected President and Chief Operating Officer of PerkinElmer effective January 2019. Dr. Singh joined PerkinElmer as the President of our Diagnostics business in May 2014. He was elected Senior Vice President in September 2016 and Executive Vice President in March 2018. Prior to joining PerkinElmer, Dr. Singh was General Manager of GE Healthcare's Women's Health business from 2012 to 2014, with responsibility for its mammography and bone densitometry businesses. Before that, Dr. Singh held senior executive level roles in strategy, business development and mergers & acquisitions at both GE Healthcare from 2011 to 2012 and Philips Healthcare from 2007 to 2011. From 1995 to 2007, he held leadership roles of increasing responsibility at DuPont Pharmaceuticals and subsequently Bristol-Myers Squibb Medical Imaging, which included managing the Asia Pacific and Middle East region. Dr. Singh holds a doctoral degree in chemistry from the University of Missouri-Columbia and a Master of Business Administration from Northeastern University. His research work has resulted in several issued patents and publications in peer reviewed journals.

James Corbett, 56. Mr. Corbett was appointed President of our Discovery & Analytical Solutions business and Executive Vice President of PerkinElmer in October 2016. Mr. Corbett was appointed President of our Human Health business in March 2014 and a Senior Vice President and officer of PerkinElmer in February 2012. Mr. Corbett was previously appointed President of the Diagnostics business in May 2010 and President of the Life Sciences and Technology business in May 2013. Mr. Corbett joined the Company in October of 2007 through our acquisition of ViaCord, where he served as President. Prior to joining ViaCord, he co-founded CADx Systems, a company focused

on the oncology market, where he held the position of Executive Vice President and Director with responsibility for worldwide sales and marketing, technical support and business development. Following the 2004 acquisition of CADx by iCAD, Inc., he was named Chief Commercial Officer. In addition, Mr. Corbett worked for Abbott Laboratories for 14 years in a variety of sales and marketing positions including Worldwide Marketing Manager for Abbott Diagnostics Immunoassay Systems and Region Manager for Abbott Diagnostics. Mr. Corbett holds a Bachelor of Science degree in business from the University of Massachusetts. Mr. Corbett also serves on the national board of trustees for the March of Dimes Foundation and on the board of directors for the Analytical, Life Science & Diagnostics Association.

James M. Mock, 42. Mr. Mock joined PerkinElmer in May 2018 as our Senior Vice President and Chief Financial Officer. Prior to joining us, Mr. Mock served for nearly 20 years in a wide range of financial oversight capacities within General Electric Company (GE). Mr. Mock was most recently Vice President, Corporate Audit Staff, a position in which he served from October 2015 to April 2018, where he worked globally across GE's businesses on controllership reviews and operational excellence projects.

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Mr. Mock previously served in a number of progressively responsible leadership positions with GE both in the United States and overseas, including as Vice President and Chief Financial Officer for GE Oil & Gas, Subsea Systems, from 2014 to 2015. Mr. Mock received a Bachelor's degree in Economics from St. Lawrence University.

Joel S. Goldberg, 50. Mr. Goldberg currently serves as our Senior Vice President, Administration, General Counsel and Secretary, having joined as our Senior Vice President, General Counsel and Secretary in July 2008. Prior to joining us, Mr. Goldberg spent seven years at Millennium Pharmaceuticals, Inc., where he most recently served as Vice President, Chief Compliance Officer and Secretary. During his seven years with Millennium, he focused in the areas of mergers and acquisitions, strategic alliances, investment and financing transactions, securities and healthcare related compliance, and employment law. Previously, he was an associate of the law firm Edwards & Angell, LLP. Mr. Goldberg graduated from the Northeastern University School of Law and also holds a Master of Business Administration from Northeastern University. He completed his undergraduate degree at the University of Wisconsin-Madison.

Daniel R. Tereau, 52. Mr. Tereau was appointed Senior Vice President, Strategy and Business Development in January 2016, having joined the Company in April 2014 as Vice President, Strategy and Business Development. He is responsible for leading PerkinElmer's overall strategic planning and business development activities. Prior to joining PerkinElmer, Mr. Tereau served on Novartis' leadership team as Senior Vice President and Global Head of Strategy, Business Development and Licensing from 2011 to 2014, where he was responsible for global strategy and business development for the Consumer Health division. Prior to 2011, Mr. Tereau held similar roles at Thermo Fisher Scientific and GE Healthcare. Mr. Tereau holds a Bachelor of Science degree in finance from Ferris State University, a Juris Doctorate from Wayne State University, and earned his Master of Business Administration from Yale University.

Deborah Butters, 49. Ms. Butters joined PerkinElmer in July 2016 as Senior Vice President, Chief Human Resources Officer. Prior to joining us, she served as Head of North America Human Resources at IBM, where she led all aspects of the Human Resource function for IBM's largest geography, which included 35,000 employees and was responsible for over \$30B of IBM's revenue. During her 17 year career there, she significantly helped shape IBM's HR programs and practices, including leading its enterprise-wide, people transformation strategy to optimize employee engagement and business performance. Ms. Butters was with Lotus Development for eight years prior to its acquisition by IBM. Ms. Butters' experiences working in the United Kingdom and Germany for Lotus Development, and in Switzerland and the United States for IBM, ranged from leading functional roles across workforce planning and talent management, to serving in five HR business partner roles in both software and consulting within IBM and Lotus Development, with the largest being IBM's North America Consulting business. Ms. Butters holds a Bachelor of Science degree from the University of Bath and a diploma in Human Resources from London University.

Tajinder Vohra, 53. Mr. Vohra joined PerkinElmer in October 2015 as Vice President of Global Operations and was appointed Senior Vice President in January 2018. He oversees all of PerkinElmer's global operations, including manufacturing, supply chain, customer care and distribution. Prior to joining PerkinElmer, Mr. Vohra served at ABB as a Country Operations Leader from 2011 to 2015, where he was responsible for India-wide operations and Supply Chains for India, Middle East and Africa. Prior to 2011, Mr. Vohra was a Senior Vice President with Genpact, managing Supply Chain and IT businesses, and held a number of global management operational positions with GE Healthcare. Mr. Vohra received his Bachelor's degree in Mechanical Engineering from the University of Delhi, Master's degree in Industrial Engineering from the University of Alabama and Master's degree in Manufacturing Engineering from Lehigh University. Mr. Vohra is a certified Six Sigma Black Belt, and was trained in lean manufacturing at the Shingijitsu Training Institute in Japan.

Andrew Okun, 49. Mr. Okun serves as our Vice President and Chief Accounting Officer, a position in which he has served since April 2011. Mr. Okun joined us in 2001 and has served in financial and controllership positions of increasing responsibility, including Director of Finance for the Optoelectronics business from 2001 through 2005, Vice President of Finance from 2005 through 2009 and Vice President and Corporate Controller from 2009 through 2011. Prior to joining us, Mr. Okun most recently worked for Honeywell International as a Site Controller as well as for Coopers & Lybrand. Mr. Okun is a Certified Public Accountant and earned his Master of Business Administration from the University of Virginia. He completed his undergraduate degree at the University of California, Santa Barbara.

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PART II

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

Common Equity

We only have one class of common stock. Our common stock is listed on the New York Stock Exchange under the symbol "PKI". As of February 22, 2019, we had approximately 3,747 holders of record of our common stock.

Stock Repurchases

The following table provides information with respect to the shares of common stock repurchased by us for the periods indicated.

Period	Issuer Repurchases of Equity Securities			Maximum Aggregate Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs
	Total Number of Shares Purchased ⁽¹⁾	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs ⁽²⁾	
October 1, 2018 - October 28, 2018	2,559	\$ 93.24	—	\$ 250,000,000
October 29, 2018 - November 25, 2018	650,379	80.28	650,000	197,803,699
November 26, 2018 - December 30, 2018	62	86.63	—	197,803,699
Activity for quarter ended December 30, 2018	653,000	\$ 80.33	650,000	\$ 197,803,699

(1) Our Board has authorized us to repurchase shares of common stock to satisfy minimum statutory tax withholding obligations in connection with the vesting of restricted stock awards and restricted stock unit awards granted pursuant to our equity incentive plans and to satisfy obligations related to the exercise of stock options made pursuant to our equity incentive plans. During the fourth quarter of fiscal year 2018, we repurchased 3,000 shares of common stock for this purpose at an aggregate cost of \$0.3 million. During the fiscal year 2018, we repurchased 66,506 shares of common stock for this purpose at an aggregate cost of \$5.2 million. The repurchased shares have been reflected as additional authorized but unissued shares, with the payments reflected in common stock and capital in excess of par value.

(2) On July 27, 2016, our Board authorized us to repurchase up to 8.0 million shares of common stock under a stock repurchase program (the "Repurchase Program"). On July 23, 2018, our Board authorized us to immediately terminate the Repurchase Program and further authorized us to repurchase shares of common stock for an aggregate amount up to \$250.0 million under a new stock repurchase program (the "New Repurchase Program"). The New Repurchase Program will expire on July 23, 2020 unless terminated earlier by our Board and may be suspended or discontinued at any time. During fiscal year 2018, we had no stock repurchases under the Repurchase Program. No shares remain available for repurchase under the Repurchase Program due to its cancellation. During the fourth quarter of fiscal year 2018, we repurchased 650,000 shares of common stock under the New Repurchase Program at an aggregate cost of \$52.2 million. As of December 30, 2018, \$197.8 million remained available for aggregate repurchases of shares under the New Repurchase Program.

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Stock Performance Graph

Set forth below is a line graph comparing the cumulative total shareholder return on our common stock against the cumulative total return of the S&P Composite-500 Index and a Peer Group Index for the five fiscal years from December 29, 2013 to December 30, 2018. Our Peer Group Index consists of Agilent Technologies Inc., Thermo Fisher Scientific Inc., and Waters Corporation. The peer group is the same as the peer group used in the stock performance graph in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017.

Comparison of Five-Year Cumulative Total Return

Among PerkinElmer, Inc. Common Stock, S&P Composite-500 and Peer Group Index

TOTAL RETURN TO SHAREHOLDERS

(Includes reinvestment of dividends)

	29-Dec-13	28-Dec-14	3-Jan-16	1-Jan-17	31-Dec-17	30-Dec-18
PerkinElmer, Inc.	\$ 100.00	\$ 107.71	\$ 131.70	\$ 128.91	\$ 181.56	\$ 192.59
S&P 500 Index	\$ 100.00	\$ 113.69	\$ 115.26	\$ 129.05	\$ 157.22	\$ 150.33
Peer Group	\$ 100.00	\$ 111.88	\$ 123.82	\$ 125.84	\$ 174.40	\$ 193.72

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Item 6. Selected Financial Data

The following table sets forth selected historical financial information as of and for each of the fiscal years in the five-year period ended December 30, 2018. We derived the selected historical financial information for the balance sheets for the fiscal years ended December 30, 2018 and December 31, 2017 and the statement of operations for each of the fiscal years in the three-year period ended December 30, 2018 from our audited consolidated financial statements which are included elsewhere in this annual report on Form 10-K. We derived the selected historical financial information for the statements of operations for the fiscal years ended January 3, 2016 and December 28, 2014 from our audited consolidated financial statements which are not included in this annual report on Form 10-K. We derived the selected historical financial information for the balance sheets as of January 1, 2017, January 3, 2016 and December 28, 2014 from our audited consolidated financial statements which are not included in this annual report on Form 10-K.

Our historical financial information may not be indicative of our future results of operations or financial position.

The following selected historical financial information should be read together with our “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements, including the related notes, included elsewhere in this annual report on Form 10-K.

	Fiscal Years Ended				
	December 30, 2018	December 31, 2017	January 1, 2017	January 3, 2016	December 28, 2014
	(In thousands, except per share data)				
Statement of Operations Data:					
Revenue ⁽¹⁾	\$2,777,996	\$2,256,982	\$2,115,517	\$2,104,823	\$2,069,880
Operating income from continuing operations ⁽²⁾⁽³⁾	323,884	295,615	294,582	258,517	240,287
Interest and other expense, net ⁽⁴⁾	66,201	(1,103)	50,514	49,710	116,419
Income from continuing operations before income taxes	257,683	296,718	244,068	208,807	123,868
Income from continuing operations, net of income taxes ⁽⁵⁾	237,475	156,890	215,706	188,785	130,139
Income from discontinued operations and dispositions, net of income taxes ⁽⁶⁾	452	135,743	18,593	23,640	27,639
Net income	\$237,927	\$292,633	\$234,299	\$212,425	\$157,778
Basic earnings per share:					
Continuing operations	\$2.15	\$1.43	\$1.97	\$1.68	\$1.16
Discontinued operations	0.00	1.24	0.17	0.21	0.25
Net income	\$2.15	\$2.66	\$2.14	\$1.89	\$1.40
Diluted earnings per share:					
Continuing operations	\$2.13	\$1.42	\$1.96	\$1.67	\$1.14
Discontinued operations	0.00	1.22	0.17	0.21	0.24
Net income	\$2.13	\$2.64	\$2.12	\$1.87	\$1.39
Weighted-average common shares outstanding:					
Basic:	110,561	109,857	109,478	112,507	112,593
Diluted:	111,534	110,859	110,313	113,315	113,739
Cash dividends declared per common share	\$0.28	\$0.28	\$0.28	\$0.28	\$0.28

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	As of				
	December 30, 2018	December 31, 2017	January 1, 2017	January 3, 2016	December 28, 2014
	(In thousands)				
Balance Sheet Data:					
Total assets	\$5,975,522	\$ 6,091,463	\$4,276,683	\$4,166,295	\$ 4,127,576
Short-term debt	14,856	217,306	1,172	1,123	1,075
Long-term debt ⁽⁴⁾⁽⁷⁾	1,876,624	1,788,803	1,045,254	1,011,762	1,045,393
Stockholders' equity ⁽¹⁾⁽²⁾⁽⁸⁾	2,584,955	2,503,188	2,153,570	2,110,441	2,042,102
Common shares outstanding ⁽⁸⁾	110,597	110,361	109,617	112,034	112,481

At the beginning of fiscal year 2018, we adopted Accounting Standards Codification No. 606, Revenue from Contracts with Customers ("ASC 606"), using a modified retrospective approach and as a result, the comparative information has not been restated and is reported under the accounting standards in effect for these years. See Note 1 to the Consolidated Financial Statements for additional information.

Activity related to the mark-to-market adjustment on postretirement benefit plans was a pre-tax loss of \$21.4 million in fiscal year 2018, a pre-tax gain of \$2.1 million in fiscal year 2017, a pre-tax loss of \$15.3 million in fiscal year 2016, a pre-tax loss of \$12.4 million in fiscal year 2015 and a pre-tax loss of \$75.4 million in fiscal year 2014.

We recorded pre-tax restructuring and contract termination charges, net, of \$11.1 million in fiscal year 2018, \$12.7 million in fiscal year 2017, \$5.1 million in fiscal year 2016, \$13.5 million in fiscal year 2015 and \$13.3 million in fiscal year 2014.

In fiscal years 2018, 2017, 2016, 2015 and 2014, interest expense was \$67.0 million, \$43.9 million, \$41.5 million, \$38.0 million and \$36.3 million, respectively.

In fiscal years 2018 and 2017, provision for income tax on continuing operations was \$20.2 million and \$139.8 million, respectively. The higher provision for income taxes in fiscal year 2017 compared to that of fiscal year 2018 was primarily due to the \$106.5 million discrete tax expense related to the Tax Cuts & Jobs Act of 2017. In fiscal years 2016, 2015 and 2014, tax expense (benefit) on continuing operations was \$28.4 million, \$20.0 million and \$(6.3) million, respectively. The tax expense in fiscal years 2016 and 2015 was primarily due to income in high tax rate jurisdictions, partially offset by losses in low tax rate jurisdictions and a tax benefit of \$9.6 million in fiscal year 2016 and \$6.4 million in fiscal year 2015 related to discrete items. The benefit from income taxes in fiscal year 2014 was primarily due to a tax benefit of \$7.1 million related to discrete items and losses in high tax rate jurisdictions, partially offset by provision for income taxes related to profits in low tax rate jurisdictions.

In May 2017, we completed the sale of our Medical Imaging business. We recorded a pre-tax gain of \$179.6 million and income tax expense of \$43.1 million in fiscal year 2017. We accounted for this business as discontinued operations beginning in 2016 and the financial information relating to fiscal years 2015 and 2014 has been retrospectively adjusted to reflect the inclusion of this business in discontinued operations.

In April 2018, we issued and sold three-year senior notes at a rate of 0.6% with a face value of €300.0 million and received €298.7 million of net proceeds from the issuance. The debt, which matures in April 2021, is unsecured. In July 2016, we issued and sold ten-year senior notes at a rate of 1.875% with a face value of €500.0 million and received €492.3 million of net proceeds from the issuance. The debt, which matures in July 2026, is unsecured.

In fiscal year 2018, we repurchased in the open market 650,000 shares of our common stock at an aggregate cost of \$52.2 million, including commissions, under the stock repurchase program authorized by our Board on July 23, 2018. In fiscal years 2018 and 2017, we did not repurchase any shares of our common stock under a stock repurchase program originally announced in July 2017 that was terminated in July 2018. In fiscal year 2016, we repurchased in the open market 3.2 million shares of our common stock at an aggregate cost of \$148.2 million, including commissions under a stock repurchase program originally announced in October 2014 that was terminated in July 2016 (the "October 2014 Repurchase Program"). In fiscal year 2015, we repurchased in the open

market 1.5 million shares of our common stock at an aggregate cost of \$72.0 million, including commissions, under both the October 2014 Repurchase Program and a stock repurchase program originally announced in October 2012 that expired in October 2014 (the "October 2012 Repurchase Program"). In fiscal year 2014, we repurchased in the open market 1.4 million shares of our common stock at an aggregate cost of \$61.3 million, including commissions, under the October 2012 Repurchase Program. The repurchased shares have been reflected as additional authorized but unissued shares, with the payments reflected in common stock and capital in excess of par value.

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

This annual report on Form 10-K, including the following management's discussion and analysis, contains forward-looking information that you should read in conjunction with the consolidated financial statements and notes to consolidated financial statements that we have included elsewhere in this annual report on Form 10-K. For this purpose, any statements contained in this report that are not statements of historical fact may be deemed to be forward-looking statements. Words such as "believes," "plans," "anticipates," "expects," "will" and similar expressions are intended to identify forward-looking statements. Our actual results may differ materially from the plans, intentions or expectations we disclose in the forward-looking statements we make. We have included important factors above under the heading "Risk Factors" in Item 1A above that we believe could cause actual results to differ materially from the forward-looking statements we make. We are not obligated to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

Accounting Period

Our fiscal year ends on the Sunday nearest December 31. We report fiscal years under a 52/53 week format and as a result, certain fiscal years will contain 53 weeks. Each of the fiscal years ended December 30, 2018 ("fiscal year 2018"), December 31, 2017 ("fiscal year 2017") and January 1, 2017 ("fiscal year 2016") included 52 weeks. The fiscal year ending December 29, 2019 will include 52 weeks.

Overview of Fiscal Year 2018

During fiscal year 2018, we continued to see good performance from acquisitions, investments in our ongoing technology and sales and marketing initiatives. Our overall revenue in fiscal year 2018 increased \$521.0 million, or 23%, as compared to fiscal year 2017, reflecting an increase of \$114.8 million, or 7%, in our Discovery & Analytical Solutions segment revenue and an increase of \$406.3 million, or 60%, in our Diagnostics segment revenue. The increase in our Discovery & Analytical Solutions segment during fiscal year 2018 was due to an increase of \$73.5 million from our applied markets revenue and an increase of \$41.3 million from our life sciences market revenue. The increase in our Diagnostics segment revenue during fiscal year 2018 was primarily due to our acquisition of EUROIMMUN, which contributed \$359.4 million in revenue during fiscal year 2018, as well as continued expansion in our reproductive health, genetic testing, applied genomics and immuno-diagnostics solutions.

In our Discovery & Analytical Solutions segment, we experienced growth during fiscal year 2018 driven by successful new product introductions and an improving macro-environment. We also experienced strong demand for industrial, environmental and food offerings. In the life sciences market, we experienced strength in our drug discovery sales and strong performance in our Informatics business.

In our Diagnostics segment, we experienced growth from our acquisition of EUROIMMUN and continued expansion in our reproductive health, genetic testing, applied genomics, and immuno-diagnostics solutions, particularly in the Americas and emerging markets, such as China and India. We saw strong growth in newborn screening as an increased number of offerings helped to offset the effect of decreased birthrates. During fiscal year 2018, we expanded both the extent and reach of our capabilities to enable earlier treatments and better outcomes, both in terms of diseases and geographies. The acquisition of EUROIMMUN has increased our reagent mix, expanded our technical capabilities and positioned us in more attractive markets.

Our consolidated gross margins increased 70 basis points in fiscal year 2018, as compared to fiscal year 2017, primarily due to favorable shift in product mix and continued productivity initiatives to improve our supply chain. Our consolidated operating margin decreased 144 basis points in fiscal year 2018, as compared to fiscal year 2017 primarily due to increased amortization of intangible assets and acquired inventory revaluation, increased costs related to investments in new product development partially offset by lower costs as a result of cost containment and productivity initiatives.

We continue to believe that we are well positioned to take advantage of the spending trends in our end markets and to promote efficiencies in markets where current conditions may increase demand for certain services. Overall, we

believe that our strategic focus on diagnostics and discovery and analytical solutions markets, coupled with our deep portfolio of technologies and applications, leading market positions, global scale and financial strength will provide us with a foundation for growth.

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Consolidated Results of Continuing Operations

Revenue

2018 Compared to 2017. Revenue for fiscal year 2018 was \$2,778.0 million, as compared to \$2,257.0 million for fiscal year 2017, an increase of \$521.0 million, or 23%, which includes an approximate 14% increase in revenue attributable to acquisitions and divestitures and a 1% increase in revenue attributable to changes in foreign exchange rates. The analysis in the remainder of this paragraph compares segment revenue for fiscal year 2018 as compared to fiscal year 2017 and includes the effect of foreign exchange rate fluctuations, and acquisitions and divestitures. The total increase in revenue reflects an increase in our Diagnostics segment revenue of \$406.3 million, or 60%, primarily due to our acquisition of EUROIMMUN, which contributed \$359.4 million in revenues during fiscal year 2018, and continued expansion in our reproductive health, genetic testing, applied genomics and immuno-diagnostics solutions. Our Discovery & Analytical Solutions segment revenue increased by \$114.8 million, or 7%, due to an increase of \$73.5 million from our applied markets revenue and an increase of \$41.3 million from our life sciences market revenue. As a result of adjustments to deferred revenue related to certain acquisitions required by business combination rules, we did not recognize \$0.8 million of revenue primarily related to our Diagnostics segment for fiscal year 2018 and \$0.7 million for fiscal year 2017 that otherwise would have been recorded by the acquired businesses during each of the respective periods.

2017 Compared to 2016. Revenue for fiscal year 2017 was \$2,257.0 million, as compared to \$2,115.5 million for fiscal year 2016, an increase of \$141.5 million, or 7%, which includes an approximate 2% increase in revenue attributable to acquisitions and divestitures and a minimal increase in revenue attributable to changes in foreign exchange rates. The analysis in the remainder of this paragraph compares segment revenue for fiscal year 2017 as compared to fiscal year 2016 and includes the effect of foreign exchange rate fluctuations and acquisitions and divestitures. The total increase in revenue reflects an increase in our Diagnostics segment revenue of \$76.0 million, or 13%, due to continued expansion in our newborn and infectious disease screening solutions and strong growth in applied genomics. Our new acquisitions, EUROIMMUN and Tulip, contributed \$13.5 million and \$38.5 million, respectively, in revenues during fiscal year 2017. Our Discovery & Analytical Solutions segment revenue increased by \$65.5 million, or 4%, due to an increase of \$36.2 million from our life sciences market revenue and an increase of \$29.3 million from our applied markets revenue. As a result of adjustments to deferred revenue related to certain acquisitions required by business combination rules, we did not recognize \$0.7 million of revenue primarily related to our Diagnostics segment for each of the fiscal years 2017 and 2016 that otherwise would have been recorded by the acquired businesses during each of the respective periods.

Cost of Revenue

2018 Compared to 2017. Cost of revenue for fiscal year 2018 was \$1,437.1 million, as compared to \$1,183.2 million for fiscal year 2017, an increase of approximately \$253.8 million, or 21%. As a percentage of revenue, cost of revenue decreased to 51.7% in fiscal year 2018 from 52.4% in fiscal year 2017, resulting in an increase in gross margin of approximately 70 basis points to 48.3% in fiscal year 2018 from 47.6% in fiscal year 2017. Amortization of intangible assets increased and was \$46.2 million for fiscal year 2018, as compared to \$29.3 million for fiscal year 2017. Stock-based compensation expense was \$1.5 million for fiscal year 2018, as compared to \$1.3 million for fiscal year 2017. The amortization of purchase accounting adjustments to record the inventory from certain acquisitions added an incremental expense of \$19.3 million for fiscal year 2018, as compared to \$6.2 million for fiscal year 2017. Acquisition and divestiture-related expenses, contingent consideration and other costs added an incremental expense of \$0.1 million for each of fiscal years 2018 and 2017. In addition to the factors noted above, the increase in gross margin was primarily the result of a favorable shift in product mix and benefits from our initiatives to improve our supply chain.

2017 Compared to 2016. Cost of revenue for fiscal year 2017 was \$1,183.2 million, as compared to \$1,101.2 million for fiscal year 2016, an increase of approximately \$82.1 million, or 7%. As a percentage of revenue, cost of revenue increased to 52.4% in fiscal year 2017 from 52.1% in fiscal year 2016, resulting in a decrease in gross margin of approximately 37 basis points to 47.6% in fiscal year 2017 from 47.9% in fiscal year 2016. Amortization of intangible assets decreased and was \$29.3 million for fiscal year 2017, as compared to \$30.3 million for fiscal year 2016. Stock-based compensation expense was \$1.3 million for fiscal year 2017, as compared to \$1.0 million for fiscal year 2016. The amortization of purchase accounting adjustments to record the inventory from certain acquisitions was \$6.2 million for fiscal year 2017, as compared to \$0.4 million for fiscal year 2016. Acquisition and divestiture-related expenses, contingent consideration and other costs added an incremental expense of \$0.1 million for each of fiscal years 2017 and 2016. In addition to the factors noted above, the decrease in gross margin was primarily the result of an unfavorable shift in product mix partially offset by benefits from our initiatives to improve our supply chain.

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Selling, General and Administrative Expenses

2018 Compared to 2017. Selling, general and administrative expenses for fiscal year 2018 were \$811.9 million, as compared to \$626.0 million for fiscal year 2017, an increase of approximately \$185.9 million, or 30%. As a percentage of revenue, selling, general and administrative expenses increased to 29.2% in fiscal year 2018 from 27.7% in fiscal year 2017. Amortization of intangible assets increased to \$81.8 million for fiscal year 2018, as compared to \$44.1 million for fiscal year 2017. Stock-based compensation expense increased to \$25.9 million for fiscal year 2018, as compared to \$22.8 million for fiscal year 2017. Acquisition and divestiture-related expenses, contingent consideration and other costs added an incremental expense of \$30.5 million for fiscal year 2018 as compared to \$29.0 million for fiscal year 2017. During fiscal year 2018, legal costs for significant litigation matters were \$5.5 million, as compared to \$2.7 million for fiscal year 2017. In addition to the above items, the increase in selling, general and administrative expenses was primarily due to our acquisition of EUROIMMUN, which was partially offset by lower costs as a result of cost containment and productivity initiatives.

2017 Compared to 2016. Selling, general and administrative expenses for fiscal year 2017 were \$626.0 million, as compared to \$590.5 million for fiscal year 2016, an increase of approximately \$35.5 million, or 6%. As a percentage of revenue, selling, general and administrative expenses decreased to 27.7% in fiscal year 2017, compared to 27.9% in fiscal year 2016. Amortization of intangible assets increased and was \$44.1 million for fiscal year 2017, as compared to \$40.7 million for fiscal year 2016. Stock-based compensation expense increased and was \$22.8 million for fiscal year 2017, as compared to \$15.2 million for fiscal year 2016. During fiscal year 2017, we recorded \$2.7 million in legal costs for a particular case. Acquisition and divestiture-related expenses, contingent consideration and other costs added an incremental expense of \$29.0 million for fiscal year 2017 as compared to \$17.5 million for fiscal year 2016. In addition to the above items, the increase in selling, general and administrative expenses was primarily the result of costs related to growth investments, which was partially offset by the result of lower costs as a result of cost containment and productivity initiatives.

Research and Development Expenses

2018 Compared to 2017. Research and development expenses for fiscal year 2018 were \$194.0 million, as compared to \$139.5 million for fiscal year 2017, an increase of \$54.5 million, or 39%. As a percentage of revenue, research and development expenses increased to 7.0% in fiscal year 2018, as compared to 6.2% in fiscal year 2017. Amortization of intangible assets was \$7.9 million in fiscal year 2018, as compared to \$0.3 million in fiscal year 2017. Stock-based compensation expense was \$1.4 million in each of fiscal years 2018 and 2017. In addition to the above items, the increase in research and development expenses was primarily the result of investments in new product development and our acquisition of EUROIMMUN, which were partially offset by lower costs as a result of cost containment and productivity initiatives.

2017 Compared to 2016. Research and development expenses for fiscal year 2017 were \$139.5 million, as compared to \$124.2 million for fiscal year 2016, an increase of \$15.3 million, or 12%. As a percentage of revenue, research and development expenses increased to 6.2% in fiscal year 2017, as compared to 5.9% in fiscal year 2016. Amortization of intangible assets was \$0.3 million for each of fiscal years 2017 and 2016. Stock-based compensation expense increased and was \$1.4 million for fiscal year 2017, as compared to \$0.9 million for fiscal year 2016. In addition to the above items, the increase in research and development expenses was in large part the result of investments in new product development, primarily our investments in Vanadis' non-invasive prenatal screening and ionics mass spectrometry's food and environmental safety applications. This was partially offset by lower costs as a result of cost containment and productivity initiatives.

Restructuring and Contract Termination Charges, Net

We have undertaken a series of restructuring actions related to the impact of acquisitions and divestitures, the alignment of our operations with our growth strategy, the integration of our business units and productivity initiatives.

Restructuring and contract termination charges for fiscal year 2018 were \$11.1 million, as compared to \$12.7 million for fiscal year 2017 and \$5.1 million for fiscal year 2016.

We implemented a restructuring plan in each of the first, third and fourth quarters of fiscal year 2018 consisting of workforce reductions principally intended to realign resources to emphasize growth initiatives (the "Q1 2018 Plan", "Q3 2018 Plan" and "Q4 2018 Plan", respectively). We implemented a restructuring plan in each of the fourth and third quarters of fiscal year 2017 consisting of workforce reductions principally intended to realign resources to emphasize growth initiatives (the "Q4 2017 Plan and "Q3 2017 Plan", respectively). We implemented a restructuring plan in the first quarter of fiscal year 2017 consisting of workforce reductions and the closure of excess facility space principally intended to focus resources on higher growth end markets (the "Q1 2017 Plan"). We implemented a restructuring plan in the third quarter of fiscal year 2016 consisting of workforce reductions principally intended to focus resources on higher growth product lines (the "Q3 2016 Plan"). We implemented a restructuring plan in the second quarter of fiscal year 2016 consisting of workforce reductions principally intended to focus resources on higher growth end markets (the "Q2 2016 Plan"). All other previous restructuring plans were workforce reductions or the closure of excess facility space principally intended to integrate our businesses in order to realign

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operations, reduce costs, achieve operational efficiencies and shift resources into geographic regions and end markets that are more consistent with our growth strategy (the "Previous Plans").

The following table summarizes the number of employees reduced, the initial restructuring or contract termination charges by operating segment, and the dates by which payments were substantially completed, or the expected dates by which payments will be substantially completed, for restructuring actions implemented during fiscal years 2018, 2017 and 2016 in continuing operations:

	Workforce Reductions		Closure of Excess Facility		Total	(Expected) Date Payments Substantially Completed by	
	Headcount Reduction	Discovery & Analytical Solutions	Discovery & Analytical Solutions	Discovery & Analytical Solutions		Severance	Excess Facility
(In thousands, except headcount data)							
Q4 2018 Plan	1	\$ —	\$ 348	\$ —	\$ —	Q1 FY2019	—
Q3 2018 Plan	61	618	1,146	—	—	1,764	Q2 FY2019 —
Q1 2018 Plan	47	902	5,096	—	—	5,998	Q2 FY2019 —
Q4 2017 Plan	29	255	1,680	—	—	1,935	Q1 FY2019 —
Q3 2017 Plan	27	1,021	1,321	—	—	2,342	Q4 FY2018 —
Q1 2017 Plan	90	1,631	5,000	33	33	6,697	Q2 FY2018 Q2 FY2018
Q3 2016 Plan	22	41	1,779	—	—	1,820	Q4 FY2017 —
Q2 2016 Plan	72	561	4,106	—	—	4,667	Q3 FY2017 —

We expect to make payments under the Previous Plans for remaining residual lease obligations, with terms varying in length, through fiscal year 2022.

We also have terminated various contractual commitments in connection with certain disposal activities and have recorded charges, to the extent applicable, for the costs of terminating these contracts before the end of their terms and the costs that will continue to be incurred for the remaining terms without economic benefit to us. We recorded additional pre-tax charges of \$5.0 million, \$3.6 million and \$0.1 million in the Discovery & Analytical Solutions segment during fiscal years 2018, 2017 and 2016, respectively, and \$0.5 million during fiscal year 2017 in the Diagnostics segment as a result of these contract terminations.

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At December 30, 2018, we had \$6.2 million recorded for accrued restructuring and contract termination charges, of which \$4.8 million was recorded in short-term accrued restructuring and \$1.4 million was recorded in long-term liabilities. At December 31, 2017, we had \$14.0 million recorded for accrued restructuring and contract termination charges, of which \$8.8 million was recorded in short-term accrued restructuring, \$2.3 million was recorded in long-term liabilities and \$2.9 million was recorded in other reserves. The following table summarizes our restructuring accrual balances and related activity by restructuring plan, as well as contract termination accrual balances and related activity, during fiscal years 2018, 2017 and 2016 in continuing operations:

	Balance at January 3, 2016	2016 Charges and Changes in Estimates, Net	2016 Amounts Paid	Balance at January 1, 2017	2017 Charges and Changes in Estimates, Net	2017 Amounts Paid	Balance at December 31, 2017	2018 Charges and Changes in Estimates, Net	2018 Amounts Paid	Balance at December 30, 2018
(In thousands)										
Severance:										
Q4 2018 Plan	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$ 348	\$—	\$ 348
Q3 2018 Plan	—	—	—	—	—	—	—	2,054	(639)	1,415
Q1 2018 Plan	—	—	—	—	—	—	—	5,998	(4,389)	1,609
Q4 2017 Plan ⁽¹⁾	—	—	—	—	1,935	(16)	1,919	(381)	(1,538)	—
Q3 2017 Plan ⁽²⁾	—	—	—	—	2,342	(270)	2,072	(1,204)	(868)	—
Q1 2017 Plan ⁽³⁾	—	—	—	—	6,631	(4,133)	2,498	(983)	(1,232)	283
Q3 2016 Plan	—	1,820	(612)	1,208	(202)	(1,006)	—	—	—	—
Q2 2016 Plan	—	4,667	(3,231)	1,436	(829)	(607)	—	232	(156)	76
Facility:										
Q1 2017 Plan	—	—	—	—	66	(33)	33	—	(33)	—
Previous Plans	22,018	(1,451)	(12,787)	7,780	(537)	(2,844)	4,399	338	(2,425)	2,312
Restructuring	22,018	5,036	(16,630)	10,424	9,406	(8,909)	10,921	6,402	(11,280)	6,043
Contract Termination	132	88	(103)	117	3,251	(320)	3,048	4,742	(7,653)	137
Total Restructuring and Contract Termination	\$22,150	\$5,124	\$(16,733)	\$10,541	\$12,657	\$(9,229)	\$13,969	\$11,144	\$(18,933)	\$6,180

During fiscal year 2018, we recognized pre-tax restructuring reversals of \$0.2 million each in the Discovery &

- (1) Analytical Solutions and Diagnostics segments, related to lower than expected costs associated with workforce reductions for the Q4 2017 Plan.

During fiscal year 2018, we recognized pre-tax restructuring reversals of \$0.8 million in the Discovery &

- (2) Analytical Solutions segment and \$0.4 million in the Diagnostics segment, related to lower than expected costs associated with workforce reductions for the Q3 2017 Plan.

During fiscal year 2018, we recognized pre-tax restructuring reversals of \$1.0 million in the Discovery &

- (3) Analytical Solutions segment, related to lower than expected costs associated with workforce reductions for the Q1 2017 Plan.

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Interest and Other Expense, Net

Interest and other expense, net, consisted of the following:

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Interest income	\$(1,141)	\$ (2,571)	\$(702)
Interest expense	66,976	43,940	41,528
(Gain) loss on disposition of businesses and assets, net	(12,844)	309	(5,562)
Other expense (income) , net	13,210	(42,781)	15,250
Total interest and other expense, net	\$66,201	\$ (1,103)	\$ 50,514

2018 Compared to 2017. Interest and other expense, net, for fiscal year 2018 was an expense of \$66.2 million, as compared to income of \$1.1 million for fiscal year 2017, an increase of \$67.3 million. The increase in interest and other expense, net, in fiscal year 2018 as compared to fiscal year 2017 was largely due to an increase in other expense, net of \$56.0 million resulting from a one-time non-recurring net foreign exchange gain of \$36.5 million in fiscal year 2017 related to remeasurement and settlement of EUROIMMUN pre-acquisition hedges, combined with an increase in pension-related expenses of \$20.7 million in fiscal year 2018 as compared to fiscal year 2017. Interest expense increased by \$23.0 million in fiscal year 2018 as compared to fiscal year 2017 primarily due to a higher outstanding total debt balance, beginning in the fourth quarter of fiscal year 2017, related to financing for the EUROIMMUN acquisition. Gain on disposition of businesses and assets, net increased \$13.2 million in fiscal year 2018 as compared to fiscal year 2017 primarily due to sale of our multi-spectral imaging business in fiscal year 2018. Interest income decreased \$1.4 million in fiscal year 2018 as compared to fiscal year 2017 due to the deployment of the cash proceeds realized from the sale of our Medical Imaging business in the second quarter of fiscal year 2017 that were initially invested, and subsequently utilized in the fourth quarter of fiscal year 2017 to support the settlement of the EUROIMMUN acquisition. A more complete discussion of our liquidity is set forth below under the heading "Liquidity and Capital Resources."

2017 Compared to 2016. Interest and other expense, net, for fiscal year 2017 was income of \$1.1 million, as compared to an expense of \$50.5 million for fiscal year 2016, a decrease of \$51.6 million. The decrease in interest and other expense, net, in fiscal year 2017 as compared to fiscal year 2016 was largely due to a decrease in other expense, net by \$58.0 million, which consists primarily of net foreign exchange gain of \$36.5 million in fiscal year 2017 related to remeasurement and settlement of the EUROIMMUN pre-acquisition hedges, combined with a decrease in pension-related expenses of \$20.7 million in fiscal year 2017 as compared to fiscal year 2016, and an increase in interest income of \$1.9 million in fiscal year 2017 as compared to fiscal year 2016. Interest income increased primarily due to investing the proceeds from the sale of our Medical Imaging business in money market mutual funds. This was partially offset by a net loss on disposition of businesses and assets, net of \$0.3 million in fiscal year 2017 as compared to a net gain of \$5.6 million in fiscal year 2016 and an increase in interest expense of \$2.4 million in fiscal year 2017 as compared to fiscal year 2016 due to the issuance of the 2026 Notes, the proceeds of which were deployed to paydown our lower cost debt outstanding on our previous senior unsecured revolving credit facility.

Provision for Income Taxes

The effective tax rates on continuing operations were 7.8%, 47.1% and 11.6% for fiscal years 2018, 2017 and 2016, respectively. Certain of our subsidiaries have, at various times, been granted tax relief in their respective countries, resulting in lower income taxes than would otherwise be the case under ordinary tax rates. A reconciliation of income tax expense at the U.S. federal statutory income tax rate to the recorded tax provision is as follows for the fiscal years ended:

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	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Tax at statutory rate	\$ 54,114	\$ 103,851	\$ 85,424
Non-U.S. rate differential, net	(27,281)	(65,836)	(52,648)
U.S. taxation of multinational operations	7,047	5,408	6,941
State income taxes, net	2,028	1,810	1,509
Prior year tax matters	(6,034)	(7,955)	(9,621)
Federal tax credits	(3,738)	(8,249)	(7,189)
Change in valuation allowance	(759)	1,951	(2,755)
Non-deductible acquisition expense	—	—	5,701
Impact of federal tax reform	(2,025)	106,538	—
Others, net	(3,144)	2,310	1,000
Total	\$ 20,208	\$ 139,828	\$ 28,362

The variation in our effective tax rate for each year is primarily a result of the recognition of earnings in foreign jurisdictions, predominantly Singapore, Finland and The Netherlands, which are taxed at rates lower than the U.S. federal statutory rate, resulting in a benefit from income taxes of \$18.7 million in fiscal year 2018, \$55.9 million in fiscal year 2017 and \$48.2 million in fiscal year 2016. These amounts include \$10.3 million in fiscal year 2018, \$10.1 million in fiscal year 2017 and \$11.4 million in fiscal year 2016 of benefits derived from tax holidays in China and Singapore. The effect of these benefits derived from tax holidays on basic and diluted earnings per share for fiscal year 2018 was \$0.09 and \$0.09, respectively, for fiscal year 2017 was \$0.09 and \$0.09, respectively, and for fiscal year 2016 was \$0.10 and \$0.10, respectively. The tax holiday in one of our subsidiaries in China expired in 2017 and the tax holiday in one other subsidiary in China is scheduled to expire in fiscal year 2019. The tax holiday in one of our subsidiaries in Singapore is scheduled to expire in fiscal year 2023.

On December 22, 2017, the President of the United States signed into law tax reform legislation, known as the Tax Cuts and Jobs Act (the "Tax Act"), which makes broad and complex changes to the U.S. Internal Revenue Code. Changes include, but are not limited to: (1) the lowering of the U.S. corporate tax rate from 35% to 21%; (2) the transition of U.S. international taxation from a worldwide tax system to a modified territorial system with a one-time transition tax on the deemed repatriation of cumulative foreign earnings as of December 31, 2017; (3) a new provision designed to tax global intangible low-taxed income (GILTI); (4) the creation of the base erosion anti-abuse tax (BEAT), which is effectively a new minimum tax; (5) the deduction for foreign-derived intangible income (FDII); (6) a new limitation on deductible interest expense; (7) the repeal of the domestic production activity deduction; and (8) limitations on the deductibility of certain executive compensation. The impacts of the Tax Act have been recorded in tax expense from continuing operations, and the details are discussed more fully in Note 8, Income Taxes, in the Notes to Consolidated Financial Statements.

Disposition of Businesses and Assets

As part of our continuing efforts to focus on higher growth opportunities, we have discontinued certain businesses. When the discontinued operations represented a strategic shift that will have a major effect on our operations and financial statements, we accounted for these businesses as discontinued operations and accordingly, have presented the results of operations and related cash flows as discontinued operations. Any business deemed to be a discontinued operation prior to the adoption of Accounting Standards Update 2014-08, Reporting Discontinued Operations and Disclosures of Disposals of Components of An Entity, continues to be reported as a discontinued operation, and the results of operations and related cash flows are presented as discontinued operations for all periods presented. Any remaining assets and liabilities of these businesses have been presented separately, and are reflected within assets and liabilities from discontinued operations in the accompanying consolidated balance sheets as of December 30, 2018

and December 31, 2017.

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We recorded the following pre-tax gains and losses, which have been reported as a net gain or loss on disposition of discontinued operations during the three fiscal years included below:

	December 31, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
(Loss) gain on disposition of the Medical Imaging business	\$(793)	\$ 179,615	\$ —
Gain on disposition of Technical Services business	—	—	1,753
Loss on disposition of Fluid Sciences Segment	(66)	—	(1,134)
(Loss) gain on disposition of discontinued operations before income taxes	\$(859)	\$ 179,615	\$ 619

On May 1, 2017 (the "Closing Date"), we completed the sale of our Medical Imaging business to Varex Imaging Corporation ("Varex") pursuant to the terms of the Master Purchase and Sale Agreement, dated December 21, 2016 (the "Agreement"), by and between us and Varian Medical Systems, Inc. ("Varian") and the subsequent Assignment and Assumption Agreement, dated January 27, 2017, between Varian and Varex, pursuant to which Varian assigned its rights under the Agreement to Varex. On the Closing Date, we received consideration of approximately \$277.4 million for the sale of the Medical Imaging business. During fiscal year 2017, we paid Varex \$4.2 million to settle a post-closing working capital adjustment. During fiscal year 2017, we recorded a pre-tax gain of \$179.6 million and income tax expense of \$43.1 million related to the sale of the Medical Imaging business in discontinued operations and dispositions. The corresponding tax liability was recorded within the other tax liabilities in the consolidated balance sheet, and we expect to utilize tax attributes to minimize the tax liability. Following the closing, we provided certain customary transitional services during a period of up to 12 months. Commercial transactions between the parties following the closing of the transaction were not significant.

During the third quarter of fiscal year 2018, we completed the sale of substantially all of the assets and liabilities related to our multispectral imaging business for aggregate consideration of \$37.3 million, recognizing a pre-tax gain of \$13.0 million. The pre-tax gain is included in interest and other expense, net in the consolidated statement of operations. The multispectral imaging business was a component of our Discovery & Analytical Solutions segment. The divestiture of the multispectral imaging business has not been classified as a discontinued operation in this Form 10-K because the disposition does not represent a strategic shift that will have a major effect on our operations and financial statements.

During fiscal year 2017, we sold Suzhou PerkinElmer Medical Laboratory Co., Ltd. for aggregate consideration of \$2.3 million, recognizing a pre-tax loss of \$1.1 million. The pre-tax loss recognized in fiscal year 2017 is included in interest and other expense, net in the consolidated statement of operations. Suzhou PerkinElmer Medical Laboratory Co., Ltd. was a component of our Diagnostics segment. The divestiture of Suzhou PerkinElmer Medical Laboratory Co., Ltd. has not been classified as a discontinued operation in this Form 10-K because the disposition does not represent a strategic shift that will have a major effect on our operations and financial statements.

During fiscal year 2016, we sold PerkinElmer Labs, Inc. for cash consideration of \$20.0 million, recognizing a pre-tax gain of \$7.1 million. The sale generated a capital loss for tax purposes of \$7.3 million, which resulted in an income tax benefit of \$2.5 million that was recognized as a discrete benefit during the second quarter of 2016. During fiscal year 2017, we recognized an additional pre-tax gain of \$1.1 million relating to the earn-out consideration received from the buyer. PerkinElmer Labs, Inc. was a component of our Diagnostics segment. The pre-tax gain recognized in fiscal years 2017 and 2016 is included in interest and other expense, net in the consolidated statements of operations. The divestiture of PerkinElmer Labs, Inc. has not been classified as a discontinued operation in this Form 10-K because the disposition does not represent a strategic shift that will have a major effect on our operations and financial statements.

In August 1999, we sold the assets of our Technical Service business. We recorded a pre-tax gain of \$1.8 million in fiscal year 2016 for a contingency related to this business. This was recognized as a gain on disposition of discontinued operations before income taxes.

The summary pre-tax operating results of the discontinued operations were as follows during the three fiscal years ended:

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	December 31, 2018	December 31, January 1, 2017
	2017	2017
	(In thousands)	
Revenue	\$ 44,343	\$ 146,217
Cost of revenue	—32,933	95,395
Selling, general and administrative expenses	—5,869	13,657
Research and development expenses	—4,891	14,368
Restructuring and contract termination charges, net	—	568
Income from discontinued operations before income taxes	\$ 650	\$ 22,229

We recorded a (benefit from) provision for income taxes of \$(1.3) million, \$44.5 million and \$4.3 million on discontinued operations and dispositions in fiscal years 2018, 2017 and 2016.

Business Combinations

Acquisitions in fiscal year 2018

During fiscal year 2018, we completed the acquisition of four businesses for aggregate consideration of \$106.0 million. The excess of the purchase price over the fair value of the acquired businesses' net assets represents cost and revenue synergies specific to us, as well as non-capitalizable intangible assets, such as the employee workforces acquired, and has been allocated to goodwill, which is not tax deductible. We reported the operations for these acquisitions within the results of our Diagnostics and Discovery & Analytical Solutions segments, as applicable, from the acquisition dates. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of these acquisitions had a weighted average amortization period of 11.2 years.

Acquisitions in fiscal year 2017

Acquisition of EUROIMMUN Medizinische Labordiagnostika AG. During fiscal year 2017, we completed the acquisition of 99.98% of the outstanding stock of EUROIMMUN Medizinische Labordiagnostika AG (“EUROIMMUN”) for aggregate consideration of €1.2 billion (equivalent to \$1.4 billion at December 19, 2017, the time of closing). The purchase price was funded by borrowings from our senior unsecured revolving credit facility and senior unsecured term loan credit facility of \$710.0 million and \$200.0 million, respectively, and available cash on hand of \$503.1 million. The excess of the purchase price over the fair value of the acquired net assets represents cost and revenue synergies specific to us, as well as non-capitalizable intangible assets, such as the employee workforce acquired. As a result of the acquisition, we recorded goodwill of \$591.3 million, which is not tax deductible, and intangible assets of \$907.4 million. We reported the operations for this acquisition within the results of our Diagnostics segment from the acquisition date. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of this acquisition had a weighted average amortization period of 16.1 years.

Other acquisitions in 2017. During fiscal year 2017, we also completed the acquisition of two other businesses for aggregate consideration of \$142.0 million. The acquired businesses were Tulip Diagnostics Private Limited (“Tulip”), which was acquired for total consideration of \$127.3 million in cash and one other business acquired for total consideration of \$14.7 million in cash. At the time of closing, we had a potential obligation to pay the former shareholders of Tulip up to INR1.6 billion in additional consideration over a two year period, equivalent to \$25.2 million, and is accounted for as compensation expense in our financial statements over a two year period and is excluded from the purchase price allocation shown below. The excess of the purchase prices over the fair values of the acquired businesses' net assets represents cost and revenue synergies specific to us, as well as non-capitalizable intangible assets, such as the employee workforces acquired, and has been allocated to goodwill, which is not tax deductible. We reported the operations of Tulip within the results of our Diagnostics segment and the other acquired business within the results of our Discovery & Analytical Solutions segment from the acquisition date. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of

these acquisitions had a weighted average amortization period of 11.8 years.

During fiscal year 2018, we paid the former shareholders of Tulip a portion of the additional consideration amounting to INR716.3 million (equivalent to \$11.3 million). As of December 30, 2018, we may have to pay the former shareholders of Tulip additional consideration of up to INR803.6 million (currently equivalent to \$11.4 million) in the first quarter of fiscal year 2019.

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Acquisitions in fiscal year 2016

During fiscal year 2016, we completed the acquisition of two businesses for total consideration of \$72.3 million in cash. The acquired businesses were Bioo Scientific Corporation, which was acquired for total consideration of \$63.5 million in cash and one other business acquired for total consideration of \$8.8 million in cash. The excess of the purchase prices over the fair values of each of the acquired businesses' net assets represents cost and revenue synergies specific to us, as well as non-capitalizable intangible assets, such as the employee workforces acquired. As a result of the acquisitions, we recorded goodwill of \$43.1 million, which is not tax deductible, and intangible assets of \$22.1 million. We have reported the operations for these acquisitions within the results of our Diagnostics and Discovery & Analytical Solutions segments from the acquisition dates. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of these acquisitions had a weighted average amortization period of 9.4 years.

We do not consider the acquisitions completed during fiscal years 2018, 2017 and 2016, with the exception of the EUROIMMUN acquisition, to be material to our consolidated results of operations; therefore, we are only presenting pro forma financial information of operations for the EUROIMMUN acquisition. The aggregate revenue and the results of operations for the acquisitions completed during fiscal year 2018 for the period from their acquisition dates to December 30, 2018 were not material. The aggregate revenue for the acquisitions, with the exception of EUROIMMUN, completed during fiscal year 2017 for the period from their acquisition dates to December 31, 2017 was \$38.5 million and the results of operations were not material. The aggregate revenue and results of operations for the acquisitions completed during fiscal year 2016 for the period from their respective acquisition dates to January 1, 2017 were minimal. We also determined that the presentation of the results of operations for each of those acquisitions, from the date of acquisition, is impracticable due to the integration of the operations upon acquisition.

As of December 30, 2018, the allocations of purchase prices for acquisitions completed in fiscal years 2017 and 2016 were final. The preliminary allocations of the purchase prices for acquisitions completed in fiscal year 2018 were based upon initial valuations. Our estimates and assumptions underlying the initial valuations are subject to the collection of information necessary to complete our valuations within the measurement periods, which are up to one year from the respective acquisition dates. The primary areas of the preliminary purchase price allocations that are not yet finalized relate to the fair value of certain tangible and intangible assets acquired and liabilities assumed, assets and liabilities related to income taxes and related valuation allowances, and residual goodwill. We expect to continue to obtain information to assist in determining the fair values of the net assets acquired at the acquisition dates during the measurement periods. During the measurement periods, we will adjust assets or liabilities if new information is obtained about facts and circumstances that existed as of the acquisition dates that, if known, would have resulted in the recognition of those assets and liabilities as of those dates. These adjustments will be made in the periods in which the amounts are determined and the cumulative effect of such adjustments will be calculated as if the adjustments had been completed as of the acquisition dates. All changes that do not qualify as adjustments made during the measurement periods are also included in current period earnings.

During fiscal year 2018, we obtained information relevant to determining the fair values of certain tangible and intangible assets acquired, and liabilities assumed, related to recent acquisitions and adjusted our purchase price allocations. Based on this information, for the EUROIMMUN acquisition, we recognized an increase in intangible assets of \$10.0 million, an increase in other assets of \$21.7 million, an increase in liabilities assumed of \$12.3 million, a decrease in property and equipment of \$20.1 million, a decrease in deferred tax liabilities of \$23.6 million, and a decrease in goodwill of \$23.5 million.

Allocations of the purchase price for acquisitions are based on estimates of the fair value of the net assets acquired and are subject to adjustment upon finalization of the purchase price allocations. The accounting for business combinations requires estimates and judgments as to expectations for future cash flows of the acquired business, and

the allocation of those cash flows to identifiable intangible assets, in determining the estimated fair values for assets acquired and liabilities assumed. The fair values assigned to tangible and intangible assets acquired and liabilities assumed, including contingent consideration, are based on management's estimates and assumptions, as well as other information compiled by management, including valuations that utilize customary valuation procedures and techniques. Contingent consideration is measured at fair value at the acquisition date, based on the probability that revenue thresholds or product development milestones will be achieved during the earnout period, with changes in the fair value after the acquisition date affecting earnings to the extent it is to be settled in cash. Increases or decreases in the fair value of contingent consideration liabilities primarily result from changes in the estimated probabilities of achieving revenue thresholds or product development milestones during the earnout period.

As of December 30, 2018, we may have to pay contingent consideration, related to acquisitions with open contingency periods, of up to \$76.5 million. As of December 30, 2018, we have recorded contingent consideration obligations of \$69.7 million, of which \$67.0 million was recorded in accrued expenses and other current liabilities, and \$2.7 million was recorded in long-term liabilities. As of December 31, 2017, we have recorded contingent consideration obligations of \$65.3 million, of which \$52.2 million was recorded in accrued expenses and other current liabilities, and \$13.1 million was recorded in long-

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term liabilities. The expected maximum earnout period for acquisitions with open contingency periods does not exceed 1.78 years from December 30, 2018, and the remaining weighted average expected earnout period at December 30, 2018 was 5 months. If the actual results differ from the estimates and judgments used in these fair values, the amounts recorded in the consolidated financial statements could result in a possible impairment of the intangible assets and goodwill, require acceleration of the amortization expense of definite-lived intangible assets or the recognition of additional contingent consideration which would be recognized as a component of operating expenses from continuing operations.

In connection with the purchase price allocations for acquisitions, we estimate the fair value of deferred revenue assumed with our acquisitions. The estimated fair value of deferred revenue is determined by the legal performance obligation at the date of acquisition, and is generally based on the nature of the activities to be performed and the related costs to be incurred after the acquisition date. The fair value of an assumed liability related to deferred revenue is estimated based on the current market cost of fulfilling the obligation, plus a normal profit margin thereon. The estimated costs to fulfill the deferred revenue are based on the historical direct costs related to providing the services. We do not include any costs associated with selling effort, research and development, or the related margins on these costs. In most acquisitions, profit associated with selling effort is excluded because the acquired businesses would have concluded the selling effort on the support contracts prior to the acquisition date. The estimated research and development costs are not included in the fair value determination, as these costs are not deemed to represent a legal obligation at the time of acquisition. The sum of the costs and operating income approximates, in theory, the amount that we would be required to pay a third-party to assume the obligation.

Contingencies, Including Tax Matters

We are conducting a number of environmental investigations and remedial actions at our current and former locations and, along with other companies, have been named a potentially responsible party (“PRP”) for certain waste disposal sites. We accrue for environmental issues in the accounting period that our responsibility is established and when the cost can be reasonably estimated. We have accrued \$7.9 million and \$9.4 million as of December 30, 2018 and December 31, 2017, respectively, in accrued expenses and other current liabilities, which represents our management’s estimate of the cost of the remediation of known environmental matters, and does not include any potential liability for related personal injury or property damage claims. Our environmental accrual is not discounted and does not reflect the recovery of any material amounts through insurance or indemnification arrangements. The cost estimates are subject to a number of variables, including the stage of the environmental investigations, the magnitude of the possible contamination, the nature of the potential remedies, possible joint and several liability, the time period over which remediation may occur, and the possible effects of changing laws and regulations. For sites where we have been named a PRP, our management does not currently anticipate any additional liability to result from the inability of other significant named parties to contribute. We expect that the majority of such accrued amounts could be paid out over a period of up to ten years. As assessment and remediation activities progress at each individual site, these liabilities are reviewed and adjusted to reflect additional information as it becomes available. There have been no environmental problems to date that have had, or are expected to have, a material adverse effect on our consolidated financial statements. While it is possible that a loss exceeding the amounts recorded in the consolidated financial statements may be incurred, the potential exposure is not expected to be materially different from those amounts recorded.

Various tax years after 2010 remain open to examination by certain jurisdictions in which we have significant business operations, such as Finland, Germany, Italy, Netherlands, Singapore, the United Kingdom and the United States. The tax years under examination vary by jurisdiction. We regularly review our tax positions in each significant taxing jurisdiction in the process of evaluating our unrecognized tax benefits. We make adjustments to our unrecognized tax benefits when: (i) facts and circumstances regarding a tax position change, causing a change in management’s judgment regarding that tax position; (ii) a tax position is effectively settled with a tax authority; and/or

(iii) the statute of limitations expires regarding a tax position.

We are subject to various claims, legal proceedings and investigations covering a wide range of matters that arise in the ordinary course of our business activities. Although we have established accruals for potential losses that we believe are probable and reasonably estimable, in our opinion, based on our review of the information available at this time, the total cost of resolving these contingencies at December 30, 2018 should not have a material adverse effect on our consolidated financial statements included in this annual report on Form 10-K. However, each of these matters is subject to uncertainties, and it is possible that some of these matters may be resolved unfavorably to us.

Reporting Segment Results of Continuing Operations

Discovery & Analytical Solutions

2018 Compared to 2017. Revenue for fiscal year 2018 was \$1,693.2 million, as compared to \$1,578.5 million for fiscal year 2017, an increase of \$114.8 million, or 7%, which includes an approximate 1% increase in revenue attributable to changes in foreign exchange rates. The analysis in the remainder of this paragraph compares revenue by end-market for fiscal year 2018, as compared to fiscal year 2017, and includes the effect of foreign exchange fluctuations and acquisitions and

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divestitures. The increase in revenue in our Discovery & Analytical Solutions segment was a result of an increase of \$73.5 million from our applied markets revenue, and an increase of \$41.3 million from our life sciences market revenue. The increase in our applied markets revenue was driven by strength in sales of industrial, environmental and food offerings. The increase in our life sciences market revenue was driven by strength in our drug discovery sales and strong performance in our Informatics business.

Operating income from continuing operations for fiscal year 2018 was \$230.5 million, as compared to \$205.3 million for fiscal year 2017, an increase of \$25.2 million, or 12%. Amortization of intangible assets decreased to \$46.1 million for fiscal year 2018 as compared to \$50.7 million for fiscal year 2017. Restructuring and contract termination charges, net decreased to \$10.0 million for fiscal year 2018 as compared to \$10.4 million for fiscal year 2017. Acquisition and divestiture-related costs, contingent consideration and other costs added an incremental expense of \$3.1 million for fiscal year 2018, as compared to \$0.4 million for fiscal year 2017. Legal costs for significant litigation matters were \$5.3 million for fiscal year 2018, as compared to \$2.7 million for fiscal year 2017. In addition to the factors noted above, operating income increased for fiscal year 2018 as compared to fiscal year 2017, as we continued to realize the benefits from our cost containment initiatives partially offset by higher costs in research and development expenses.

2017 Compared to 2016. Revenue for fiscal year 2017 was \$1,578.5 million, as compared to \$1,513.0 million for fiscal year 2016, an increase of \$65.5 million, or 4%, which includes an approximate 0.3% increase in revenue attributable to favorable changes in foreign exchange rates with minimal impact from acquisitions and divestitures. The analysis in the remainder of this paragraph compares revenue by end-market for fiscal year 2017, as compared to fiscal year 2016, and includes the effect of foreign exchange fluctuations and acquisitions and divestitures. The increase in revenue in our Discovery & Analytical Solutions segment was due to an increase of \$36.2 million from our life sciences market revenue, and an increase of \$29.3 million from our applied markets revenue. The increase in our life sciences market revenue was primarily driven by increased demand for our OneSource laboratory service business, partially offset by continued decline in sales of radioactive reagents in our radio-nucleotide business. In our applied markets, we experienced higher growth in our industrial, environmental and food offerings, as a result of increased government regulation of soil and water and increased focus on food safety laws.

Operating income from continuing operations for fiscal year 2017 was \$205.3 million, as compared to \$196.5 million for fiscal year 2016, an increase of \$8.8 million, or 4%. Amortization of intangible assets decreased and was \$50.7 million for fiscal year 2017 as compared to \$53.3 million for fiscal year 2016. Restructuring and contract termination charges, net increased and were \$10.4 million for fiscal year 2017 as compared to \$4.7 million for fiscal year 2016. Acquisition and divestiture-related costs, contingent consideration and other costs added an incremental expense of \$0.4 million for fiscal year 2017, as compared to \$0.6 million for fiscal year 2016. The amortization of purchase accounting adjustments to record the inventory from certain acquisitions added an incremental expense of \$0.4 million in fiscal year 2016. Legal costs for significant litigation matters were \$2.7 million for fiscal year 2017. In addition to the factors noted above, operating income increased for fiscal year 2017 as compared to fiscal year 2016, as we continued to see the benefits from our cost containment initiatives partially offset by higher costs in research and development expenses and a shift in product mix, with an increase in sales of lower gross margin product offerings.

Diagnostics

2018 Compared to 2017. Revenue for fiscal year 2018 was \$1,084.8 million, as compared to \$678.5 million for fiscal year 2017, an increase of \$406.3 million, or 60%, which includes an approximate 49% increase in revenue attributable to acquisitions. As a result of adjustments to deferred revenue related to certain acquisitions required by business combination rules, we did not recognize \$0.8 million of revenue primarily related to our Diagnostics segment for fiscal year 2018 and \$0.7 million for fiscal year 2017. In our diagnostics market, we experienced growth primarily due to our acquisition of EUROIMMUN, which contributed \$359.4 million in revenues during fiscal year 2018, and continued expansion of our reproductive health, applied genomics, genetic testing and immuno-diagnostics solutions,

particularly in the Americas and emerging markets, such as China and India.

Operating income from continuing operations for fiscal year 2018 was \$153.2 million, as compared to \$146.9 million for fiscal year 2017, an increase of \$6.3 million, or 4%. Amortization of intangible assets increased and was \$89.8 million for fiscal year 2018 as compared to \$23.0 million for fiscal year 2017. Restructuring and contract termination charges, net decreased and were \$1.2 million for fiscal year 2018 as compared to \$2.2 million for fiscal year 2017. Acquisition and divestiture-related expenses, contingent consideration and other costs added an incremental expense of \$28.2 million in fiscal year 2018, as compared to an incremental expense of \$29.4 million for fiscal year 2017. The amortization of purchase accounting adjustments to record the inventory from certain acquisitions added an incremental expense of \$19.3 million in fiscal year 2018, as compared to \$6.2 million for fiscal year 2017. Legal costs for significant litigation matters were \$0.2 million for fiscal

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year 2018. In addition to the factors noted above, operating income increased during fiscal year 2018, as compared to fiscal year 2017, primarily the result of higher sales volume, strong reproductive health sales and benefits from our initiatives to improve our supply chain.

2017 Compared to 2016. Revenue for fiscal year 2017 was \$678.5 million, as compared to \$602.5 million for fiscal year 2016, an increase of \$76.0 million or 13%, which includes an approximate 6% increase in revenue attributable to acquisitions and divestitures and 0.5% increase in revenue attributable to changes in foreign exchange rates. As a result of adjustments to deferred revenue related to certain acquisitions required by business combination rules, we did not recognize \$0.7 million of revenue primarily related to our Diagnostics segment for each of the fiscal years 2017 and 2016 that otherwise would have been recorded by the acquired businesses during each of the respective periods. In our diagnostics market, we experienced growth from continued expansion of our newborn and infectious disease screening solutions in key regions outside the United States, particularly in emerging markets such as China and India, and strong growth in applied genomics. EUROIMMUN and Tulip contributed \$13.5 million and \$38.5 million, respectively, in revenues during fiscal year 2017.

Operating income from continuing operations for fiscal year 2017 was \$146.9 million, as compared to \$148.0 million for fiscal year 2016, a decrease of \$1.1 million, or 1%. Amortization of intangible assets increased and was \$23.0 million for fiscal year 2017 as compared to \$18.1 million for fiscal year 2016. Restructuring and contract termination charges, net increased and were \$2.2 million for fiscal year 2017 as compared to \$0.4 million for fiscal year 2016. Acquisition and divestiture-related expenses and other costs added an incremental expense of \$29.4 million in fiscal year 2017, as compared to decreasing expenses by \$17.7 million for fiscal year 2016. Excluding the impact of the above items, operating income increased during fiscal year 2017, as compared to fiscal year 2016 primarily due to strong reproductive health sales and benefits from our initiatives to improve our supply chain.

Liquidity and Capital Resources

We require cash to pay our operating expenses, make capital expenditures, make strategic acquisitions, service our debt and other long-term liabilities, repurchase shares of our common stock and pay dividends on our common stock. Our principal sources of funds are from our operations and the capital markets, particularly the debt markets. We anticipate that our internal operations will generate sufficient cash to fund our operating expenses, capital expenditures, smaller acquisitions, interest payments on our debt and dividends on our common stock. However, we expect to use external sources to satisfy the balance of our debt when due, any larger acquisitions and other long-term liabilities, such as contributions to our postretirement benefit plans.

Principal factors that could affect the availability of our internally generated funds include:

- changes in sales due to weakness in markets in which we sell our products and services, and
- changes in our working capital requirements.

Principal factors that could affect our ability to obtain cash from external sources include:

- financial covenants contained in the financial instruments controlling our borrowings that limit our total borrowing capacity,
- increases in interest rates applicable to our outstanding variable rate debt,
- a ratings downgrade that could limit the amount we can borrow under our senior unsecured revolving credit facility and our overall access to the corporate debt market,
- increases in interest rates or credit spreads, as well as limitations on the availability of credit, that affect our ability to borrow under future potential facilities on a secured or unsecured basis,
- a decrease in the market price for our common stock, and
- volatility in the public debt and equity markets.

Cash Flows

Fiscal Year 2018

Operating Activities. Net cash provided by continuing operations was \$311.2 million for fiscal year 2018, as compared to net cash provided by continuing operations of \$292.2 million for fiscal year 2017, an increase of \$19.1 million. The cash provided by operating activities for fiscal year 2018 was principally a result of income from continuing operations of \$237.5

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million, and non-cash charges, including depreciation and amortization of \$180.6 million, stock based compensation expense of \$28.8 million, change in fair value of contingent consideration of \$14.6 million, a non-cash expense of \$11.9 million related to our postretirement benefit plans, including the mark-to-market adjustment in the fourth quarter of fiscal year 2018, restructuring and contract termination charges, net, of \$11.1 million, and amortization of deferred debt issuance costs and accretion of discounts of \$3.3 million. These amounts were partially offset by a net increase in working capital of \$115.8 million, deferred tax benefit of \$51.1 million, a net increase of \$3.7 million in accrued expenses, other assets and liabilities and other items, a gain from disposition of businesses and assets, net of \$12.8 million, and a gain on sale of investments, net of \$0.6 million. The change in accrued expenses, other assets and liabilities and other items increased cash provided by operating activities by \$3.7 million for fiscal year 2018, primarily related to the timing of payments for pension, taxes, restructuring, royalties and salary and benefits. During fiscal year 2018, we made contributions of \$8.5 million, in the aggregate, to pension plans outside of the United States and \$15.0 million to our defined benefit pension plan in the United States for the plan year 2017. Contributing to the net increase in working capital for fiscal year 2018, excluding the effect of foreign exchange rate fluctuations, was an increase in accounts receivable of \$94.5 million and an increase in inventory of \$30.2 million, which were partially offset by an increase in accounts payable of \$8.9 million. The increase in accounts receivable was a result of higher sales volume late in the fourth quarter of fiscal year 2018. The increase in inventory was primarily a result of overseas production moves to further increase our manufacturing localization and added inventory needed for our distribution center strategy. The increase in accounts payable was primarily a result of the timing of disbursements during the fourth quarter of fiscal year 2018.

Investing Activities. Net cash used in the investing activities of our continuing operations was \$159.9 million for fiscal year 2018, as compared to net cash used in the investing activities of our continuing operations of \$1,539.4 million for fiscal year 2017, a decrease of \$1,379.5 million. For fiscal year 2018, we used \$97.7 million of net cash for acquisitions, as compared to \$1,527.2 million used in fiscal year 2017. Capital expenditures for fiscal year 2018 were \$93.3 million, primarily for manufacturing equipment and other capital equipment purchases, as compared to \$39.1 million for fiscal year 2017. During fiscal year 2018, we made equity investments that are accounted for using the cost method of accounting, amounting to \$7.0 million as compared to \$10.8 million in fiscal year 2017. These items were partially offset by \$38.0 million in proceeds from disposition of investments and \$0.1 million in proceeds from the surrender of life insurance policies in fiscal year 2018.

Financing Activities. Net cash used in the financing activities of our continuing operations was \$179.2 million for fiscal year 2018, as compared to net cash provided by the financing activities of our continuing operations of \$782.8 million for fiscal year 2017, an increase of \$962.0 million. The cash used in financing activities in fiscal year 2018 was as a result of payments on borrowings, repurchases of our common stock, settlement of forward foreign exchange contracts, payments of dividends, net payments on other credit facilities, and payments for acquisition-related contingent consideration. During fiscal year 2018, payments on our senior unsecured revolving credit facility totaled \$1,264.0 million, which was partially offset by proceeds from our senior unsecured revolving credit facility of \$857.0 million and proceeds from the sale of our 0.6% senior unsecured notes due in 2021 of \$369.3 million offset by debt issuance costs totaling \$2.6 million. This compares to borrowings from our senior unsecured revolving credit facility of \$1,061.0 million, which was partially offset by debt payments of \$236.0 million in fiscal year 2017. During fiscal year 2018, we repurchased 650,000 shares of our common stock, in addition to repurchasing 66,506 shares of our common stock pursuant to our equity incentive plans, for a total cost of \$57.4 million, including commissions. This compares to repurchases of 78,644 shares of our common stock pursuant to our equity incentive plans, for a total cost of \$3.8 million during fiscal year 2017. During fiscal year 2018, we paid \$34.1 million for the settlement of forward foreign exchange contracts, as compared to \$13.8 million in fiscal year 2017. During each of the fiscal years 2018 and 2017, we paid \$31.0 million in dividends. We had net payments on other credit facilities of \$28.4 million during fiscal year 2018, as compared to \$2.8 million during fiscal year 2017. We made \$12.8 million in payments during fiscal year 2018 for acquisition-related contingent consideration, as compared to \$8.9 million in fiscal year 2017. Cash used in financing activities in fiscal year 2018 was partially offset by proceeds from the issuance of common stock under stock plans of \$24.8 million, as compared to proceeds from the issuance of common stock under stock plans of \$18.0

million in fiscal year 2017.

Fiscal Year 2017

Operating Activities. Net cash provided by continuing operations was \$292.2 million for fiscal year 2017, as compared to net cash provided by continuing operations of \$323.8 million for fiscal year 2016, a decrease of \$31.6 million. The cash provided by operating activities for fiscal year 2017 was principally a result of income from continuing operations of \$156.9 million, and non-cash charges, including depreciation and amortization of \$105.0 million, deferred taxes expense of \$28.9 million, stock based compensation expense of \$25.4 million, restructuring and contract termination charges, net, of \$12.7 million, amortization of deferred debt issuance costs and accretion of discounts of \$2.6 million, change in fair value of contingent consideration of \$2.2 million, and a loss from disposition of businesses and assets, net of \$0.3 million. These amounts were partially offset by a net decrease of \$11.1 million in accrued expenses, other assets and liabilities and other items, a net increase in working capital of \$20.2 million, and a non-cash gain related to our postretirement benefit plans, including the

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mark-to-market adjustment in the fourth quarter of fiscal year 2017, of \$10.4 million. The change in accrued expenses, other assets and liabilities and other items decreased cash provided by operating activities by \$11.1 million for fiscal year 2017, primarily related to the timing of payments for taxes, defined benefit pension plans, royalties, restructuring, and salary and benefits. During fiscal year 2017, we made contributions of \$8.4 million, in the aggregate, to pension plans outside of the United States. Contributing to the net increase in working capital for fiscal year 2017, excluding the effect of foreign exchange rate fluctuations, was an increase in accounts receivable of \$36.6 million and an increase in inventory of \$17.9 million, which were partially offset by an increase in accounts payable of \$34.3 million. The increase in accounts receivable was a result of higher sales volume late in the fourth quarter of fiscal year 2017. The increase in inventory was primarily a result of expanding the amount of inventory held at sales locations within our Discovery & Analytical Solutions and Diagnostics segments to improve responsiveness to customer requirements and to facilitate the introduction of new products. The increase in accounts payable was primarily a result of the timing of disbursements during the fourth quarter of fiscal year 2017.

Investing Activities. Net cash used in the investing activities of our continuing operations was \$1,539.4 million for fiscal year 2017, as compared to net cash used in the investing activities of our continuing operations of \$82.6 million for fiscal year 2016, an increase of \$1,456.8 million. For fiscal year 2017, we used \$1,527.2 million of net cash for acquisitions, as compared to \$71.9 million used in fiscal year 2016. The increase of \$1,455.3 million in net cash for acquisitions primarily related to the acquisition of EUROIMMUN and Tulip during fiscal year 2017. Capital expenditures for fiscal year 2017 were \$39.1 million, primarily for manufacturing equipment and other capital equipment purchases, as compared to \$31.7 million for fiscal year 2016. During fiscal year 2017, we made an equity investment that is accounted for using the cost method of accounting, amounting to \$10.8 million. In addition, we received \$36.5 million from the settlement of acquisition-related foreign currency forward contracts, and \$1.1 million from disposition of businesses in fiscal year 2017.

Financing Activities. Net cash provided by the financing activities of our continuing operations was \$782.8 million for fiscal year 2017, as compared to net cash used in the financing activities of our continuing operations of \$115.0 million for fiscal year 2016, an increase of \$897.8 million. During fiscal year 2017, borrowings from our senior unsecured revolving credit facility totaled \$1,061.0 million, which was partially offset by debt payments of \$236.0 million. This compares to borrowings from our senior unsecured revolving credit facility of \$420.5 million, which was more than offset by debt payments of \$902.5 million in fiscal year 2016. During fiscal year 2017, proceeds from the issuance of common stock under stock plans was \$18.0 million. This compares to proceeds from the issuance of common stock under stock plans of \$14.4 million in fiscal year 2016. This cash provided by financing activities in fiscal year 2017 was partially offset by payments of dividends, settlement of forward foreign exchange contracts, payments for acquisition-related contingent consideration, repurchases of our common stock, and net payments on other credit facilities. During each of the fiscal years 2017 and 2016, we paid \$30.8 million in dividends. During fiscal year 2017, we paid \$13.8 million for the settlement of forward foreign exchange contracts, as compared to \$1.9 million in fiscal year 2016. During fiscal year 2017, we made \$8.9 million in payments for acquisition-related contingent consideration, as compared to \$0.2 million in fiscal year 2016. During fiscal year 2017, we repurchased 78,644 shares of our common stock pursuant to our equity incentive plans, for a total cost of \$3.8 million. This compares to repurchases of 3.2 million shares of our common stock, including 75,198 shares of our common stock pursuant to our equity incentive plans, for a total cost of \$151.8 million, including commissions, during fiscal year 2016. We had net payments on other credit facilities of \$2.8 million during fiscal year 2017, as compared to \$1.1 million during fiscal year 2016.

Borrowing Arrangements

Senior Unsecured Revolving Credit Facility. Our senior unsecured revolving credit facility provides for \$1.0 billion of revolving loans and has an initial maturity of August 11, 2021. As of December 30, 2018, undrawn letters of credit in the aggregate amount of \$11.4 million were treated as issued and outstanding when calculating the borrowing availability under the senior unsecured revolving credit facility. As of December 30, 2018, we had \$570.6 million available for additional borrowing under the facility. We use the senior unsecured revolving credit facility for general

corporate purposes, which may include working capital, refinancing existing indebtedness, capital expenditures, share repurchases, acquisitions and strategic alliances. The interest rates under the senior unsecured revolving credit facility are based on the Eurocurrency rate or the base rate at the time of borrowing, plus a margin. The base rate is the higher of (i) the rate of interest in effect for such day as publicly announced from time to time by JP Morgan Chase Bank, N.A. as its "prime rate," (ii) the Federal Funds rate plus 50 basis points or (iii) an adjusted one-month Libor plus 1.00%. The Eurocurrency margin as of December 30, 2018 was 110 basis points. The weighted average Eurocurrency interest rate as of December 30, 2018 was 2.51%, resulting in a weighted average effective Eurocurrency rate, including the margin, of 3.61%, which was the interest applicable to the borrowings outstanding under the Eurocurrency rate as of December 30, 2018. As of December 30, 2018, the senior unsecured revolving credit facility had outstanding borrowings of \$418.0 million, and \$2.4 million of unamortized debt issuance costs. As of December 31, 2017, the senior unsecured revolving credit facility had \$625.0 million outstanding borrowings, and \$3.3 million of unamortized debt issuance costs. The credit agreement for the facility contains affirmative, negative and financial covenants and events of default. The financial covenants include a debt-to-capital ratio that remains applicable for so long as our debt is rated as investment grade. In the event that our debt is not rated as investment grade, the debt-to-capital ratio covenant is replaced with

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a maximum consolidated leverage ratio covenant and a minimum consolidated interest coverage ratio covenant. We were in compliance with all applicable covenants as of December 30, 2018.

Senior Unsecured Term Loan Credit Facility. We entered into a senior unsecured term loan credit facility on August 11, 2017 that provided for \$200.0 million of term loans and had an initial maturity of twelve months from December 19, 2017, the date of the initial draw. We utilized the senior unsecured term loan facility for the acquisition of EUROIMMUN. The interest rates under the senior unsecured term loan credit facility were based on the Eurocurrency rate or the base rate at the time of the borrowing, plus a margin. The base rate was the higher of (i) the rate of interest in effect for such day as publicly announced from time to time by JP Morgan Chase Bank, N.A. as its "prime rate," (ii) the Federal Funds rate plus 50 basis points or (iii) an adjusted one-month Libor plus 1.00%. In April 2018, we paid in full the outstanding balance of \$200.0 million on our senior unsecured term loan credit facility, from the proceeds of the 0.6% senior unsecured notes due in 2021 that were issued in April 2018.

5% Senior Unsecured Notes due in 2021. On October 25, 2011, we issued \$500.0 million aggregate principal amount of senior unsecured notes due in 2021 (the "November 2021 Notes") in a registered public offering and received \$493.6 million of net proceeds from the issuance. The November 2021 Notes were issued at 99.4% of the principal amount, which resulted in a discount of \$3.1 million. As of December 30, 2018, the November 2021 Notes had an aggregate carrying value of \$497.4 million, net of \$1.1 million of unamortized original issue discount and \$1.6 million of unamortized debt issuance costs. As of December 31, 2017, the November 2021 Notes had an aggregate carrying value of \$496.6 million, net of \$1.4 million of unamortized original issue discount and \$2.0 million of unamortized debt issuance costs. The November 2021 Notes mature in November 2021 and bear interest at an annual rate of 5%. Interest on the November 2021 Notes is payable semi-annually on May 15th and November 15th each year. Prior to August 15, 2021 (three months prior to their maturity date), we may redeem the November 2021 Notes in whole or in part, at our option, at a redemption price equal to the greater of (i) 100% of the principal amount of the November 2021 Notes to be redeemed, plus accrued and unpaid interest, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest in respect to the November 2021 Notes being redeemed, discounted on a semi-annual basis, at the Treasury Rate plus 45 basis points, plus accrued and unpaid interest. At any time on or after August 15, 2021 (three months prior to their maturity date), we may redeem the November 2021 Notes, at our option, at a redemption price equal to 100% of the principal amount of the November 2021 Notes to be redeemed plus accrued and unpaid interest. Upon a change of control (as defined in the indenture governing the November 2021 Notes) and a contemporaneous downgrade of the November 2021 Notes below investment grade, each holder of November 2021 Notes will have the right to require us to repurchase such holder's November 2021 Notes for 101% of their principal amount, plus accrued and unpaid interest.

1.875% Senior Unsecured Notes due 2026. On July 19, 2016, we issued €500.0 million aggregate principal amount of senior unsecured notes due in 2026 (the "2026 Notes") in a registered public offering and received approximately €492.3 million of net proceeds from the issuance. The 2026 Notes were issued at 99.118% of the principal amount, which resulted in a discount of €4.4 million. The 2026 Notes mature in July 2026 and bear interest at an annual rate of 1.875%. Interest on the 2026 Notes is payable annually on July 19th each year. The proceeds from the 2026 Notes were used to pay in full the outstanding balance of our previous senior unsecured revolving credit facility. As of December 30, 2018, the 2026 Notes had an aggregate carrying value of \$564.5 million, net of \$4.0 million of unamortized original issue discount and \$3.8 million of unamortized debt issuance costs. As of December 31, 2017, the 2026 Notes had an aggregate carrying value of \$591.7 million, net of \$4.7 million of unamortized original issue discount and \$4.3 million of unamortized debt issuance costs.

Prior to April 19, 2026 (three months prior to their maturity date), we may redeem the 2026 Notes in whole at any time or in part from time to time, at our option, at a redemption price equal to the greater of (i) 100% of the principal amount of the 2026 Notes to be redeemed, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest in respect to the 2026 Notes being redeemed, discounted on an annual basis, at the applicable Comparable Government Bond Rate (as defined in the indenture governing the 2026 Notes) plus 35 basis points; plus, in each case, accrued and unpaid interest. In addition, at any time on or after April 19, 2026 (three months prior to their maturity date), we may redeem the 2026 Notes, at our option, at a redemption price equal to 100% of the

principal amount of the 2026 Notes due to be redeemed plus accrued and unpaid interest.

Upon a change of control (as defined in the indenture governing the 2026 Notes) and a contemporaneous downgrade of the 2026 Notes below investment grade, we will, in certain circumstances, make an offer to purchase the 2026 Notes at a price equal to 101% of their principal amount plus any accrued and unpaid interest.

0.6% Senior Unsecured Notes due in 2021. On April 11, 2018, we issued €300.0 million aggregate principal amount of senior unsecured notes due in 2021 (the “April 2021 Notes”) in a registered public offering and received approximately €298.7 million of net proceeds from the issuance. The April 2021 Notes were issued at 99.95% of the principal amount, which resulted in a discount of €0.2 million. As of December 30, 2018, the April 2021 Notes had an aggregate carrying value of \$341.3 million, net of \$0.1 million of unamortized original issue discount and \$2.0 million of unamortized debt issuance costs. The

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April 2021 Notes mature in April 2021 and bear interest at an annual rate of 0.6%. Interest on the April 2021 Notes is payable annually on April 9th each year. The proceeds from the April 2021 Notes were used to pay in full the outstanding balance of our senior unsecured term loan credit facility, and a portion of the outstanding senior unsecured revolving credit facility, and in each case the borrowings were incurred to pay a portion of the purchase price for our acquisition of EUROIMMUN, which closed on December 19, 2017. Prior to the maturity date of the April 2021 Notes, we may redeem them in whole at any time or in part from time to time, at our option, at a redemption price equal to the greater of (i) 100% of the principal amount of the April 2021 Notes to be redeemed, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest in respect to the April 2021 Notes being redeemed, discounted on an annual basis, at the applicable Comparable Government Bond Rate (as defined in the indenture governing the April 2021 Notes) plus 15 basis points; plus, in each case, accrued and unpaid interest. Upon a change of control (as defined in the indenture governing the April 2021 Notes) and a contemporaneous downgrade of the April 2021 Notes below investment grade, we will, in certain circumstances, make an offer to purchase the April 2021 Notes at a price equal to 101% of their principal amount, plus accrued and unpaid interest.

Other Debt Facilities. Our other debt facilities include Euro-denominated bank loans with an aggregate carrying value of \$32.1 million (or €28.0 million) and \$57.2 million (or €47.6 million) as of December 30, 2018 and December 31, 2017, respectively. These bank loans are primarily utilized for financing fixed assets and are repaid in monthly or quarterly installments with maturity dates extending to 2028. Of these bank loans, loans in the aggregate amount of \$31.9 million bear fixed interest rates between 1.1% and 5.5% and a loan in the amount of \$0.2 million bears a variable interest rate based on the Euribor rate plus a margin of 1.5%. An aggregate amount of \$4.8 million of the bank loans are secured by mortgages on real property and the remaining \$27.3 million are unsecured. Certain credit agreements for the unsecured bank loans include financial covenants which are based on an equity ratio or an equity ratio and minimum interest coverage ratio. We were in compliance with all applicable covenants as of December 30, 2018.

In addition, we had other unsecured revolving credit facilities and a secured bank loan in the amount of \$5.8 million and \$0.3 million, respectively, as of December 30, 2018 and \$2.7 million and \$0.3 million, respectively, as of December 31, 2017. The unsecured revolving debt facilities bear fixed interest rates between 2.3% and 17.6%. The secured bank loan of \$0.3 million bears a fixed annual interest rate of 2.0% and is repaid in monthly installments until 2027.

Financing Lease Obligations. In fiscal year 2012, we entered into agreements with the lessors of certain buildings that we are currently occupying and leasing to expand those buildings. We provided a portion of the funds needed for the construction of the additions to the buildings, and as a result we were considered the owner of the buildings during the construction period. At the end of the construction period, we were not reimbursed by the lessors for all of the construction costs. We are therefore deemed to have continuing involvement and the leases qualify as financing leases under sale-leaseback accounting guidance, representing debt obligations for us and non-cash investing and financing activities. As a result, we capitalized \$29.3 million in property, plant and equipment, net, representing the fair value of the buildings with a corresponding increase to debt. We have also capitalized \$11.5 million in additional construction costs necessary to complete the renovations to the buildings, which were funded by the lessors, with a corresponding increase to debt. At December 30, 2018, we had \$34.5 million recorded for these financing lease obligations, of which \$1.5 million was recorded as short-term debt and \$33.0 million was recorded as long-term debt. At December 31, 2017, we had \$35.9 million recorded for these financing lease obligations, of which \$1.4 million was recorded as short-term debt and \$34.5 million was recorded as long-term debt. The buildings are being depreciated on a straight-line basis over the terms of the leases to their estimated residual values, which will equal the remaining financing obligation at the end of the lease term. At the end of the lease term, the remaining balances in property, plant and equipment, net and debt will be reversed against each other.

Dividends

Our Board declared a regular quarterly cash dividend of \$0.07 per share in each quarter of fiscal years 2018 and 2017, resulting in an annual dividend rate of \$0.28 per share. At December 30, 2018, we had accrued \$7.7 million for a dividend declared on October 24, 2018 for the fourth quarter of fiscal year 2018 that was paid in February 2019. On January 24, 2019, we announced that our Board had declared a quarterly dividend of \$0.07 per share for the first quarter of fiscal year 2019 that will be payable in May 2019. In the future, our Board may determine to reduce or eliminate our common stock dividend in order to fund investments for growth, repurchase shares or conserve capital resources.

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Contractual Obligations

The following table summarizes our contractual obligations at December 30, 2018 for continuing and discontinued operations. Purchase commitments are minimal and have been excluded from this table:

	Operating Leases	Sr. Unsecured Revolving Credit Facility ⁽¹⁾ Maturing 2021	November 2021 Notes ⁽²⁾	April 2021 Notes ⁽³⁾	2026 Notes ⁽⁴⁾	Other Debt Facilities ⁽⁵⁾	Financing Lease Obligations ⁽⁶⁾	Employee Benefit Payments ⁽⁷⁾	Unrecognized Tax Benefits ⁽⁸⁾	Total
	(In thousands)									
2019	\$56,430	\$—	\$25,000	\$2,060	\$10,732	\$13,763	\$1,532	\$30,223	\$—	-\$139,740
2020	46,621	—	25,000	2,060	10,732	8,818	1,597	30,751	—	125,579
2021	33,490	418,000	521,772	343,981	10,732	8,388	1,665	31,544	—	1,369,572
2022	22,129	—	—	—	10,732	4,027	1,657	31,804	—	70,349
2023	15,591	—	—	—	10,732	2,729	1,681	32,207	—	62,940
2024 and thereafter	67,582	—	—	—	599,622	1,475	4,698	163,910	—	837,287
Total	\$241,843	\$418,000	\$571,772	\$348,101	\$653,282	\$39,200	\$12,830	\$320,439	\$—	-\$2,605,467

(1) The credit facility borrowings carry variable interest rates. As of December 30, 2018, the senior unsecured revolving credit facility had a carrying value of \$415.6 million.

(2) The November 2021 Notes include interest obligations of \$71.8 million. As of December 30, 2018, the November 2021 Notes had a carrying value of \$497.4 million.

(3) The April 2021 Notes include interest obligations of \$4.7 million. As of December 30, 2018, the April 2021 Notes had a carrying value of \$341.3 million.

(4) The 2026 Notes include interest obligations of \$80.9 million. As of December 30, 2018, the 2026 Notes had a carrying value of \$564.5 million.

(5) The other debt facilities include interest obligations of \$1.0 million. As of December 30, 2018, the other debt facilities had a carrying value of \$38.2 million.

(6) The financing lease obligations do not include interest obligations.

(7) Employee benefit payments only include obligations through fiscal year 2028.

We do not expect to cash settle any uncertain positions during fiscal year 2019. We have excluded \$1.0 million,

(8) including accrued interest, net of tax benefits, and penalties, from our uncertain tax positions, as we cannot make a reasonably reliable estimate of the amount and period of related future payments.

As of December 30, 2018, we may have to pay the former shareholders of certain of our acquisitions contingent consideration of up to \$76.5 million. The table above does not reflect any of these obligations as the timing and amounts are uncertain. For further information related to our contingent consideration obligations, see Note 23 to our consolidated financial statements included in this annual report on Form 10-K.

Capital Expenditures

During fiscal year 2019, we expect to invest an amount for capital expenditures similar to that in fiscal year 2018, primarily to introduce new products, to improve our operating processes, to shift the production capacity to lower cost locations, and to develop information technology. We expect to use our available cash and internally generated funds to fund these expenditures.

Other Potential Liquidity Considerations

At December 30, 2018, we had cash and cash equivalents of \$163.1 million, of which \$149.4 million was held by our non-U.S. subsidiaries, and we had \$570.6 million of additional borrowing capacity available under a senior unsecured revolving credit facility. We had no other liquid investments at December 30, 2018.

We utilize a variety of tax planning and financing strategies to ensure that our worldwide cash is available in the locations in which it is needed. The Tax Act requires us to pay a one-time transition tax on the unremitted earnings of foreign subsidiaries. Based on available information, we estimated the tax on the deemed repatriation of our foreign earnings and recorded a tax expense of \$85.0 million in continuing operations at December 31, 2017. During the fiscal year ended December 30, 2018, we refined our calculations of the one-time transition tax based on newly issued guidance from the Internal Revenue Service. As a result, we recorded a benefit of \$4.6 million in continuing operations related to the one-time transition

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tax. In addition, during fiscal year 2018, we determined that previously undistributed earnings of certain international subsidiaries no longer met the requirements of indefinite reinvestment and therefore recognized \$2.9 million of income tax expense during the year. Our intent is to continue to reinvest the remaining undistributed earnings of our international subsidiaries indefinitely. No additional income tax expense has been provided for any remaining undistributed foreign earnings not subject to the transition tax, or any additional outside basis difference inherent in these entities, as these amounts continue to be indefinitely reinvested in foreign operations.

On July 27, 2016, our Board authorized us to repurchase up to 8.0 million shares of common stock under a stock repurchase program (the "Repurchase Program"). On July 23, 2018, our Board authorized us to immediately terminate the Repurchase Program and further authorized us to repurchase shares of common stock for an aggregate amount up to \$250.0 million under a new stock repurchase program (the "New Repurchase Program"). The New Repurchase Program will expire on July 23, 2020 unless terminated earlier by our Board and may be suspended or discontinued at any time. During fiscal year 2018, we had no stock repurchases under the Repurchase Program. No shares remain available for repurchase under the Repurchase Program due to its cancellation. During the fourth quarter of fiscal year 2018, we repurchased 650,000 shares of common stock under the New Repurchase Program at an aggregate cost of \$52.2 million. As of December 30, 2018, \$197.8 million remained available for aggregate repurchases of shares under the New Repurchase Program.

In addition, our Board has authorized us to repurchase shares of common stock to satisfy minimum statutory tax withholding obligations in connection with the vesting of restricted stock awards and restricted stock unit awards granted pursuant to our equity incentive plans and to satisfy obligations related to the exercise of stock options made pursuant to our equity incentive plans. During the fiscal year 2018, we repurchased 66,506 shares of common stock for this purpose at an aggregate cost of \$5.2 million. During fiscal year 2017, we repurchased 78,644 shares of common stock for this purpose at an aggregate cost of \$4.4 million. During fiscal year 2016, we repurchased 75,198 shares of common stock for this purpose at an aggregate cost of \$3.6 million.

The repurchased shares have been reflected as additional authorized but unissued shares, with the payments reflected in common stock and capital in excess of par value. Any repurchased shares will be available for use in connection with corporate programs. If we continue to repurchase shares, the New Repurchase Program will be funded using our existing financial resources, including cash and cash equivalents, and our existing senior unsecured revolving credit facility.

Distressed global financial markets could adversely impact general economic conditions by reducing liquidity and credit availability, creating increased volatility in security prices, widening credit spreads and decreasing valuations of certain investments. The widening of credit spreads may create a less favorable environment for certain of our businesses and may affect the fair value of financial instruments that we issue or hold. Increases in credit spreads, as well as limitations on the availability of credit at rates we consider to be reasonable, could affect our ability to borrow under future potential facilities on a secured or unsecured basis, which may adversely affect our liquidity and results of operations. In difficult global financial markets, we may be forced to fund our operations at a higher cost, or we may be unable to raise as much funding as we need to support our business activities.

Our pension plans have not experienced a material impact on liquidity or counterparty exposure due to the volatility and uncertainty in the credit markets. With respect to plans outside of the United States, we expect to contribute \$8.3 million in the aggregate during fiscal year 2019. During fiscal year 2018, we contributed \$8.5 million, in the aggregate, to pension plans outside of the United States and \$15.0 million to our defined benefit pension plan in the United States for plan year 2017. During fiscal year 2017, we made contributions of \$8.4 million, in the aggregate, to plans outside of the United States. During fiscal year 2016, we contributed \$9.6 million, in the aggregate, to plans outside of the United States. We could potentially have to make additional funding payments in future periods for all pension plans. We expect to use existing cash and external sources to satisfy future contributions to our pension plans.

Effects of Recently Issued and Adopted Accounting Pronouncements

See Note 1, Nature of Operations and Accounting Policies, in the Notes to Consolidated Financial Statements for a summary of recently adopted and issued accounting pronouncements.

Application of Critical Accounting Policies and Estimates

The preparation of consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition, warranty costs, bad debts, inventories, accounting for business combinations and dispositions, long-lived assets, pensions and other postretirement benefits,

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restructuring, income taxes, contingencies and litigation. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies affect our more significant judgments and estimates used in preparation of our consolidated financial statements.

Revenue recognition. We enter into contracts that can include various combinations of products and services, which are generally capable of being distinct and accounted for as separate performance obligations. We recognize revenue in an amount that reflects the consideration we expect to receive in exchange for the promised products or services when a performance obligation is satisfied by transferring control of those products or services to customers. Taxes that are collected by us from a customer and assessed by a governmental authority, that are both imposed on and concurrent with a specific revenue-producing transaction, are excluded from revenue.

The majority of our sales relate to specific manufactured products or units rather than long-term customized projects, therefore we generally do not experience significant changes in original estimates. Further, we have not experienced any significant refunds or promotional allowances that require significant estimation.

Warranty costs. We provide for estimated warranty costs for products at the time of their sale. Warranty liabilities are estimated using expected future repair costs based on historical labor and material costs incurred during the warranty period.

Allowances for doubtful accounts. We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. We generally compute our allowance for doubtful accounts by (i) applying specific percentage reserves on accounts that are past due and deemed uncollectible; and (ii) specifically reserving for customers known to be in financial difficulty. Therefore, if the financial condition of our customers were to deteriorate beyond our estimates, we may have to increase our allowance for doubtful accounts. This would reduce our earnings. Accounts are written-off only when all methods of recovery have been exhausted.

Inventory valuation. We value inventory at the lower of cost or market. Inventories are accounted for using the first-in, first-out method. We periodically review these values to ascertain that market value of the inventory continues to exceed its recorded cost. Generally, reductions in value of inventory below cost are caused by our maintenance of stocks of products in excess of demand, or technological obsolescence of the inventory. We regularly review inventory quantities on hand and, when necessary, record provisions for excess and obsolete inventory based on either our estimated forecast of product demand and production requirements, or historical trailing usage of the product. If our sales do not materialize as planned or at historic levels, we may have to increase our reserve for excess and obsolete inventory. This would reduce our earnings. If actual market conditions are more favorable than anticipated, inventory previously written down may be sold, resulting in lower costs of sales and higher income from operations than expected in that period.

Business combinations. Business combinations are accounted for at fair value. Acquisition costs are expensed as incurred and recorded in selling, general and administrative expenses; previously held equity interests are valued at fair value upon the acquisition of a controlling interest; in-process research and development (“IPR&D”) is recorded at fair value as an intangible asset at the acquisition date; restructuring costs associated with a business combination are expensed subsequent to the acquisition date; and changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date affect income tax expense. Measurement period adjustments are made in the period in which the amounts are determined and the current period income effect of such adjustments will be

calculated as if the adjustments had been completed as of the acquisition date. All changes that do not qualify as measurement period adjustments are also included in current period earnings. The accounting for business combinations requires estimates and judgment as to expectations for future cash flows of the acquired business, and the allocation of those cash flows to identifiable intangible assets, in determining the estimated fair value for assets acquired and liabilities assumed. The fair values assigned to tangible and intangible assets acquired and liabilities assumed, including contingent consideration, are based on management's estimates and assumptions, as well as other information compiled by management, including valuations that utilize customary valuation procedures and techniques. If the actual results differ from the estimates and judgments used in these estimates, the amounts recorded in the financial statements could result in a possible impairment of the intangible assets and goodwill, require acceleration of the amortization expense of finite-lived intangible assets, or the recognition of additional consideration which would be expensed. The fair value of contingent consideration is remeasured each period based on relevant information and changes to the fair value are included in the operating results for the period.

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Value of long-lived assets, including goodwill and other intangibles. We carry a variety of long-lived assets on our consolidated balance sheets including property and equipment, investments, identifiable intangible assets, and goodwill. We periodically review the carrying value of all of these assets based, in part, upon current estimated market values and our projections of anticipated future cash flows. We undertake this review (i) on an annual basis for assets such as goodwill and non-amortizing intangible assets and (ii) on a periodic basis for other long-lived assets when facts and circumstances suggest that cash flows related to those assets may be diminished. Any impairment charge that we record reduces our earnings. The test consists of the comparison of the fair value to the carrying value of the reporting unit to determine if the carrying value exceeds the fair value. If the carrying value of the reporting unit exceeds its fair value, an impairment loss in an amount equal to that excess is recognized up to the amount of goodwill. We perform the annual impairment assessment on the later of January 1 or the first day of each fiscal year. This same impairment test will be performed at other times during the course of the year should an event occur which suggests that the recoverability of goodwill should be reconsidered. We completed the annual goodwill impairment test using a measurement date of January 1, 2018, and concluded that there was no goodwill impairment. At January 1, 2018, the fair value exceeded the carrying value by more than 20.0% for each reporting unit, except for our Informatics reporting unit. The range of the long-term terminal growth rates for the reporting units was 3.0% to 5.0% for the fiscal year 2018 impairment analysis. The range for the discount rates for the reporting units was 9.0% to 15.0%. Keeping all other variables constant, a 10.0% change in any one of these input assumptions for the various reporting units, except for our Informatics reporting unit, would still allow us to conclude that there was no impairment of goodwill.

We consistently employed the income approach to estimate the current fair value when testing for impairment of goodwill. A number of significant assumptions and estimates are involved in the application of the income approach to forecast operating cash flows, including markets and market share, sales volumes and prices, costs to produce, tax rates, capital spending, discount rates and working capital changes. Cash flow forecasts are based on approved business unit operating plans for the early years' cash flows and historical relationships in later years. The income approach is sensitive to changes in long-term terminal growth rates and the discount rates. The long-term terminal growth rates are consistent with our historical long-term terminal growth rates, as the current economic trends are not expected to affect our long-term terminal growth rates. We corroborate the income approach with a market approach. Our Informatics reporting unit, which had a goodwill balance of \$217.2 million at January 1, 2018, had a fair value that was less than 20% but greater than 10% more than its carrying value. Informatics is at increased risk of an impairment charge given its ongoing weakness due to a highly competitive industry. Despite the increased risk associated with this reporting unit, we do not believe there will be a significant change in the key estimates or assumptions driving the fair value of this reporting unit that would lead to a material impairment charge. While we believe that our estimates of current value are reasonable, if actual results differ from the estimates and judgments used including such items as future cash flows and the volatility inherent in markets which we serve, impairment charges against the carrying value of those assets could be required in the future.

Non-amortizing intangibles are also subject to an annual impairment test. We consistently employed the relief from royalty model to estimate the current fair value when testing for impairment of non-amortizing intangible asset. The impairment test consists of a comparison of the fair value of the non-amortizing intangible asset with its carrying amount. If the carrying amount of a non-amortizing intangible asset exceeds its fair value, an impairment loss in an amount equal to that excess is recognized up to the amount of the amortizing intangible asset. In addition, we evaluate the remaining useful life of our non-amortizing intangible asset at least annually to determine whether events or circumstances continue to support an indefinite useful life. If events or circumstances indicate that the useful life of our non-amortizing intangible asset is no longer indefinite, the asset will be tested for impairment. This intangible asset will then be amortized prospectively over their estimated remaining useful life and accounted for in the same manner as other intangible assets that are subject to amortization.

We performed our annual impairment testing as of January 1, 2018, and concluded that there was no impairment of non-amortizing intangible asset. An assessment of the recoverability of amortizing intangible assets takes place when

events have occurred that may give rise to an impairment. No such events occurred during fiscal year 2018.

Employee compensation and benefits. We sponsor both funded and unfunded U.S. and non-U.S. defined benefit pension plans and other postretirement benefits. Retirement and postretirement benefit plans are a significant cost of doing business, and represent obligations that will be ultimately settled far in the future, and therefore are subject to estimation. Retirement and postretirement benefit plan expenses are allocated to cost of revenue, research and development, and selling, general and administrative expenses, in our consolidated statements of operations. We immediately recognize actuarial gains and losses in operating results in the year in which the gains and losses occur. Actuarial gains and losses are measured annually as of the calendar month-end that is closest to our fiscal year end and accordingly will be recorded in the fourth quarter, unless we are required to perform an interim remeasurement.

We recognized a loss of \$11.9 million in fiscal year 2018, income of \$10.4 million in fiscal year 2017 and a loss of \$14.5 million in fiscal year 2016 for our retirement and postretirement benefit plans, which includes the charge or benefit for the

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mark-to-market adjustment for the postretirement benefit plans, which was recorded in the fourth quarter of each fiscal year. The loss or income related to the mark-to-market adjustment on postretirement benefit plans was a pre-tax loss of \$21.4 million in fiscal year 2018, a pre-tax gain of \$2.1 million in fiscal year 2017 and a pre-tax loss of \$15.3 million in fiscal year 2016. We expect income of approximately \$1.2 million in fiscal year 2019 for our retirement and postretirement benefit plans, excluding the charge for or benefit from the mark-to-market adjustment. It is difficult to reliably calculate and predict whether there will be a mark-to-market adjustment in fiscal year 2019. Mark-to-market adjustments are primarily driven by events and circumstances beyond our control, including changes in interest rates, the performance of the financial markets and mortality assumptions. To the extent the discount rates decrease or the value of our pension and postretirement investments decrease, mark-to market charges to operations will be recorded in fiscal year 2019. Conversely, to the extent the discount rates increase or the value of our pension and postretirement investments increase more than expected, mark-to market income will be recorded in fiscal year 2019. Pension accounting is intended to reflect the recognition of future benefit costs over the employee's approximate service period based on the terms of the plans and the investment and funding decisions made. We are required to make assumptions regarding such variables as the expected long-term rate of return on assets, the discount rate applied and mortality assumptions, to determine service cost and interest cost, in order to arrive at expected pension income or expense for the year. Beginning in fiscal year 2016, the approach we use to calculate the service and interest components of net periodic benefit cost for certain non-U.S. benefit plans was changed to provide a more precise measurement of service and interest costs. Prior to fiscal year 2016, we calculated these service and interest components utilizing a single weighted-average discount rate derived from a yield curve used to measure the benefit obligation at the beginning of the period. Beginning in fiscal year 2016, we have elected to utilize an approach that discounts the individual expected cash flows using the applicable spot rates derived from a yield curve over the projected cash flow period.

As of December 30, 2018, we estimate the expected long-term rate of return on assets in our pension and other postretirement benefit plans in the United States to be 7.25% and to be 5.30% for all plans outside the United States. In addition, as of December 30, 2018, we estimate the discount rate for our pension and other postretirement benefit plans in the United States to be 4.05% and to be 2.07% for all plans outside the United States. During fiscal year 2016, for the plans in the United States, the Society of Actuaries issued an updated projection scale, MP-2016, which reduced the life expectancy used to determine the projected benefit obligation. We adopted MP-2016 as of January 1, 2017. The adoption of the updated projection scale resulted in a \$5.5 million decrease to the projected benefit obligation at January 1, 2017. We adopted a further updated projection scale, MP-2017, as of December 31, 2017. The adoption of MP-2017 resulted in a \$2.6 million decrease to the projected benefit obligation at December 31, 2017. During fiscal year 2018, the Society of Actuaries issued MP-2018 mortality improvement rates to replace MP-2017 rates for use with the RP-2014 mortality table, which incorporates an additional year (2016) of U.S. population. We adopted MP-2018 as of December 30, 2018. The adoption of MP-2018 resulted in a \$1.0 million decrease to the projected benefit obligation at December 30, 2018. We have analyzed the rates of return on assets used and determined that these rates are reasonable based on the plans' historical performance relative to the overall markets in the countries where we invest the assets, as well as our current expectations for long-term rates of returns for our pension and other postretirement benefit assets. Our management will continue to assess the expected long-term rate of return on plan assets assumptions for each plan based on relevant market conditions, and will make adjustments to the assumptions as appropriate. Discount rate assumptions have been, and continue to be, based on the prevailing market long-term interest rates corresponding with expected benefit payments at the measurement date.

If any of our assumptions were to change as of December 30, 2018, our pension plan expenses would also change.

Increase
(Decrease) at
December 30,
2018

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	Percentage Point Change	Non-U.S.	U.S.
Pension plans discount rate	+0.25	(11,836)	(6,969)
	-0.25	12,591	7,278
Rate of return on pension plan assets	+1.00	(1,592)	(2,343)
	-1.00	1,592	2,343
Postretirement medical plans discount rate	+0.25	N/A	(81)
	-0.25	N/A	85
Rate of return on postretirement medical plan assets	+1.00	N/A	(163)
	-1.00	N/A	163

We have reduced the volatility in our healthcare costs provided to our retirees by adopting a defined dollar plan feature in fiscal year 2001. Under the defined dollar plan feature, our total annual liability for healthcare costs to any one retiree is

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limited to a fixed dollar amount, regardless of the nature or cost of the healthcare needs of that retiree. Our maximum future liability, therefore, cannot be increased by future changes in the cost of healthcare.

Restructuring activities. Our consolidated financial statements detail specific charges relating to restructuring activities as well as the actual spending that has occurred against the resulting accruals. Our pre-tax restructuring charges are estimates based on our preliminary assessments of (i) severance benefits to be granted to employees, based on known benefit formulas and contractual agreements, (ii) costs to abandon certain facilities based on known lease costs of sub-rental income and (iii) impairment of assets as discussed above under “Value of long-lived assets, including goodwill and other intangibles.” Because these accruals are estimates, they are subject to change as a result of deviations from initial restructuring plans or subsequent information that may come to our attention. For example, actual severance costs may be less than anticipated if employees voluntarily leave prior to the time at which they would be entitled to severance, or if anticipated legal hurdles in foreign jurisdictions prove to be less onerous than expected. In addition, unanticipated successes or difficulties in terminating leases and other contractual obligations may lead to changes in estimates. When such changes in estimates occur, they are reflected in our consolidated financial statements on our consolidated statements of operations line entitled “restructuring and contract termination charges, net.”

Dispositions. When we record the disposition of an asset or discontinuance of an operation, which meets the criteria to be reported as a discontinued operation, we make an estimate relative to the amount we expect to realize on the sale or disposition. This estimate is based on a variety of factors, including current interest in the market, alternative markets for the assets, and other relevant factors. If anticipated proceeds are less than the current carrying amount of the asset or operation, we record a loss. If anticipated proceeds are greater than the current carrying amount of the asset or operation, we recognize a gain net of expected contingencies when the transaction has been consummated. Accordingly, we may realize amounts different than were first estimated. Any such changes decrease or increase current earnings. During the fiscal year ended December 30, 2018, we had no disposition of discontinued operations.

Income taxes. Our business operations are global in nature, and we are subject to taxes in numerous jurisdictions. Tax laws and tax rates vary substantially in these jurisdictions, and are subject to change given the political and economic climate in those countries. We report and pay income tax based on operational results and applicable law. Our tax provision contemplates tax rates currently in effect to determine our current tax provision as well as enacted tax rates expected to apply to taxable income in the fiscal years in which those temporary differences are expected to be recovered or settled to determine our deferred tax provision. Any significant fluctuation in rates or changes in tax laws could cause our estimates of taxes we anticipate either paying or recovering in the future to change. Such changes could lead to either increases or decreases in our effective tax rate.

The Tax Act makes broad and complex changes to the U.S. Internal Revenue Code, which include reducing the corporate income tax rate from 35% to 21% and implementing a modified territorial tax system that includes a one-time transition tax on deemed repatriated earnings of foreign subsidiaries. The end of the measurement period for purposes of Staff Accounting Bulletin No. 118 was December 22, 2018. We have completed the analysis based on legislative updates relating to the Tax Act currently available and has recorded the impact in tax expense from continuing operations. The details are discussed more fully in Note 8, Income Taxes, in the Notes to Consolidated Financial Statements.

We will be subject to the new Global Intangible Low Tax Income ("GILTI") tax rules that are part of the modified territorial tax system imposed by the Tax Act. Under U.S. GAAP, we are allowed to make an accounting policy choice of either (1) treating taxes due on future U.S. inclusions in taxable income related to GILTI as a current-period expense when incurred (the “period cost method”) or (2) factoring such amounts into our measurement of deferred taxes (the “deferred method”). We decided to adopt the period cost method and thus have not recorded any potential deferred tax effects related to GILTI and FDII in our financial statements for the fiscal year ended December 30, 2018.

Significant judgment is required in determining our worldwide provision for income taxes and recording the related tax assets and liabilities. In the ordinary course of our business, there are operational decisions, transactions, facts and circumstances, and calculations for which the ultimate tax determination is not certain. Furthermore, our tax positions are periodically subject to challenge by taxing authorities throughout the world. Every quarter we review our tax positions in each significant taxing jurisdiction in the process of evaluating our unrecognized tax benefits.

Adjustments are made to our unrecognized tax benefits when: (i) facts and circumstances regarding a tax position change, causing a change in our judgment regarding that tax position; (ii) a tax position is effectively settled with a tax authority at a differing amount; and/or (iii) the statute of limitations expires regarding a tax position. Any significant impact as a result of changes in underlying facts, law, tax rates, tax audit, or review could lead to adjustments to our income tax expense, our effective tax rate, or our cash flow.

Additionally, we have established valuation allowances against a variety of deferred tax assets, including state net operating loss carryforwards, state income tax credit carryforwards, and certain foreign tax attributes. Valuation allowances

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take into consideration our ability to use these deferred tax assets and reduce the value of such items to the amount that is deemed more likely than not to be recoverable. In evaluating our ability to recover our deferred tax assets within the jurisdiction from which they arise, we consider all available positive and negative evidence, including reversals of deferred tax liabilities, projected future taxable income, tax-planning strategies, and results of recent operations. In projecting future taxable income, we begin with historical results adjusted for the results of discontinued operations and incorporate assumptions about the future pretax operating income adjusted for items that do not have tax consequences. These assumptions about future taxable income require significant judgment and are consistent with the plans and estimates we are using to manage the underlying business. Changes in our assumptions regarding the appropriate amount for valuation allowances could result in the increase or decrease in the valuation allowance, with a corresponding charge or benefit to our tax provision.

Historically, deferred income tax expense has not been provided on the cumulative undistributed earnings of our international subsidiaries. During fiscal year 2018, we determined that previously undistributed earnings of certain international subsidiaries of approximately \$1.0 billion no longer met the requirements of indefinite reinvestment and therefore we recognized \$2.9 million of income tax expense in fiscal year 2018. Our intent is to continue to reinvest the remaining undistributed earnings of our international subsidiaries indefinitely. While federal income tax expense has been recognized as a result of the Tax Act, we have not provided any additional deferred taxes with respect to items such as foreign withholding taxes, state income tax or foreign exchange gain or loss. As of December 30, 2018, the amount of foreign earnings that we have the intent and ability to keep invested outside the U.S. indefinitely and for which no additional incremental U.S. tax cost has been provided, other than the \$80.4 million from the one-time transition tax on deemed repatriation, was approximately \$652.1 million. It is not practicable to calculate the unrecognized deferred tax liability related to such incremental tax costs on those earnings.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Quantitative and Qualitative Disclosures about Market Risk

Financial Instruments

Financial instruments that potentially subject us to concentrations of credit risk consist principally of temporary cash investments, derivatives, marketable securities and accounts receivable. We believe we had no significant concentrations of credit risk as of December 30, 2018.

We use derivative instruments as part of our risk management strategy only, and include derivatives utilized as economic hedges that are not designated as hedging instruments. By nature, all financial instruments involve market and credit risks. We enter into derivative instruments with major investment grade financial institutions and have policies to monitor the credit risk of those counterparties. We do not enter into derivative contracts for trading or other speculative purposes, nor do we use leveraged financial instruments. Approximately 70% of our business is conducted outside of the United States, generally in foreign currencies. As a result, fluctuations in foreign currency exchange rates can increase the costs of financing, investing and operating the business.

In the ordinary course of business, we enter into foreign exchange contracts for periods consistent with our committed exposures to mitigate the effect of foreign currency movements on transactions denominated in foreign currencies. The intent of these economic hedges is to offset gains and losses that occur on the underlying exposures from these currencies, with gains and losses resulting from the forward currency contracts that hedge these exposures.

Transactions covered by hedge contracts include intercompany and third-party receivables and payables. The contracts are primarily in European and Asian currencies, have maturities that do not exceed 12 months, have no cash requirements until maturity, and are recorded at fair value on our consolidated balance sheets. The unrealized gains and losses on our foreign currency contracts are recognized immediately in interest and other expense, net. The cash flows related to the settlement of these hedges are included in cash flows from operating activities within our consolidated statements of cash flows.

Principal hedged currencies include the British Pound, Euro, Swedish Krona, Chinese Yuan and Singapore Dollar. We held forward foreign exchange contracts, designated as economic hedges, with U.S. dollar equivalent notional

amounts totaling \$223.3 million at December 30, 2018, \$212.1 million at December 31, 2017, and \$137.5 million at January 1, 2017, and the fair value of these foreign currency derivative contracts was insignificant. The gains and losses realized on these foreign currency derivative contracts are not material. The duration of these contracts was generally 30 days or less during each of fiscal years 2018, 2017 and 2016.

In addition, in connection with certain intercompany loan agreements utilized to finance our acquisitions and stock repurchase program, we enter into forward foreign exchange contracts intended to hedge movements in foreign exchange rates prior to settlement of such intercompany loans denominated in foreign currencies. We record these hedges at fair value on our

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consolidated balance sheets. The unrealized gains and losses on these hedges, as well as the gains and losses associated with the remeasurement of the intercompany loans, are recognized immediately in interest and other expense, net. The cash flows related to the settlement of these hedges are included in cash flows from financing activities within our consolidated statement of cash flows.

The outstanding forward exchange contracts designated as economic hedges, which were intended to hedge movements in foreign exchange rates prior to the settlement of certain intercompany loan agreements, included combined Euro notional amounts of €37.3 million and combined U.S. Dollar notional amounts of \$5.7 million as of December 30, 2018, combined Euro notional amounts of €57.2 million and combined U.S. Dollar notional amounts of \$1.3 billion as of December 31, 2017, and combined Euro notional amounts of €58.6 million, combined U.S. Dollar notional amounts of \$8.7 million and combined Swedish Krona notional amounts of kr969.5 million as of January 1, 2017. The net gains and losses on these derivatives, combined with the gains and losses on the remeasurement of the hedged intercompany loans were not material for each of the fiscal years 2018 and 2017. We paid \$34.1 million and \$13.8 million during the fiscal years 2018 and 2017, respectively, from the settlement of these hedges.

During fiscal year 2018, we entered into a series of foreign currency forward contracts with a notional amount of €298.7 million to hedge our investments in certain foreign subsidiaries. Realized and unrealized translation adjustments from these hedges were included in the foreign currency translation component of accumulated other comprehensive income ("AOCI"), which offsets translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold. The foreign currency forward contracts were settled during the second quarter of 2018 and we recorded a net realized foreign exchange loss in AOCI of \$2.6 million for the fiscal year ended December 30, 2018.

During fiscal year 2016, we designated the 2026 Notes to hedge our investments in certain foreign subsidiaries. In January 2018, we removed the hedging relationship of our 2026 Notes and investments in certain foreign subsidiaries and recognized \$2.1 million of unrealized foreign exchange gain in AOCI. In April 2018, we designated a portion of the 2026 Notes to hedge our investments in certain foreign subsidiaries. Unrealized translation adjustments from a portion of the 2026 Notes were included in the foreign currency translation component of AOCI, which offsets translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold. As of December 30, 2018, the total notional amount of the 2026 Notes that was designated to hedge investments in foreign subsidiaries was €216.0 million. The unrealized foreign exchange gain recorded in AOCI related to the net investment hedge was \$9.3 million for the fiscal year ended December 30, 2018.

During fiscal year 2018, we designated the April 2021 Notes to hedge our investments in certain foreign subsidiaries. Unrealized translation adjustments from the April 2021 Notes were included in the foreign currency translation component of AOCI, which offsets translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold. As of December 30, 2018, the total notional amount of the April 2021 Notes that was designated to hedge investments in foreign subsidiaries was €298.7 million. The unrealized foreign exchange gain recorded in AOCI related to the net investment hedge was \$27.5 million for the fiscal year ended December 30, 2018.

Market Risk

Market Risk. We are exposed to market risk, including changes in interest rates and currency exchange rates. To manage the volatility relating to these exposures, we enter into various derivative transactions pursuant to our policies to hedge against known or forecasted market exposures.

Foreign Exchange Risk. The potential change in foreign currency exchange rates offers a substantial risk to us, as approximately 70% of our business is conducted outside of the United States, generally in foreign currencies. Our risk management strategy currently uses forward contracts to mitigate certain balance sheet foreign currency transaction exposures. The intent of these economic hedges is to offset gains and losses that occur on the underlying exposures,

with gains and losses resulting from the forward contracts that hedge these exposures. Moreover, we are able to partially mitigate the impact that fluctuations in currencies have on our net income as a result of our manufacturing facilities located in countries outside the United States, material sourcing and other spending which occur in countries outside the United States, resulting in natural hedges.

Although we attempt to manage our foreign currency exchange risk through the above activities, when the U.S. dollar weakens against other currencies in which we transact business, sales and net income will in general be positively but not proportionately impacted. Conversely, when the U.S. dollar strengthens against other currencies in which we transact business, sales and net income will in general be negatively but not proportionately impacted.

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Foreign Currency Risk—Value-at-Risk Disclosure. We utilize a Value-at-Risk model to determine the potential earning/fair value exposures presented by our foreign currency related financial instruments. As discussed above, we seek to minimize this exposure through our hedging program. Our Value-at-Risk computation is based on the Monte Carlo simulation, utilizing a 95% confidence interval and a holding period of 30 days. As of December 30, 2018, this computation estimated that there is a 5% chance that the market value of the underlying exposures and the corresponding derivative instruments either increase or decrease due to foreign currency fluctuations by more than \$0.1 million. This Value-At-Risk measure is consistent with our financial statement disclosures relative to our foreign currency hedging program. Specifically, during each of the four quarters ended in fiscal year 2018, the Value-At-Risk ranged between \$0.1 million and \$1.1 million, with an average of approximately \$0.5 million.

Interest Rate Risk. As of December 30, 2018, we had \$418.0 million in outstanding borrowings under our senior unsecured revolving credit facility. As described above in “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources,” amounts drawn under our senior unsecured revolving credit facility bear interest at variable rates. Our cash and cash equivalents, for which we receive interest at variable rates, were \$163.1 million at December 30, 2018. Fluctuations in interest rates can therefore have a direct impact on both our short-term cash flows, as they relate to interest, and our earnings. To manage the volatility relating to these exposures, we periodically enter into various derivative transactions pursuant to our policies to hedge against known or forecasted interest rate exposures.

Interest Rate Risk—Sensitivity. Our current earnings exposure for changes in interest rates can be summarized as follows:

- (i) Changes in interest rates can cause our cash flows to fluctuate. An increase of 10%, or approximately 36 basis points, in current interest rates would cause our cash outflows to increase by \$1.5 million for fiscal year 2019.
- (ii) Changes in interest rates can cause our interest income and cash flows to fluctuate.

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Item 8. Financial Statements and Supplemental Data

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of PerkinElmer, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of PerkinElmer, Inc. and subsidiaries (the “Company”) as of December 30, 2018 and December 31, 2017, and the related consolidated statements of operations, comprehensive income, stockholders’ equity, and cash flows for each of the three years in the period ended December 30, 2018, the related notes, and the schedule listed in the Index at Item 15 (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 30, 2018 and December 31, 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 30, 2018, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 30, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 26, 2019 expressed an unqualified opinion on the Company’s internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 1 to the financial statements, the Company adopted Accounting Standards Codification Topic 606, “Revenue from Contracts with Customers,” using the modified retrospective adoption method on January 1, 2018.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s / DELOITTE & TOUCHE LLP

Boston, Massachusetts
February 26, 2019

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

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CONSOLIDATED STATEMENTS OF OPERATIONS

For the Fiscal Years Ended

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands, except per share data)		
Revenue			
Product revenue	\$1,935,493	\$1,477,414	\$1,396,896
Service revenue	842,503	779,568	718,621
Total revenue	2,777,996	2,256,982	2,115,517
Cost of product revenue	908,228	707,962	663,795
Cost of service revenue	528,829	475,266	437,361
Selling, general and administrative expenses	811,913	626,018	590,471
Research and development expenses	193,998	139,464	124,184
Restructuring and contract termination charges, net	11,144	12,657	5,124
Operating income from continuing operations	323,884	295,615	294,582
Interest and other expense, net	66,201	(1,103)	) 50,514
Income from continuing operations before income taxes	257,683	296,718	244,068
Provision for income taxes	20,208	139,828	28,362
Income from continuing operations	237,475	156,890	215,706
Income from discontinued operations before income taxes	—	650	22,229
(Loss) gain on disposition of discontinued operations before income taxes	(859)	) 179,615	619
(Benefit from) provision for income taxes on discontinued operations and dispositions	(1,311)	) 44,522	4,255
Income from discontinued operations and dispositions	452	135,743	18,593
Net income	\$237,927	\$292,633	\$234,299
Basic earnings per share:			
Income from continuing operations	\$2.15	\$1.43	\$1.97
Income from discontinued operations and dispositions	0.00	1.24	0.17
Net income	\$2.15	\$2.67	\$2.14
Diluted earnings per share:			
Income from continuing operations	\$2.13	\$1.42	\$1.96
Income from discontinued operations and dispositions	0.00	1.22	0.17
Net income	\$2.13	\$2.64	\$2.12

The accompanying notes are an integral part of these consolidated financial statements.

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CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

For the Fiscal Years Ended

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Net income	\$237,927	\$292,633	\$234,299
Other comprehensive (loss) income			
Foreign currency translation adjustments, net of tax	(123,388)	54,341	(54,077)
Reclassification of taxes on foreign currency translation adjustments to earnings upon adoption of ASU 2018-02	(6,489)	—	—
Unrecognized prior service costs, net of tax	(77)	(77)	(860)
Unrealized (losses) gains on securities, net of tax	(9)	79	32
Other comprehensive (loss) income	(129,963)	54,343	(54,905)
Comprehensive income	\$107,964	\$346,976	\$179,394

The accompanying notes are an integral part of these consolidated financial statements.

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CONSOLIDATED BALANCE SHEETS

As of the Fiscal Years Ended

	December 30, 2018	December 31, 2017
	(In thousands, except share and per share data)	
Current assets:		
Cash and cash equivalents	\$163,111	\$202,134
Accounts receivable, net	632,669	552,304
Inventories	338,347	351,675
Other current assets	100,507	93,842
Total current assets	1,234,634	1,199,955
Property, plant and equipment, net	318,590	298,066
Intangible assets, net	1,199,667	1,346,940
Goodwill	2,952,608	3,002,198
Other assets, net	270,023	244,304
Total assets	\$5,975,522	\$6,091,463
Current liabilities:		
Current portion of long-term debt	\$14,856	\$217,306
Accounts payable	220,949	222,093
Accrued restructuring and contract termination charges	4,834	8,759
Accrued expenses and other current liabilities	528,827	500,642
Current liabilities of discontinued operations	2,165	2,102
Total current liabilities	771,631	950,902
Long-term debt	1,876,624	1,788,803
Long-term liabilities	742,312	848,570
Total liabilities	3,390,567	3,588,275
Commitments and contingencies (see Notes 15 and 18)		
Stockholders' equity:		
Preferred stock—\$1 par value per share, authorized 1,000,000 shares; none issued or outstanding	—	—
Common stock—\$1 par value per share, authorized 300,000,000 shares; issued and outstanding 110,597,000 and 110,361,000 shares at December 30, 2018 and December 31, 2017, respectively	110,597	110,361
Capital in excess of par value	48,772	58,828
Retained earnings	2,602,067	2,380,517
Accumulated other comprehensive loss	(176,481)	(46,518)
Total stockholders' equity	2,584,955	2,503,188
Total liabilities and stockholders' equity	\$5,975,522	\$6,091,463

The accompanying notes are an integral part of these consolidated financial statements.

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CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

For the Three Fiscal Years Ended December 30, 2018

	Common Stock Amount	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	(In thousands)				
Balance, January 3, 2016	\$112,034	\$52,932	\$1,991,431	\$ (45,956)	\$2,110,441
Adjustment to recognize prior year's unrecognized excess tax benefits upon adoption of ASU 2016-09	—	177	14,051	—	14,228
Net income	—	—	234,299	—	234,299
Other comprehensive loss	—	—	—	(54,905)	(54,905)
Dividends	—	—	(30,629)	—	(30,629)
Exercise of employee stock options and related income tax benefits	576	13,842	—	—	14,418
Issuance of common stock for employee stock purchase plans	50	2,413	—	—	2,463
Purchases of common stock	(3,275)	(58,058)	(90,468)	—	(151,801)
Issuance of common stock for long-term incentive program	232	10,193	—	—	10,425
Stock compensation	—	4,631	—	—	4,631
Balance, January 1, 2017	\$109,617	\$26,130	\$2,118,684	\$ (100,861)	\$2,153,570
Net income	—	—	292,633	—	292,633
Other comprehensive income	—	—	—	54,343	54,343
Dividends	—	—	(30,800)	—	(30,800)
Exercise of employee stock options and related income tax benefits	578	17,426	—	—	18,004
Issuance of common stock for employee stock purchase plans	37	2,430	—	—	2,467
Purchases of common stock	(79)	(4,288)	—	—	(4,367)
Issuance of common stock for long-term incentive program	208	12,145	—	—	12,353
Stock compensation	—	4,985	—	—	4,985
Balance, December 31, 2017	\$110,361	\$58,828	\$2,380,517	\$ (46,518)	\$2,503,188
Cumulative effect of adopting ASC 606	—	—	10,209	—	10,209
Impact of adopting ASU 2016-16	—	—	(2,062)	—	(2,062)
Impact of adopting ASU 2018-02	—	—	6,489	(6,489)	—
Net income	—	—	237,927	—	237,927
Other comprehensive loss	—	—	—	(123,474)	(123,474)
Dividends	—	—	(31,013)	—	(31,013)
Exercise of employee stock options and related income tax benefits	709	24,124	—	—	24,833
Issuance of common stock for employee stock purchase plans	21	1,464	—	—	1,485
Purchases of common stock	(717)	(56,676)	—	—	(57,393)
	223	15,650	—	—	15,873

Issuance of common stock for long-term incentive program

Stock compensation	—	5,382	—	—	5,382
Balance, December 30, 2018	\$110,597	\$48,772	\$2,602,067	\$ (176,481)	\$2,584,955

The accompanying notes are an integral part of these consolidated financial statements.

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CONSOLIDATED STATEMENTS OF CASH FLOWS

For the Fiscal Years Ended

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Operating activities:			
Net income	\$237,927	\$292,633	\$234,299
Income from discontinued operations and dispositions, net of income taxes	(452)	(135,743)	(18,593)
Income from continuing operations	237,475	156,890	215,706
Adjustments to reconcile income from continuing operations to net cash provided by continuing operations:			
Restructuring and contract termination charges, net	11,144	12,657	5,124
Depreciation and amortization	180,588	105,000	99,972
Stock-based compensation	28,767	25,421	17,158
Pension and other postretirement expense (benefits)	11,915	(10,439)	14,511
Change in fair value of contingent consideration	14,639	2,162	16,183
Deferred taxes	(51,103)	28,854	(6,526)
Contingencies and non-cash tax matters	(671)	182	(291)
Amortization of deferred debt issuance costs and accretion of discounts	3,341	2,592	2,137
(Gain) loss on disposition of businesses and assets, net	(12,844)	309	(5,562)
Amortization of acquired inventory revaluation	19,272	6,188	396
Gain on sale of investments, net	(557)	—	—
Changes in assets and liabilities which provided (used) cash, excluding effects from companies acquired:			
Accounts receivable, net	(94,512)	(36,633)	(18,960)
Inventories	(30,183)	(17,923)	6,752
Accounts payable	8,900	34,331	30,716
Accrued expenses and other	(14,933)	(17,436)	(53,540)
Net cash provided by operating activities of continuing operations	311,238	292,155	323,776
Net cash (used in) provided by operating activities of discontinued operations	(200)	(3,702)	26,839
Net cash provided by operating activities	311,038	288,453	350,615
Investing activities:			
Capital expenditures	(93,253)	(39,089)	(31,702)
Settlement of cash flow hedges	—	36,541	—
Purchases of investments	(7,019)	(10,783)	—
Proceeds from disposition of businesses	38,027	1,100	21,000
Proceeds from surrender of life insurance policies	72	45	44
Activity related to acquisitions, net of cash and cash equivalents acquired	(97,686)	(1,527,183)	(71,924)
Net cash used in investing activities of continuing operations	(159,859)	(1,539,369)	(82,582)
Net cash provided by (used in) investing activities of discontinued operations	—	272,779	(1,302)
Net cash used in investing activities	(159,859)	(1,266,590)	(83,884)
Financing activities:			
Payments on borrowings	(1,264,000)	(235,965)	(902,507)
Proceeds from borrowings	857,000	1,060,952	420,507
Proceeds from sale of senior debt	369,340	—	546,190

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Payments of debt financing costs	(2,634)	—	(7,868)
Net payments on other credit facilities	(28,383)	(2,831)	(1,096)
Settlement of cash flow hedges	(34,132)	(13,824)	(1,900)
Payments for acquisition-related contingent consideration	(12,800)	(8,940)	(155)
Proceeds from issuance of common stock under stock plans	24,833	18,004	14,418
Purchases of common stock	(57,445)	(3,834)	(151,801)
Dividends paid	(31,009)	(30,793)	(30,799)
Net cash (used in) provided by financing activities of continuing operations	(179,230)	782,769	(115,011)
Net cash used in financing activities of discontinued operations	—	(533)	—
Net cash (used in) provided by financing activities	(179,230)	782,236	(115,011)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(8,004)	21,703	(13,422)
Net (decrease) increase in cash, cash equivalents and restricted cash	(36,055)	(174,198)	138,298
Cash, cash equivalents and restricted cash at beginning of year	202,370	376,568	238,270
Cash, cash equivalents and restricted cash at end of year	\$ 166,315	\$ 202,370	\$ 376,568

Supplemental disclosures of cash flow information

Reconciliation of cash, cash equivalents and restricted cash reported within the consolidated balance sheets that sum to the total shown in the consolidated statements of cash flows:

Cash and cash equivalents	163,111	202,134	359,265
Restricted cash included in other current assets	3,204	236	17,303
Total cash, cash equivalents and restricted cash shown in the consolidated statements of cash flows	\$ 166,315	\$ 202,370	\$ 376,568

Cash paid during the year for:

Interest	\$ 56,451	\$ 35,780	\$ 30,718
Income taxes	\$ 59,844	\$ 77,607	\$ 43,549

The accompanying notes are an integral part of these consolidated financial statements.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1: Nature of Operations and Accounting Policies

Nature of Operations: PerkinElmer, Inc. is a leading provider of products, services and solutions to the diagnostics, life sciences and applied markets. Through its advanced technologies and differentiated solutions, critical issues are addressed that help to improve lives and the world around us.

The consolidated financial statements include the accounts of PerkinElmer, Inc. and its subsidiaries (the "Company"). All intercompany balances and transactions have been eliminated in consolidation.

The Company has two operating segments: Discovery & Analytical Solutions and Diagnostics. The Company's Discovery & Analytical Solutions segment focuses on service and innovating for customers spanning the life sciences and applied markets. The Company's Diagnostics segment is targeted towards meeting the needs of clinically-oriented customers, especially within the growing areas of reproductive health, emerging market diagnostics and applied genomics.

The Company's fiscal year ends on the Sunday nearest December 31. The Company reports fiscal years under a 52/53 week format and as a result, certain fiscal years will contain 53 weeks. Each of the fiscal years ended December 30, 2018 ("fiscal year 2018"), December 31, 2017 ("fiscal year 2017") and January 1, 2017 ("fiscal year 2016") included 52 weeks. The fiscal year ending December 29, 2019 will include 52 weeks.

Accounting Policies and Estimates: The preparation of consolidated financial statements in accordance with United States ("U.S.") Generally Accepted Accounting Principles ("GAAP") requires the Company to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, the Company evaluates its estimates. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

Revenue Recognition: The Company enters into contracts that can include various combinations of products and services, which are generally capable of being distinct and accounted for as separate performance obligations. The Company recognizes revenue in an amount that reflects the consideration the Company expects to receive in exchange for the promised products or services when a performance obligation is satisfied by transferring control of those products or services to customers.

Taxes that are collected by the Company from a customer and assessed by a governmental authority, that are both imposed on and concurrent with a specific revenue-producing transaction, are excluded from revenue.

Warranty Costs: The Company provides for estimated warranty costs for products at the time of their sale. Warranty liabilities are estimated using expected future repair costs based on historical labor and material costs incurred during the warranty period.

Shipping and Handling Costs: The Company reports shipping and handling revenue in revenue, to the extent they are billed to customers, and the associated costs in cost of product revenue.

Inventories: Inventories, which include material, labor and manufacturing overhead, are valued at the lower of cost or market. Inventories are accounted for using the first-in, first-out method of determining inventory costs. Inventory quantities on-hand are regularly reviewed, and where necessary, provisions for excess and obsolete inventory are recorded based primarily on the Company's estimated forecast of product demand and production requirements.

Income Taxes: The Company uses the asset and liability method of accounting for income taxes. Under the asset and liability method, deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of assets and liabilities and their respective tax bases. This method also requires the recognition of future tax benefits such as net operating loss carryforwards, to the extent that realization of such benefits is more likely than not. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the fiscal years in which those temporary differences are expected to be recovered or settled. A valuation allowance is established for any deferred tax asset for which realization is not more likely than not. With respect to earnings expected to be indefinitely reinvested offshore, the Company does not accrue tax for the repatriation of such foreign earnings. When the Company determines during the period that previously undistributed earnings of certain international subsidiaries no longer meet the requirements of indefinite reinvestment, the Company recognizes the income tax expense in that period.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The Company provides reserves for potential payments of tax to various tax authorities related to uncertain tax positions and other issues. These reserves are based on a determination of whether and how much of a tax benefit taken by the Company in its tax filings or positions is more likely than not to be realized following resolution of any potential contingencies present related to the tax benefit. Potential interest and penalties associated with such uncertain tax positions is recorded as a component of income tax expense. See Note 8 below for additional details.

The Company uses an individual unit of account approach for releasing the income tax effects of unrealized gains and losses from Accumulated Other Comprehensive Income ("AOCI").

Property, Plant and Equipment: The Company depreciates property, plant and equipment using the straight-line method over its estimated useful lives, which generally fall within the following ranges: buildings- 10 to 40 years; leasehold improvements-estimated useful life or remaining term of lease, whichever is shorter; and machinery and equipment- 3 to 8 years. Certain tooling costs are capitalized and amortized over a 3-year life, while repairs and maintenance costs are expensed.

Asset Retirement Obligations: The Company records obligations associated with its lease obligations, the retirement of tangible long-lived assets and the associated asset retirement costs in accordance with authoritative guidance on asset retirement obligations. The Company reviews legal obligations associated with the retirement of long-lived assets that result from contractual obligations or the acquisition, construction, development and/or normal use of the assets. If it is determined that a legal obligation exists, regardless of whether the obligation is conditional on a future event, the fair value of the liability for an asset retirement obligation is recognized in the period in which it is incurred, if a reasonable estimate of fair value can be made. The fair value of the liability is added to the carrying amount of the associated asset, and this additional carrying amount is depreciated over the life of the asset. The difference between the gross expected future cash flow and its present value is accreted over the life of the related lease as interest expense. The amounts recorded in the consolidated financial statements are not material to any year presented.

Pension and Other Postretirement Benefits: The Company sponsors both funded and unfunded U.S. and non-U.S. defined benefit pension plans and other postretirement benefits. The Company immediately recognizes actuarial gains and losses in operating results in the year in which the gains and losses occur. Actuarial gains and losses are measured annually as of the calendar month-end that is closest to the Company's fiscal year end and accordingly will be recorded in the fourth quarter, unless the Company is required to perform an interim remeasurement. The remaining components of pension expense, primarily service and interest costs and assumed return on plan assets, are recorded on a quarterly basis. The Company's funding policy provides that payments to the U.S. pension trusts shall at least be equal to the minimum funding requirements of the Employee Retirement Income Security Act of 1974. Non-U.S. plans are accrued for, but generally not fully funded, and benefits are paid from operating funds.

Translation of Foreign Currencies: For foreign operations, asset and liability accounts are translated at current exchange rates; income and expenses are translated using weighted average exchange rates for the reporting period. Resulting translation adjustments, as well as translation gains and losses from certain intercompany transactions considered permanent in nature, are reported in accumulated other comprehensive (loss) income, a separate component of stockholders' equity. Gains and losses arising from transactions and translation of period-end balances denominated in currencies other than the functional currency are included in other expense, net.

Business Combinations: Business combinations are accounted for at fair value. Acquisition costs are expensed as incurred and recorded in selling, general and administrative expenses; previously held equity interests are valued at fair value upon the acquisition of a controlling interest; in-process research and development ("IPR&D") is recorded at

fair value as an intangible asset at the acquisition date; restructuring costs associated with a business combination are expensed subsequent to the acquisition date; and changes in deferred tax asset valuation allowances and income tax uncertainties after the acquisition date affect income tax expense. Measurement period adjustments are made in the period in which the amounts are determined and the current period income effect of such adjustments will be calculated as if the adjustments had been completed as of the acquisition date. All changes that do not qualify as measurement period adjustments are also included in current period earnings. The accounting for business combinations requires estimates and judgment as to expectations for future cash flows of the acquired business, and the allocation of those cash flows to identifiable intangible assets, in determining the estimated fair value for assets acquired and liabilities assumed. The fair values assigned to tangible and intangible assets acquired and liabilities assumed, including contingent consideration, are based on management's estimates and assumptions, as well as other information compiled by management, including valuations that utilize customary valuation procedures and techniques. If the actual results differ from the estimates and judgments used in these estimates, the amounts recorded in the financial statements could result in a possible impairment of the intangible assets and goodwill, require acceleration of the amortization expense of finite-lived intangible assets, or the recognition of additional consideration which would be expensed.

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Goodwill and Other Intangible Assets: The Company's intangible assets consist of (i) goodwill, which is not being amortized; (ii) indefinite lived intangibles, which consist of a trade name that is not subject to amortization; and (iii) amortizing intangibles, which consist of patents, trade names and trademarks, licenses, customer relationships and purchased technologies, which are being amortized over their estimated useful lives.

The process of testing goodwill for impairment involves the determination of the fair value of the applicable reporting units. The test consists of the comparison of the fair value to the carrying value of the reporting unit to determine if the carrying value exceeds the fair value. If the carrying value of the reporting unit exceeds its fair value, an impairment loss in an amount equal to that excess is recognized up to the amount of goodwill. This annual impairment assessment is performed by the Company on the later of January 1 or the first day of each fiscal year. Non-amortizing intangibles are also subject to an annual impairment test. The impairment test consists of a comparison of the fair value of the non-amortizing intangible asset with its carrying amount. If the carrying amount of a non-amortizing intangible asset exceeds its fair value, an impairment loss in an amount equal to that excess is recognized up to the amount of the amortizing intangible asset. In addition, the Company evaluates the remaining useful life of its non-amortizing intangible asset at least annually to determine whether events or circumstances continue to support an indefinite useful life. If events or circumstances indicate that the useful life of non-amortizing intangible asset is no longer indefinite, the asset will be tested for impairment. The intangible asset will then be amortized prospectively over its estimated remaining useful life and accounted for in the same manner as other intangible assets that are subject to amortization. Amortizing intangible assets are reviewed for impairment when indicators of impairment are present. When a potential impairment has been identified, forecasted undiscounted net cash flows of the operations to which the asset relates are compared to the current carrying value of the long-lived assets present in that operation. If such cash flows are less than such carrying amounts, long-lived assets, including such intangibles, are written down to their respective fair values. See Note 14 below for additional details.

Stock-Based Compensation: The Company accounts for stock-based compensation expense based on estimated grant date fair value, generally using the Black-Scholes option-pricing model. The fair value is recognized as expense in the consolidated financial statements over the requisite service period. The determination of fair value and the timing of expense using option pricing models such as the Black-Scholes model require the input of highly subjective assumptions, including the expected term and the expected price volatility of the underlying stock. The Company estimates the expected term assumption based on historical experience. In determining the Company's expected stock price volatility assumption, the Company reviews both the historical and implied volatility of the Company's common stock, with implied volatility based on the implied volatility of publicly traded options on the Company's common stock. The Company has one stock-based compensation plan from which it makes grants, which is described more fully in Note 20 below.

Marketable Securities and Investments: The cost of securities sold is based on the specific identification method. If securities are classified as available for sale, the Company records these investments at their fair values with unrealized gains and losses included in accumulated other comprehensive (loss) income. Under the cost method of accounting, equity investments in private companies are carried at cost and are adjusted for other-than-temporary declines in fair value, additional investments or distributions.

Cash and Cash Equivalents: The Company considers all highly liquid unrestricted instruments with a purchased maturity of three months or less to be cash equivalents. The carrying amount of cash equivalents approximates fair value due to the short maturities of these instruments.

Environmental Matters: The Company accrues for costs associated with the remediation of environmental pollution when it is probable that a liability has been incurred and the Company's proportionate share of the amount can be

reasonably estimated. The recorded liabilities have not been discounted.

Research and Development: Research and development costs are expensed as incurred. The fair value of acquired IPR&D costs are recorded at fair value as an intangible asset at the acquisition date and amortized once the product is ready for sale or expensed if abandoned.

Restructuring Charges: In recent fiscal years, the Company has undertaken a series of restructuring actions related to the impact of acquisitions and divestitures, the alignment of its operations with its growth strategy, the integration of its business units and its productivity initiatives. In connection with these initiatives, the Company has recorded restructuring charges, as more fully described in Note 6 below. Generally, costs associated with an exit or disposal activity are recognized when the liability is incurred. Prior to recording restructuring charges for employee separation agreements, the Company notifies all employees of termination. Costs related to employee separation arrangements requiring future service beyond a specified minimum retention period are recognized over the service period. Costs related to lease terminations are recorded at the fair value of the liability based on the remaining lease rental payments, reduced by estimated sublease rentals that could be reasonably obtained for the property, at the date the Company ceases use.

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Comprehensive Income: Comprehensive income is defined as net income or loss and other changes in stockholders' equity from transactions and other events from sources other than stockholders. Comprehensive income is reflected in the consolidated statements of comprehensive income.

Derivative Instruments and Hedging: Derivatives are recorded on the consolidated balance sheets at fair value. Accounting for gains or losses resulting from changes in the values of those derivatives depends on the use of the derivative instrument and whether it qualifies for hedge accounting.

For a cash flow hedge, the effective portion of the derivative's gain or loss is initially reported as a component of other comprehensive income and subsequently amortized into net earnings when the hedged exposure affects net earnings. Cash flow hedges related to anticipated transactions are designated and documented at the inception of each hedge by matching the terms of the contract to the underlying transaction. The Company classifies the cash flows from hedging transactions in the same categories as the cash flows from the respective hedged items. Once established, cash flow hedges are generally recorded in other comprehensive income, unless an anticipated transaction is no longer likely to occur, and subsequently amortized into net earnings when the hedged exposure affects net earnings. Discontinued or dedesignated cash flow hedges are immediately settled with counterparties, and the related accumulated derivative gains or losses are recognized into net earnings on the consolidated financial statements. Settled cash flow hedges related to forecasted transactions that remain probable are recorded as a component of other comprehensive (loss) income and are subsequently amortized into net earnings when the hedged exposure affects net earnings. Forward contract effectiveness for cash flow hedges is calculated by comparing the fair value of the contract to the change in value of the anticipated transaction using forward rates on a monthly basis. The Company also has entered into other foreign currency forward contracts that are not designated as hedging instruments for accounting purposes. These contracts are recorded at fair value, with the changes in fair value recognized into interest and other expense, net on the consolidated financial statements.

The Company also uses foreign currency denominated debt to hedge its investments in certain foreign subsidiaries. Realized and unrealized translation adjustments from these hedges are included in the foreign currency translation component of AOCI, as well as the offset translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold.

Recently Issued Accounting Pronouncements: From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (the "FASB") and are adopted by the Company as of the specified effective dates. Unless otherwise discussed, such pronouncements did not have or will not have a significant impact on the Company's consolidated financial position, results of operations and cash flows or do not apply to the Company's operations.

In August 2018, the FASB issued Accounting Standards Update No. 2018-15, Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract ("ASU 2018-15"). ASU 2018-15 aligns the accounting for implementation costs incurred in a hosting arrangement that is a service contract with the guidance on capitalizing costs associated with developing or obtaining internal-use software (and hosting arrangements that include an internal-use software license). Specifically, ASU 2018-15 amends Intangibles-Goodwill and Other (Topic 350) to include in its scope implementation costs incurred in a hosting arrangement that is a service contract and clarifies that a customer should apply Subtopic 350-40 to determine which implementation costs to capitalize as an asset related to the service contract and which costs to expense. The provisions of this guidance are to be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. ASU 2018-15 is effective for annual reporting periods beginning after December 15, 2019, and interim periods within those years with early adoption permitted. The Company is currently evaluating the requirements of this guidance and has not yet determined the impact of its adoption on the Company's consolidated financial position, results of operations and cash

flows.

In August 2018, the FASB issued Accounting Standards Update No. 2018-14, Compensation - Retirement Benefits - Defined Benefit Plans - General (Subtopic 715-20): Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans ("ASU 2018-14"). ASU 2018-14 adds, removes, and clarifies disclosure requirements related to defined benefit pension and other postretirement plans. ASU 2018-14 adds requirements for an entity to disclose the weighted-average interest crediting rates used in the entity's cash balance pension plans and other similar plans; and an explanation of the reasons for significant gains and losses related to changes in the benefit obligation for the period. Further, ASU 2018-14 removes guidance that currently requires the following disclosures: the amounts in accumulated other comprehensive income expected to be recognized as part of net periodic benefit cost over the next year; the amount and timing of plan assets expected to be returned to the employer; information about (1) benefits covered by related-party insurance and annuity contracts and (2) significant transactions between the plan and related parties; and the effects of a one-percentage-point change on the assumed health care costs and the effect of this change in rates on service cost, interest cost, and the benefit obligation for postretirement health care benefits. ASU 2018-14 also clarifies the guidance in Compensation-Retirement Benefits (Topic 715-20-50-3) on

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defined benefit plans to require disclosure of (1) the projected benefit obligation ("PBO") and fair value of plan assets for pension plans with PBOs in excess of plan assets (the same disclosure with reference to the accumulated postretirement benefit obligation rather than the PBO is required for other postretirement benefit plans) and (2) the accumulated benefit obligation ("ABO") and fair value of plan assets for pension plans with ABOs in excess of plan assets. The provisions of this guidance are to be applied retrospectively to all periods presented upon their effective date. ASU 2018-14 is effective for annual reporting periods beginning after December 15, 2020, and interim periods within those years with early adoption permitted. The Company is currently evaluating the requirements of this guidance and has not yet determined the impact of its adoption on the Company's consolidated financial position, results of operations and cash flows.

In August 2018, the FASB issued Accounting Standards Update No. 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement ("ASU 2018-13"). ASU 2018-13 adds, removes, and modifies certain disclosures related to fair value measurements. ASU 2018-13 adds requirements for an entity to disclose the changes in unrealized gains and losses for the period included in other comprehensive income for recurring Level 3 fair value measurements held at the end of the reporting period; and the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. Further, ASU 2018-13 removes the requirement to disclose the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy; the policy for timing of transfers between levels; and the valuation processes for Level 3 fair value measurements. ASU 2018-13 also modifies existing disclosure requirements related to measurement uncertainty. The amendments regarding changes in unrealized gains and losses, the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements, and the narrative description of measurement uncertainty are to be applied prospectively for only the most recent interim or annual period presented in the initial fiscal year of adoption. All other amendments are to be applied retrospectively to all periods presented upon their effective date. ASU 2018-13 is effective for annual reporting periods beginning after December 15, 2019, and interim periods within those years. Early adoption is permitted for any removed or modified disclosures. The Company is currently evaluating the requirements of this guidance and has not yet determined the impact of its adoption on the Company's consolidated financial position, results of operations and cash flows.

In June 2018, the FASB issued Accounting Standards Update No. 2018-07, Compensation - Stock Compensation (Topic 718), Improvements to Nonemployee Share-Based Payment Accounting ("ASU 2018-07") which supersedes Subtopic 505-50, Equity - Equity-Based Payments to Non-employees, and expands the scope of Topic 718 (which currently only includes share-based payments to employees) to also include share-based payments issued to non-employees for goods and services, except for specific guidance on inputs to an option pricing model and the attribution of cost (that is, the period of time over which share-based payment awards vest and the pattern of cost recognition over that period). ASU 2018-07 specifies that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor's own operations by issuing share-based payment awards, except for financing transactions, or awards issued to customers as part of a contract accounted for under Topic 606, Revenue from Contracts with Customers ("Topic 606"). The provisions of this guidance are to be applied using a modified retrospective approach, with a cumulative-effect adjustment to retained earnings as of the beginning of the fiscal year, for all (1) liability-classified non-employee awards that have not been settled as of the adoption date and (2) equity-classified non-employee awards for which a measurement date has not been established. ASU 2018-07 is effective for annual reporting periods beginning after December 15, 2018, and interim periods within those years. Early adoption is permitted, but no earlier than a company's adoption date of Topic 606. The Company early adopted the provisions of this guidance effective July 2, 2018. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flow.

In March 2018, the FASB Issued Accounting Standards Update No. 2018-05, Income Taxes (Topic 740): Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118 ("ASU 2018-05"). ASU 2018-05 was issued to incorporate into Topic 740 recent SEC guidance related to the income tax accounting implications of the Tax Cut and Jobs Act (the "Tax Act"). The SEC issued Staff Accounting Bulletin No. 118 ("SAB 118") to address

concerns about reporting entities' ability to timely comply with the accounting requirements to recognize all of the effects of the Tax Act in the period of enactment. SAB 118 permits companies to disclose that some or all of the income tax effects from the Tax Act are incomplete by the due date of the financial statements, and if possible, disclose a reasonable estimate of such tax effects. ASU 2018-05 is effective immediately. The Company is applying the guidance in ASU 2018-05 when accounting for the enactment date effects of the Tax Act. At December 30, 2018, the Company completed the accounting for all of the tax effects of the Tax Act using reasonable estimates of their effects based on currently available information. These estimates may be affected as additional clarification and implementation guidance becomes available. These changes could be material to the Company's income tax expense. See Note 8 for further disclosures.

In February 2018, the FASB Issued Accounting Standards Update No. 2018-03, Technical Corrections and Improvements to Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities ("ASU 2018-03"). ASU 2018-03 was issued to clarify certain aspects of guidance concerning the recognition of financial assets and liabilities established in Accounting Standards Update No. 2016-01, Financial Instruments - Overall

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(Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities ("ASU 2016-01"). This includes treatment for discontinuations and adjustments for equity securities without a readily determinable market value, forward contracts and purchased options, presentation requirements for certain fair value option liabilities, fair value option liabilities denominated in a foreign currency, and transition guidance for equity securities without a readily determinable fair value. ASU 2018-03 is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years beginning after June 15, 2018. Early adoption is permitted for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years, as long as the Company has adopted ASU 2016-01. The Company adopted the provisions of this guidance effective July 2, 2018. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows.

In February 2018, the FASB Issued Accounting Standards Update No. 2018-02, Income Statement-Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income ("ASU 2018-02"). ASU 2018-02 provides entities with an option to reclassify stranded tax effects within AOCI to retained earnings in each period in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Act (or portion thereof) is recorded. ASU 2018-02 requires entities to disclose a description of the accounting policy for releasing income tax effects from AOCI; whether they elect to reclassify the stranded income tax effects from the Tax Act; and information about the other income tax effects that are reclassified. ASU 2018-02 is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted, and entities should apply the proposed amendments either in the period of adoption or retrospectively to each period (or periods) in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Act is recognized. The Company adopted ASU 2018-02 on December 30, 2018. The adoption of the standard resulted in an increase in retained earnings at December 30, 2018 in the amount of \$6.5 million, with a corresponding decrease in AOCI. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows, other than the impact discussed above.

In August 2017, the FASB issued Accounting Standards Update No. 2017-12, Derivatives and Hedging (Topic 815), Targeted Improvements to Accounting for Hedging Activities ("ASU 2017-12"), which amends the hedge accounting recognition and presentation requirements in Topic 815. ASU 2017-12 makes targeted changes to the existing hedge accounting model to better align an entity's financial reporting for hedging relationships with the entity's risk management activities, and to reduce the complexity of, and simplify the application of, the hedge accounting model. Specifically, ASU 2017-12 expands the types of transactions eligible for hedge accounting, eliminates the requirement to separately measure and present hedge ineffectiveness, simplifies the way assessments of hedge ineffectiveness may be performed, relaxes the documentation requirements for entering into hedging positions, provides targeted improvements to fair value hedges of interest rate risk, and permits an entity to exclude the change in the fair value of cross-currency basis spreads in currency swaps from the assessment of hedge effectiveness. The standard also requires entities to provide new disclosures about the impact fair value and cash flow hedges have on their income statements and about cumulative basis adjustments arising from fair value hedges. The provisions of this guidance are to be applied using a modified retrospective approach to existing hedging relationships as of the adoption date. However, the transition provisions allow for certain elections at the date of adoption and entities may choose to apply any of the provided elections. ASU 2017-12 is effective for annual reporting periods beginning after December 15, 2018, and interim periods within those years. Early adoption is permitted, including adoption in any interim period. The Company early adopted the provisions of this guidance effective January 1, 2018. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows.

In May 2017, the FASB issued Accounting Standards Update No. 2017-09, Compensation - Stock Compensation (Topic 718), Scope of Modification Accounting ("ASU 2017-09"), which amends the scope of modification accounting for share-based payment arrangements. ASU 2017-09 provides guidance on the types of changes to the

terms or conditions of share-based payment awards to which an entity would be required to apply modification accounting under Topic 718. Specifically, an entity would not apply modification accounting if the fair value, vesting conditions, and classification of the awards are the same immediately before and after the modification. If an entity modifies its awards and concludes that it is not required to apply modification accounting under the standard, it must still consider whether the modification affects its application of other guidance. Additionally, if a significant modification does not result in incremental compensation cost, entities are required to disclose the “lack of” incremental compensation cost resulting from such significant modification. The standard also removes the guidance in Topic 718 stating that modification accounting is not required when an entity adds an antidilution provision as long as that modification is not made in contemplation of an equity restructuring. The provisions of this guidance are to be applied on a prospective basis to awards modified on or after the effective date. ASU 2017-09 is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those years. Early adoption is permitted, including adoption in any interim period. The Company adopted ASU 2017-09 effective January 1, 2018. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows.

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In March 2017, the FASB issued Accounting Standards Update No. 2017-07, Compensation - Retirement Benefits (Topic 715), Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost ("ASU 2017-07"), which amends the requirements in Topic 715 related to the income statement presentation of the components of net periodic benefit cost for an entity's sponsored defined benefit pension and other postretirement plans. ASU 2017-07 requires entities to (1) disaggregate the current-service-cost component from the other components of net benefit cost (the "other components") and present it with other current employee compensation costs in their income statements and (2) present the other components elsewhere in their income statements and outside of income from operations, and disclose the income statement lines that contain the other components if they are not presented on appropriately described separate lines. Additionally, the standard requires that only the service-cost component of net benefit cost is eligible for capitalization (e.g., as part of inventory or property, plant, and equipment). The change in income statement presentation requires retrospective application, while the change in capitalized benefit cost is to be applied prospectively. ASU 2017-07 is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those years, with early adoption permitted. The standard provides a practical expedient that permits entities to use the components of cost disclosed in prior years as a basis for the retrospective application of the new income statement presentation. Entities need to disclose the use of the practical expedient. The Company adopted ASU 2017-07 effective January 1, 2018 using a retrospective approach for each period presented. For the fiscal years 2017 and 2016, \$(9.2) million and \$11.5 million, respectively, of net periodic pension (credit) cost previously presented within operating income has been presented outside of operating income in the line item "Interest and other expense, net" in the consolidated statements of operations due to the retrospective adoption of ASU 2017-07. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows, other than the impact discussed above.

In January 2017, the FASB issued Accounting Standards Update No. 2017-01, Business Combinations (Topic 805), Clarifying the Definition of a Business ("ASU 2017-01"), which amends Topic 805 to provide a screen to determine when a set of assets and liabilities is not a business. The screen requires that when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not a business. This screen reduces the number of transactions that need to be further evaluated. If the screen is not met, the standard (1) requires that to be considered a business, a set must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create output and (2) removes the evaluation of whether a market participant could replace missing elements. The standard provides a framework to assist entities in evaluating whether both an input and a substantive process are present. The standard also provides a framework that includes two sets of criteria to consider that depend on whether a set has outputs and a more stringent criteria for sets without outputs. Lastly, the standard narrows the definition of the term "output" so that the term is consistent with how outputs are described in Topic 606, Revenue from Contracts with Customers. The provisions of this guidance are to be applied prospectively. ASU 2017-01 is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those years, with early adoption permitted in limited circumstances. The Company adopted ASU 2017-01 effective January 1, 2018. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows.

In November 2016, the FASB issued Accounting Standards Update No. 2016-18, Statement of Cash Flows (Topic 230), Restricted Cash ("ASU 2016-18"), which amends Topic 230 to add or clarify guidance on the classification and presentation of restricted cash in the statement of cash flows. The standard requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The provisions of this guidance are to be applied using a retrospective transition method to each period presented. ASU 2016-18 is effective for annual reporting

periods beginning after December 15, 2017, and interim periods within those years, with early adoption permitted. The Company adopted ASU 2016-18 effective January 1, 2018. For the fiscal years 2017 and 2016, \$17.2 million and \$(17.0) million, respectively, of changes in restricted cash balances that were previously presented within investing activities in the consolidated statements of cash flows have been excluded from the cash flows used in investing activities and the effect of exchange rate changes increased by \$0.2 million in fiscal year 2017, due to the retrospective adoption of ASU 2016-18. Restricted cash amounting to \$17.3 million and \$0.2 million at January 1, 2017 and December 31, 2017, respectively, have been included with the cash and cash equivalents when reconciling the beginning of period and end of period total amounts on the consolidated statement of cash flows for the fiscal year ended December 31, 2017. Restricted cash amounting to \$0.3 million and \$17.3 million at January 3, 2016 and January 1, 2017, respectively, have been included with the cash and cash equivalents when reconciling the beginning of period and end of period total amounts on the consolidated statement of cash flows for the fiscal year ended January 1, 2017. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows, other than the impact discussed above.

In October 2016, the FASB issued Accounting Standards Update No. 2016-16, Income Taxes (Topic 740), Intra-entity Transfer of Assets Other than Inventory ("ASU 2016-16"). ASU 2016-16 removes the prohibition in Topic 740 against the

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immediate recognition of the current and deferred income tax effects of intra-entity transfers of assets other than inventory. The standard requires entities to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The provisions of this guidance are to be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. ASU 2016-16 is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those years, with early adoption permitted. The Company adopted ASU 2016-16 on January 1, 2018. The adoption of the standard resulted in a decrease in the retained earnings at January 1, 2018 of approximately \$2.1 million with corresponding increase in deferred tax assets of \$10.7 million and decrease in prepaid taxes of \$12.8 million related to prior years' intra-entity transfers of assets other than inventory. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows, other than the impact discussed above.

In August 2016, the FASB issued Accounting Standards Update No. 2016-15, Statement of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Cash Payments ("ASU 2016-15"). ASU 2016-15 addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows under Topic 230 and other topics. The provisions of this guidance are to be applied using a retrospective transition method to each period presented, and if it is impracticable to apply the amendments retrospectively for some of the issues, ASU 2016-15 allows the amendments for those issues to be applied prospectively as of the earliest date practicable. ASU 2016-15 is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those years, with early adoption permitted. The Company adopted ASU 2016-15 effective January 1, 2018. The adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows.

In June 2016, the FASB issued Accounting Standards Update No. 2016-13, Financial Instruments - Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments ("ASU 2016-13"). ASU 2016-13 changes how entities will measure credit losses for most financial assets and certain other instruments that are not measured at fair value through net income. The standard requires entities to use the expected loss impairment model and will apply to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables, loans, held-to-maturity debt securities, net investments in leases and off-balance sheet credit exposures. Entities are required to estimate the lifetime "expected credit loss" for each applicable financial asset and record an allowance that, when deducted from the amortized cost basis of the financial asset, presents the net amount expected to be collected on the financial asset. The standard also amends the impairment model for available-for-sale ("AFS") debt securities and requires entities to determine whether all or a portion of the unrealized loss on an AFS debt security is a credit loss. An entity will recognize an allowance for credit losses on an AFS debt security as a contra-account to the amortized cost basis rather than as a direct reduction of the amortized cost basis of the investment. The provisions of this guidance are to be applied using a modified-retrospective approach. A prospective transition approach is required for debt securities for which an other-than-temporary impairment had been recognized before the effective date. ASU 2016-13 is effective for annual reporting periods beginning after December 15, 2019, and interim periods within those years. Early adoption is permitted for annual periods beginning after December 15, 2018, and interim periods therein. The Company is currently evaluating the requirements of this guidance and has not yet determined the impact of its adoption on the Company's consolidated financial position, results of operations and cash flows.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, Leases ("ASU 2016-02"). ASU 2016-02 requires organizations that lease assets to recognize assets and liabilities on the balance sheet related to the rights and obligations created by those leases, regardless of whether they are classified as finance or operating leases. Consistent with current guidance, the recognition, measurement, and presentation of expenses and cash flows arising from a lease of assets will primarily depend on its classification as a finance or operating lease. ASU 2016-02 also

requires new disclosures to help financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases. The provisions of this guidance are effective for annual periods beginning after December 15, 2018, and interim periods within those years, with early adoption permitted. ASU 2016-02 is to be applied using a modified retrospective approach. Subsequent to the issuance of ASU 2016-02, in July 2018, the FASB issued Accounting Standards Update No. 2018-10, Codification Improvements to Topic 842, Leases ("ASU 2018-10") and Accounting Standards Update No. 2018-11, Leases (Topic 842): Targeted Improvements ("ASU 2018-11"). The amendments in ASU 2018-10 clarify, correct or remove inconsistencies in the guidance provided under ASU 2016-02 related to sixteen specific issues identified. The amendments in ASU 2018-11 provide entities with an additional (and optional) transition method to adopt the new leases standard. Under the new transition method, an entity initially applies the new leases standard at the adoption date and recognizes a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. Consequently, an entity's reporting for the comparative periods presented in the financial statements in the period of adoption will continue to be in accordance with ASC 840, Leases ("ASC 840"). An entity that elects this additional (and optional) transition method must provide the required disclosures under ASC 840 for all periods that continue to be in accordance with ASC 840. ASU 2018-11 also provides lessors with a practical expedient, by class of underlying asset, to not separate nonlease components from the associated lease component and, instead,

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to account for those components as a single component if certain criteria are met. The effective date and transition requirements for these two standards are the same as the effective date and transition requirements of ASU 2016-02. The standards were effective for the Company beginning on December 31, 2018. The Company did not early adopt these standards and adopted these standards using the optional transition method.

The Company elected to apply the modified retrospective approach, and applied the new leases standard at December 31, 2018, with a cumulative effect adjustment recognized in the opening balance of retained earnings in fiscal year 2019. As a lessee, the most significant impact of the standards relates to the recognition of the right-of-use assets and lease liabilities for the operating leases in the balance sheet. In addition, the Company had deferred gains from a sale-leaseback transaction that are being amortized in operating expenses over the lease term and the lease is accounted for as an operating lease under ASC 840. Under the new standards, the Company will recognize the deferred gains from the sale as a cumulative-effect adjustment in retained earnings at December 31, 2018. The Company will also derecognize the impact of its build-to-suit arrangement in which the Company was the deemed owner during the construction period, for which the construction is complete and the lease commenced before the initial date of adoption. The adoption of the standards will result in an increase in retained earnings at December 31, 2018 of approximately \$19.1 million for the cumulative effect of initially applying the standards as of that date. In addition, the adoption of the standards will result in recognition of right-of-use assets of approximately \$190.7 million and lease liabilities of approximately \$137.7 million, primarily related to the facilities operating leases, a decrease in property and equipment of approximately \$31.9 million and an increase in deferred tax liabilities of \$2.1 million for the tax impact of the cumulative adjustments. The adoption will have no impact to cash from or used in operating, investing or financing activities in the Company's consolidated statement of cash flows at December 31, 2018.

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers ("ASU 2014-09"). Under this new guidance, an entity should use a five-step process to recognize revenue, depicting the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard also requires new disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. Subsequent to the issuance of the standard, the FASB decided to defer the effective date for one year to annual reporting periods beginning after December 15, 2017, with early adoption permitted for annual reporting periods beginning after December 15, 2016. In November 2017, the FASB also issued Accounting Standards Update No. 2017-14, Income Statement-Reporting Comprehensive Income (Topic 220), Revenue Recognition (Topic 605), and Revenue from Contracts with Customers (Topic 606). ASU 2017-14 includes amendments to certain SEC paragraphs within the FASB Accounting Standards Codification ("Codification"). ASU 2017-14 amends the Codification to incorporate SEC Staff Accounting Bulletin No. 116 and SEC Interpretive Release on Vaccines for Federal Government Stockpiles (SEC Release No. 33-10403) to align existing SEC staff guidance with Revenue from Contracts with Customers (Topic 606). In May 2016, the FASB also issued Accounting Standards Update No. 2016-12, Revenue from Contracts with Customers (Topic 606), Narrow-Scope Improvements and Practical Expedients ("ASU 2016-12"), which amended its revenue recognition guidance in ASU 2014-09 on transition, collectability, non-cash consideration, contract modifications and completed contracts at transition and the presentation of sales and other similar taxes collected from customers. In April 2016, the FASB also issued Accounting Standards Update No. 2016-10, Revenue from Contracts with Customers (Topic 606), Identifying Performance Obligations and Licensing ("ASU 2016-10"), which amended its revenue recognition guidance in ASU 2014-09 on identifying performance obligations to allow entities to disregard items that are immaterial in the context of the contract, clarify when a promised good or service is separately identifiable (i.e., distinct within the context of the contract) and allow an entity to elect to account for the cost of shipping and handling performed after control of a good has been transferred to the customer as a fulfillment cost (i.e., an expense). ASU 2016-10 also clarifies how an entity should evaluate the nature of its promise in granting a license of intellectual property ("IP") and requires entities to classify IP in one of two categories: functional IP or symbolic IP, which will determine whether it recognizes

revenue over time or at a point in time. ASU 2016-10 also address how entities should consider license renewals and restrictions and apply the exception for sales- and usage-based royalties received in exchange for licenses of IP. In March 2016, the FASB also issued Accounting Standards Update No. 2016-08, Revenue from Contracts with Customers (Topic 606), Principal versus Agent Considerations (Reporting Revenue Gross versus Net) ("ASU 2016-08"), which amended the principal-versus-agent implementation guidance and illustrations in ASU 2014-09. ASU 2016-08 clarifies that an entity should evaluate when it is the principal or agent for each specified good or service promised in a contract with a customer. ASU 2017-14, ASU 2016-12, ASU 2016-10, ASU 2016-08 and ASU 2014-09 may be adopted either using a full retrospective approach or a modified retrospective approach. The standards were effective for the Company beginning on January 1, 2018. The Company did not early adopt these standards and adopted these standards using the modified retrospective approach.

The most significant impact of the standards relates to the accounting for certain transactions with multiple elements or "bundled" arrangements. Specifically, for sales of software subscriptions or sales of licenses and maintenance, the Company will recognize the license revenue predominantly at the time of billing and delivery rather than recognizing the entire sales price ratably over the maintenance period, which is the Company's previous practice. In addition, for certain sales of

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instruments that include customer-specified acceptance criteria, the Company will recognize revenue when the customer obtains control of the instrument which is typically upon delivery or when title has transferred to the customer, as the Company believes acceptance is perfunctory. The Company will also capitalize incremental commission fees as a result of obtaining contracts when these fees are recoverable and will amortize the assets based on the transfer of goods or services to which the assets relate which typically range from two to six years. The Company elected to apply the modified retrospective approach only to contracts not completed as of January 1, 2018. The adoption of the standards resulted in an increase in the retained earnings at January 1, 2018 of approximately \$10.2 million for the cumulative effect of initially applying the standards at January 1, 2018. In addition, the adoption of the standards resulted primarily in a reduction in deferred revenue of approximately \$11.5 million, mainly driven by the upfront recognition of license revenue and certain multi-year software subscriptions, and an increase in deferred tax liability of approximately \$3.0 million for the tax impact of the cumulative adjustments. The cumulative effect of recognizing instrument sales upon delivery or transfer of title and capitalizing the incremental commission fees were not material at January 1, 2018. The adoption of the standards had no impact to cash from or used in operating, investing, or financing activities in the Company's consolidated statement of cash flows at January 1, 2018. Refer to Note 3, Changes in Accounting Policies, for the impact of adoption of the standards on the Company's consolidated financial statements for the fiscal year ended December 30, 2018. Also refer to Note 2, Revenue, for the disclosures required by the standards.

Note 2: Revenue

Nature of goods and services

The following is a description of principal activities, by reportable segments, from which the Company generates its revenue. For more detailed information about the reportable segments, see Note 25.

i. Discovery & Analytical Solutions

The Discovery & Analytical Solutions ("DAS") segment of the Company principally generates revenue from sales of (a) instruments, consumables and services in the applied markets and (b) instruments, reagents, informatics, detection and imaging technologies, extended warranties, training and services in the life sciences market. Products and services may be sold separately or in bundled packages. The typical length of a contract for service is 12 to 36 months.

For bundled packages, the Company accounts for individual products and services separately if they are distinct - i.e. if a product or service is separately identifiable from other items in the bundled package and if a customer can benefit from it on its own or with other resources that are readily available to the customer. The consideration (including any discounts) is allocated between separate products and services in a bundle based on their stand-alone selling prices. The stand-alone selling prices are determined based on the prices at which the Company separately sells the products, extended warranties, and services. For items that are not sold separately, the Company estimates stand-alone selling prices by reference to the amount charged for similar items on a stand-alone basis.

The Company sells products and services predominantly through its direct sales force. As a result, the use of distributors is generally limited to geographic regions where the Company has no direct sales force. The Company does not offer product return or exchange rights (other than those relating to defective goods under warranty) or price protection allowances to its customers, including distributors. Payment terms granted to distributors are the same as those granted to end-customers and payments are not dependent upon the distributor's receipt of payment from their end-user customers.

In instances where the timing of revenue recognition differs from the timing of invoicing, the Company determined that the contracts generally do not include a significant financing component. The primary purpose of its invoicing terms is to provide customers with simplified and predictable ways of purchasing products and services, rather than to receive financing from the customers or to provide customers with financing. Examples include invoicing at the beginning of a subscription term with revenue recognized ratably over the contract period, and multi-year software licenses or software subscriptions that are invoiced annually with revenue recognized upfront. In limited

circumstances where the Company provides the customer with a significant benefit of financing, the Company uses the practical expedient and only adjusts the transaction price for the effects of the time value of money and only on contracts where the duration of financing is more than one year.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Products and services	Nature, timing of satisfaction of performance obligations, and significant payment terms
Instruments	<p>For instruments that include installation, and if the installation meets the criteria to be considered a separate performance obligation, product revenue is generally recognized upon delivery or when title has transferred to the customer, which is generally the point in time where control of the products has been transferred to customers, and installation revenue is recognized when the installation is complete. Certain of the Company's products require specialized installation and configuration at the customer's site. Revenue for these products is deferred until installation is complete and customer acceptance has been received. Payment terms and conditions vary, although terms generally include a requirement of payment within 30 to 60 days.</p>
Consumables and reagents	<p>The Company recognizes revenue from the sale of consumables and reagents upon delivery or when title has transferred to the customer, which is generally the point in time where control of the products has been transferred to customers. Payment terms and conditions vary, although terms generally include a requirement of payment within 30 days.</p> <p>Customers may purchase perpetual or term licenses, or subscribe to licenses, which provide customers with the same functionality and differ mainly in the duration over which the customer benefits from the software.</p>
Software licenses and subscriptions	<p>The Company sells its software subscriptions or software licenses with maintenance services and, in some cases, with consulting services. The Company recognizes revenue for the software upfront at the point in time when the software is made available to the customer. For maintenance and consulting services, revenue is recognized ratably over the period in which the services are provided. Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 30 to 60 days. Software subscriptions and maintenance service contracts are non-cancelable.</p>
Cloud services	<p>Cloud services, which allow customers to use hosted software over the contract period without taking possession of the software, are provided on either a subscription or consumption basis. Revenue related to cloud services provided on a subscription basis is recognized ratably over the contract period. Revenue related to cloud services provided on a consumption basis, such as the amount of storage used in a period, is recognized based on the customer utilization of such resources. Payment terms are generally net 30 days from signing of contract and contracts are non-cancelable.</p>
Extended warranty	<p>The Company recognizes revenue for extended warranties on a straight-line basis over the extended warranty period in service revenue. In the majority of countries in which the Company operates, the customary warranty period is one year and the extended warranty covers periods beyond year one. Customers typically pay for extended warranties on an annual basis over the term of the warranty. In general, customers can cancel the extended warranty at any time with 30 days notice without significant penalty.</p>
Laboratory services and training	<p>The Company's service offerings include service contracts, field service, including related time and materials, and training. The Company recognizes revenue as the services are performed. Revenue for the service contracts is recognized over the contract period or at a point in time when the service is billable based on time and materials. The Company recognizes revenue as training is provided in service revenue. Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 30 to 60 days. In general, customers can cancel the service contracts at any time with 30 to 90 days notice without significant penalty.</p>

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

ii. Diagnostics

The Diagnostics segment of the Company principally generates revenue from sales of instruments, solutions, consumables, reagents, extended warranties and services in the diagnostics market. Products and services may be sold separately or in bundled packages.

For bundled packages, the Company accounts for individual products and services separately if they are distinct - i.e. if a product or service is separately identifiable from other items in the bundled package and if a customer can benefit from it on its own or with other resources that are readily available to the customer. The consideration (including any discounts) is allocated between separate products and services in a bundle based on their stand-alone selling prices.

The stand-alone selling prices are determined based on the prices at which the Company separately sells the products, extended warranties, and services. For items that are not sold separately, the Company estimates stand-alone selling prices by reference to the amount charged for similar items on a stand-alone basis.

The Company sells products and services predominantly through its direct sales force. As a result, the use of distributors is generally limited to geographic regions where the Company has no direct sales force. The Company does not offer product return or exchange rights (other than those relating to defective goods under warranty) or price protection allowances to its customers, including distributors. Payment terms granted to distributors are the same as those granted to end-customers and payments are not dependent upon the distributor's receipt of payment from their end-user customers.

In instances where the timing of revenue recognition differs from the timing of invoicing, the Company determined that the contracts generally do not include a significant financing component. The primary purpose of its invoicing terms is to provide customers with simplified and predictable ways of purchasing products and services, rather than to receive financing from the customers or to provide customers with financing. Examples include invoicing at the beginning of a storage period with revenue recognized ratably over the contract period. In limited circumstances where the Company provides the customer with a significant benefit of financing, the Company uses the practical expedient and only adjusts the transaction price for the effects of the time value of money and only on contracts where the duration of financing is more than one year.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Products and services	Nature, timing of satisfaction of performance obligations, and significant payment terms
Instruments	<p>For instruments that include installation, and if the installation meets the criteria to be considered a separate performance obligation, product revenue is generally recognized upon delivery or when title has transferred to the customer, which is generally the point in time where control of the products has been transferred to customers, and installation revenue is recognized when the installation is complete. Certain of the Company's products require specialized installation and configuration at the customer's site. Revenue for these products is deferred until installation is complete and customer acceptance has been received. Payment terms and conditions vary, although terms generally include a requirement of payment within 30 to 60 days.</p>
Consumables and reagents	<p>The Company recognizes revenue from the sale of consumables and reagents upon delivery or when title has transferred to the customer, which is generally the point in time where control of the products has been transferred to customers. Payment terms and conditions vary, although terms generally include a requirement of payment within 30 days.</p> <p>When the Company sells the instrument and reagents that work only on those instruments to a customer or distributor, the Company considers the instrument and reagents as separate performance obligations. The Company recognizes revenue when an instrument is sold to the customer upon delivery or when title has transferred to the customer, which is generally the point in time where control of the products has been transferred to customers. Revenue from the sale of reagents is also recognized at the time of delivery or when title has transferred to the customer. Payment terms for instrument and reagent sales are usually net 30 days from invoice date.</p>
Solutions	<p>When the Company places the instrument at the customer's site and sells the reagents to a customer, the instrument and reagents are accounted for together as one performance obligation. The Company does not charge a fee for the use of the instrument and retains ownership of the placed instrument. The Company has a right to remove the instrument and replace it with another instrument at the customer's site at any time throughout the contract term. The Company recognizes revenue upon delivery of reagents, which is the point in time where the Company has performed its obligation to provide a screening solution to the customer. Payment terms are usually net 30 days from invoice date. Payment terms for certain contracts are based on equal installments over the duration of the contract.</p>
Extended warranty	<p>The Company recognizes revenue for extended warranties on a straight-line basis over the extended warranty period in service revenue. In the majority of countries in which the Company operates, the customary warranty period is one year and the extended warranty covers periods beyond year one. Customers typically pay for extended warranties on an annual basis over the term of the warranty. In general, customers can cancel the extended warranty at any time with 30 days notice without significant penalty.</p>
Services	<p>The Company's service offerings include cord blood processing and storage, and training. The Company recognizes revenue for the cord blood processing and training as the services are performed in service revenue. Revenue for the storage contracts are recognized over the contract period. Storage is typically for a period of 1, 20, or 25 years or lifetime. Lifetime storage is recognized over a certain period that is based on the life expectancy estimate from Social Security data. For cord blood processing, customers pay the processing fee in full at the point of sale. The processing fee is non-refundable unless the cord blood is non-viable for storage. For storage, customers are required to pay the storage fees in full upfront. Storage fees are refundable to the customer on a pro-rated basis if the contract is canceled.</p>

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Disaggregation of revenue

In the following tables, revenue is disaggregated by primary geographical market, end-markets and timing of revenue recognition. The tables also include a reconciliation of the disaggregated revenue with the reportable segments revenue.

	Reportable Segments For the fiscal year ended December 30, 2018		
	Discovery & Analytical Solutions (In thousands)	Diagnostics	Total
Primary geographical markets			
Americas	\$680,117	\$385,005	\$1,065,122
Europe	494,707	283,385	778,092
Asia	518,387	416,395	934,782
	\$1,693,211	\$1,084,785	\$2,777,996
Primary end-markets			
Diagnostics	\$—	\$1,084,785	\$1,084,785
Life sciences	934,690	—	934,690
Applied markets	758,521	—	758,521
	\$1,693,211	\$1,084,785	\$2,777,996
Timing of revenue recognition			
Products and services transferred at a point in time	\$1,199,255	\$1,002,788	\$2,202,043
Services transferred over time	493,956	81,997	575,953
	\$1,693,211	\$1,084,785	\$2,777,996

Contract Balances

Contract assets: The unbilled receivables (contract assets) primarily relate to the Company's right to consideration for work completed but not billed at the reporting date. The unbilled receivables are transferred to trade receivables when billed to customers. Contract assets are generally classified as current assets and are included in "Accounts receivable, net" in the consolidated balance sheet. The balance of contract assets as of December 30, 2018 and as of the date of adoption of ASC 606 were \$31.9 million and \$22.7 million, respectively. The amount of unbilled receivables recognized at the beginning of the period that were transferred to trade receivables during the fiscal year ended December 30, 2018 was \$21.9 million. The increase in unbilled receivables during the fiscal year ended December 30, 2018 as a result of recognition of revenue before billing to customers, excluding amounts transferred to trade receivables during the period, amounted to \$31.1 million.

Contract liabilities: The contract liabilities primarily relate to the advance consideration received from customers for products and related installation for which transfer of control has not occurred at the balance sheet date. Contract liabilities are classified as either current in "Accounts payable" or long-term in "Long-term liabilities" in the consolidated balance sheet based on the timing of when the Company expects to recognize revenue. The balance of contract liabilities as of December 30, 2018 and as of the date of adoption of ASC 606 were \$30.8 million and \$29.0 million, respectively. The increase in contract liabilities during the fiscal year ended December 30, 2018 due to cash received, excluding amounts recognized as revenue during the period, was \$23.6 million. The amount of revenue recognized during the fiscal year ended December 30, 2018 that was included in the contract liability balance at the

beginning of the period was \$21.8 million.

Contract costs: The Company recognizes the incremental costs of obtaining a contract with a customer as an asset if it expects the benefit of those costs to be longer than one year. The Company determined that certain sales incentive programs meet the requirements to be capitalized. Total capitalized costs to obtain a contract were immaterial during the period and are included in other current and long-term assets on the consolidated balance sheet. The Company applies a practical expedient to expense costs as incurred for costs to obtain a contract with a customer when the amortization period would have been one year or less. These costs include the Company's internal sales force compensation program, as the Company determined that annual compensation is commensurate with annual sales activities.

Transaction price allocated to the remaining performance obligations

The Company applies the practical expedient in ASC 606-10-50-14 and does not disclose information about remaining performance obligations that have original expected durations of one year or less. The estimated revenue expected to be

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

recognized beyond one year in the future related to performance obligations that are unsatisfied (or partially unsatisfied) at the end of the period are not material to the Company. The remaining performance obligations primarily include noncancelable purchase orders and noncancelable software subscriptions and cloud service contracts.

Note 3: Changes in Accounting Policies

Except for the changes described below, the Company has consistently applied the accounting policies to all periods presented in these consolidated financial statements.

The Company adopted ASC 606 with a date of the initial application of January 1, 2018. As a result, the Company has changed its accounting policy for revenue recognition as detailed below.

The Company applied ASC 606 using the modified retrospective method only to contracts that are not completed contracts as of January 1, 2018, and the cumulative effect of initially applying ASC 606 is recognized as an adjustment to the beginning retained earnings. Therefore, the comparative information has not been adjusted and continues to be reported under ASC 605. The details of the significant changes and quantitative impact of the changes are disclosed below.

A. Sales of software subscriptions or sales of licenses and maintenance in bundled arrangements

The Company previously recognized revenue from software licenses sold together with maintenance and/or consulting services upon shipment using the residual method, provided that the undelivered items in the arrangement have value to the customer on a stand-alone basis and vendor-specific objective evidence ("VSOE") of fair value can be determined. If VSOE of fair value for the undelivered elements cannot be established, the Company deferred all revenue from the arrangement until the earlier of the point at which such sufficient VSOE does exist or all elements of the arrangement have been delivered, or if the undelivered element is maintenance, then the Company recognized the entire fee ratably over the maintenance period. Under ASC 606, the total consideration in the contract is allocated to all products and services based on their stand-alone selling prices. The stand-alone selling prices are determined based on the list prices at which the Company sells the software license, software subscription, maintenance and/or consulting services. Accordingly, the Company now recognizes higher license revenue upfront and less service revenue over time.

B. Sales of instruments

The Company previously recognized revenue from sale of instruments when persuasive evidence of an arrangement existed, delivery had occurred, the price to the buyer was fixed or determinable, and collectability was reasonably assured. For certain sales of instruments that included customer-specified acceptance criteria, the Company previously recognized revenue after the acceptance criteria had been met. Under ASC 606, revenue is recognized when the Company satisfies a performance obligation by transferring control of the product to a customer. Accordingly, the Company now recognizes product revenue upon delivery or when title has transferred to the customer, as the Company believes acceptance is perfunctory.

C. Sales commissions

The Company previously recognized commission fees related to sales of products and services as selling expenses when they were incurred. Under ASC 606, the Company capitalizes those commission fees as costs of obtaining a contract, when they are incremental and, if they are expected to be recovered, the Company amortizes them consistently with the pattern of transfer of the product or service to which the asset relates. If the expected amortization period is one year or less, the commission fee is expensed when incurred.

D. Impacts on financial statements

The following tables summarize the impacts of ASC 606 adoption on the Company's consolidated financial statements for the fiscal year ended December 30, 2018.

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Consolidated Balance Sheet

	As reported	Adjustments	Balances without adoption of ASC 606
	(In thousands)		
Cash and cash equivalents	\$163,111	\$ —	\$163,111
Accounts receivable, net	632,669	(16,264)	616,405
Inventories	338,347	9,773	348,120
Other current assets	100,507	(363)	100,144
Property, plant and equipment, net	318,590	—	318,590
Intangible assets, net	1,199,667	—	1,199,667
Goodwill	2,952,608	—	2,952,608
Other assets, net	270,023	—	270,023
Total assets	\$5,975,522	\$ (6,854)	\$5,968,668
Current portion of long-term debt	\$14,856	\$ —	\$14,856
Accounts payable	220,949	—	220,949
Accrued restructuring and contract termination charges	4,834	—	4,834
Accrued expenses and other current liabilities	528,827	19,173	548,000
Current liabilities of discontinued operations	2,165	—	2,165
Long-term debt	1,876,624	—	1,876,624
Long-term liabilities	742,312	—	742,312
Total liabilities	3,390,567	19,173	3,409,740
Commitments and contingencies			
Preferred stock	—	—	—
Common stock	110,597	—	110,597
Capital in excess of par value	48,772	—	48,772
Retained earnings	2,602,067	(26,027)	2,576,040
Accumulated other comprehensive loss	(176,481)	—	(176,481)
Total stockholders' equity	2,584,955	(26,027)	2,558,928
Total liabilities and stockholders' equity	\$5,975,522	\$ (6,854)	\$5,968,668

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Consolidated Statement of Operations

	As reported	Adjustments	Balances without adoption of ASC 606
	(In thousands)		
Product revenue	\$1,935,493	\$ (31,441)	\$1,904,052
Service revenue	842,503	—	842,503
Total revenue	2,777,996	(31,441)	2,746,555
Cost of product revenue	908,228	(10,290)	897,938
Cost of service revenue	528,829	—	528,829
Total cost of revenue	1,437,057	(10,290)	1,426,767
Selling, general and administrative expenses	811,913	329	812,242
Research and development expenses	193,998	—	193,998
Restructuring and contract termination charges, net	11,144	—	11,144
Operating income from continuing operations	323,884	(21,480)	302,404
Interest and other expense, net	66,201	—	66,201
Income from continuing operations before income taxes	257,683	(21,480)	236,203
Provision for income taxes	20,208	(5,662)	14,546
Income from continuing operations	237,475	(15,818)	221,657
Income from discontinued operations before income taxes	—	—	—
Loss on disposition of discontinued operations before income taxes	(859)	—	(859)
Benefit from income taxes on discontinued operations and dispositions	(1,311)	—	(1,311)
Gain from discontinued operations and dispositions	452	—	452
Net income	\$237,927	\$ (15,818)	\$222,109

The adoption of ASC 606 increased comprehensive income by \$15.8 million in the Company's consolidated statement of comprehensive income for the fiscal year ended December 30, 2018. The adoption of ASC 606 had no impact on cash from or used in operating, investing, or financing activities in the Company's consolidated statement of cash flows as of and for the fiscal year ended December 30, 2018.

Note 4: Business Combinations

Acquisitions in fiscal year 2018

During fiscal year 2018, the Company completed the acquisition of four businesses for aggregate consideration of \$106.0 million. The excess of the purchase price over the fair value of the acquired businesses' net assets represents cost and revenue synergies specific to the Company, as well as non-capitalizable intangible assets, such as the employee workforces acquired, and has been allocated to goodwill, which is not tax deductible. The Company has reported the operations for these acquisitions within the results of the Company's Diagnostics and Discovery & Analytical Solutions segments from the acquisition dates. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of these acquisitions had a weighted average amortization period of 11.2 years.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The total purchase price for the acquisitions in fiscal year 2018 has been allocated to the estimated fair values of assets acquired and liabilities assumed as follows:

	2018 Acquisitions (In thousands)
Fair value of business combination:	
Cash payments	\$ 95,950
Other liability	3,354
Contingent consideration	6,200
Working capital and other adjustments	520
Less: cash acquired	(1,132)
Total	\$ 104,892
Identifiable assets acquired and liabilities assumed:	
Current assets	\$ 6,522
Property, plant and equipment	1,166
Other assets	891
Identifiable intangible assets:	
Core technology	34,021
Trade names	1,070
Customer relationships	10,200
Goodwill	59,647
Deferred taxes	(3,860)
Debt assumed	(461)
Liabilities assumed	(4,304)
Total	\$ 104,892

Acquisitions in fiscal year 2017

Acquisition of EUROIMMUN Medizinische Labordiagnostika AG. During fiscal year 2017, the Company completed the acquisition of 99.98% of the outstanding stock of EUROIMMUN Medizinische Labordiagnostika AG (“EUROIMMUN”) for aggregate consideration of €1.2 billion (equivalent to \$1.4 billion at December 19, 2017, the time of closing). The purchase price was funded by borrowings from the Company's senior unsecured revolving credit facility and senior unsecured term loan credit facility of \$710.0 million and \$200.0 million, respectively, and available cash on hand of \$503.1 million. The excess of the purchase price over the fair value of the acquired net assets represents cost and revenue synergies specific to the Company, as well as non-capitalizable intangible assets, such as the employee workforce acquired. As a result of the acquisition, the Company recorded goodwill of \$591.3 million, which is not tax deductible, and intangible assets of \$907.4 million. The Company has reported the operations for this acquisition within the results of the Company's Diagnostics segment from the acquisition date. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of this acquisition had a weighted average amortization period of 16.1 years.

Other acquisitions in 2017. During fiscal year 2017, the Company also completed the acquisition of two other businesses for aggregate consideration of \$142.0 million. The acquired businesses were Tulip Diagnostics Private Limited (“Tulip”), which was acquired for total consideration of \$127.3 million in cash and one other business acquired for total consideration of \$14.7 million in cash. At the acquisition date, the Company had a potential obligation to pay the former shareholders of Tulip up to INR1.6 billion in additional consideration over a two year period, equivalent to \$25.2 million, and is accounted for as compensation expense in the Company's financial statements over a two year period and is excluded from the purchase price allocation shown below. The excess of the purchase prices over the fair

values of the acquired businesses' net assets represents cost and revenue synergies specific to the Company, as well as non-capitalizable intangible assets, such as the employee workforces acquired, and has been allocated to goodwill, which is not tax deductible. The Company has reported the operations of Tulip within the results of the Company's Diagnostics segment and the other acquired business within the results of the Company's Discovery & Analytical Solutions segment from the acquisition date. Identifiable definite-lived intangible assets,

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

such as core technology, trade names and customer relationships, acquired as part of these acquisitions had a weighted average amortization period of 11.8 years.

During fiscal year 2018, the Company paid the former shareholders of Tulip a portion of the additional consideration amounting to INR716.3 million (equivalent to \$11.3 million). As of December 30, 2018, the Company may have to pay the former shareholders of Tulip additional consideration of up to INR803.6 million (currently equivalent to \$11.4 million) in the first quarter of fiscal year 2019.

The total purchase price for the acquisitions in fiscal year 2017 have been allocated to the estimated fair values of assets acquired and liabilities assumed as follows:

	EUROIMMUN	2017 Other
	(In thousands)	
Fair value of business combination:		
Cash payments	\$1,413,113	\$140,861
Other liability	—	1,273
Working capital and other adjustments	—	(93)
Less: cash acquired	(25,018)	(2,439)
Total	\$1,388,095	\$139,602
Identifiable assets acquired and liabilities assumed:		
Current assets	\$121,174	\$16,268
Property, plant and equipment	109,859	11,356
Other assets	71,621	1,691
Identifiable intangible assets:		
Core technology	160,000	12,400
Trade names	36,000	3,000
Customer relationships	710,000	43,700
In-process research and development ("IPR&D")	1,400	—
Goodwill	591,304	75,250
Deferred taxes	(251,886)	(15,735)
Liabilities assumed	(100,020)	(8,328)
Debt assumed	(61,357)	—
Total	\$1,388,095	\$139,602

EUROIMMUN's revenue and net loss for the period from the acquisition date to December 31, 2017 were \$13.5 million and \$1.0 million, respectively. The following unaudited pro forma information presents the combined financial results for the Company and EUROIMMUN as if the acquisition of EUROIMMUN had been completed at the beginning of fiscal year 2016:

	December 31, 2017	January 1, 2017
	(In thousands, except per share data)	
Pro Forma Statement of Operations Information (Unaudited):		
Revenue	\$2,562,580	\$2,379,176
Income from continuing operations	143,459	156,210
Basic earnings per share:		
Income from continuing operations	\$1.31	\$1.43

Diluted earnings per share:

Income from continuing operations	\$1.29	\$1.42
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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The unaudited pro forma information for fiscal years 2017 and 2016 have been calculated after applying the Company's accounting policies and the impact of acquisition date fair value adjustments. The fiscal year 2017 unaudited pro forma income from continuing operations was adjusted to exclude approximately \$9.8 million of acquisition-related transaction costs. The fiscal year 2016 pro forma income from continuing operations was adjusted to include these acquisition-related transaction costs and the nonrecurring expenses related to the fair value adjustments. These pro forma condensed consolidated financial results have been prepared for comparative purposes only and include certain adjustments, such as fair value adjustment to inventory, increased interest expense on debt obtained to finance the transaction, and increased amortization for the fair value of acquired intangible assets. The pro forma information does not reflect the effect of costs or synergies that would have been expected to result from the integration of the acquisition. The pro forma information does not purport to be indicative of the results of operations that actually would have resulted had the combination occurred at the beginning of each period presented, or of future results of the consolidated entities.

Acquisitions in fiscal year 2016

During fiscal year 2016, the Company completed the acquisition of two businesses for total consideration of \$72.3 million in cash. The acquired businesses were Bioo Scientific Corporation, which was acquired for total consideration of \$63.5 million in cash and one other business acquired for total consideration of \$8.8 million in cash. The excess of the purchase prices over the fair values of each of the acquired businesses' net assets represents cost and revenue synergies specific to the Company, as well as non-capitalizable intangible assets, such as the employee workforces acquired. As a result of the acquisitions, the Company recorded goodwill of \$43.1 million, which is not tax deductible, and intangible assets of \$22.1 million. The Company has reported the operations for these acquisitions within the results of the Company's Diagnostics and Discovery & Analytical Solutions segments from the acquisition dates. Identifiable definite-lived intangible assets, such as core technology, trade names and customer relationships, acquired as part of these acquisitions had a weighted average amortization period of 9.4 years.

The total purchase price for the acquisitions in fiscal year 2016 has been allocated to the estimated fair values of assets acquired and liabilities assumed as follows:

	2016
	Acquisitions
	(In
	thousands)
Fair value of business combination:	
Cash payments	\$ 72,497
Working capital and other adjustments	(261)
Less: cash acquired	(2,152)
Total	\$ 70,084
Identifiable assets acquired and liabilities assumed:	
Current assets	\$ 7,153
Property, plant and equipment	7,542
Identifiable intangible assets:	
Core technology	6,600
Trade names	570
Customer relationships	14,900
Goodwill	43,072
Deferred taxes	(7,768)
Liabilities assumed	(1,985)

Total \$ 70,084

The Company does not consider the acquisitions completed during fiscal years 2018, 2017 and 2016, with the exception of the EUROIMMUN acquisition, to be material to its consolidated results of operations; therefore, the Company is only presenting pro forma financial information of operations for the EUROIMMUN acquisition. The aggregate revenue and the results of operations for the acquisitions completed during fiscal year 2018 for the period from their acquisition dates to

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

December 30, 2018 were not material. The aggregate revenue for the acquisitions, with the exception of EUROIMMUN, completed during fiscal year 2017 for the period from their acquisition dates to December 31, 2017 was \$38.5 million and the results of operations were not material. The aggregate revenue and results of operations for the acquisitions completed during fiscal year 2016 for the period from their respective acquisition dates to January 1, 2017 were minimal. The Company has also determined that the presentation of the results of operations for each of those acquisitions, from the date of acquisition, is impracticable due to the integration of the operations upon acquisition.

As of December 30, 2018, the allocations of purchase prices for acquisitions completed in fiscal years 2017 and 2016 were final. The preliminary allocations of the purchase prices for acquisitions completed in fiscal year 2018 were based upon initial valuations. The Company's estimates and assumptions underlying the initial valuations are subject to the collection of information necessary to complete its valuations within the measurement periods, which are up to one year from the respective acquisition dates. The primary areas of the preliminary purchase price allocations that are not yet finalized relate to the fair value of certain tangible and intangible assets acquired and liabilities assumed, assets and liabilities related to income taxes and related valuation allowances, and residual goodwill. The Company expects to continue to obtain information to assist in determining the fair values of the net assets acquired at the acquisition dates during the measurement periods. During the measurement periods, the Company will adjust assets or liabilities if new information is obtained about facts and circumstances that existed as of the acquisition dates that, if known, would have resulted in the recognition of those assets and liabilities as of those dates. These adjustments will be made in the periods in which the amounts are determined and the cumulative effect of such adjustments will be calculated as if the adjustments had been completed as of the acquisition dates. All changes that do not qualify as adjustments made during the measurement periods are also included in current period earnings.

During fiscal year 2018, the Company obtained information relevant to determining the fair values of certain tangible and intangible assets acquired, and liabilities assumed, related to recent acquisitions and adjusted its purchase price allocations. Based on this information, for the EUROIMMUN acquisition, the Company recognized an increase in intangible assets of \$10.0 million, an increase in other assets of \$21.7 million, an increase in liabilities assumed of \$12.3 million, a decrease in property and equipment of \$20.1 million, a decrease in deferred tax liabilities of \$23.6 million, and a decrease in goodwill of \$23.5 million.

Allocations of the purchase price for acquisitions are based on estimates of the fair value of the net assets acquired and are subject to adjustment upon finalization of the purchase price allocations. The accounting for business combinations requires estimates and judgments as to expectations for future cash flows of the acquired business, and the allocation of those cash flows to identifiable intangible assets, in determining the estimated fair values for assets acquired and liabilities assumed. The fair values assigned to tangible and intangible assets acquired and liabilities assumed, including contingent consideration, are based on management's estimates and assumptions, as well as other information compiled by management, including valuations that utilize customary valuation procedures and techniques. Contingent consideration is measured at fair value at the acquisition date, based on the probability that revenue thresholds or product development milestones will be achieved during the earnout period, with changes in the fair value after the acquisition date affecting earnings to the extent it is to be settled in cash. Increases or decreases in the fair value of contingent consideration liabilities primarily result from changes in the estimated probabilities of achieving revenue thresholds or product development milestones during the earnout period.

As of December 30, 2018, the Company may have to pay contingent consideration, related to acquisitions with open contingency periods, of up to \$76.5 million. As of December 30, 2018, the Company has recorded contingent consideration obligations of \$69.7 million, of which \$67.0 million was recorded in accrued expenses and other current liabilities, and \$2.7 million was recorded in long-term liabilities. As of December 31, 2017, the Company has recorded contingent consideration obligations of \$65.3 million, of which \$52.2 million was recorded in accrued expenses and other current liabilities, and \$13.1 million was recorded in long-term liabilities. The expected maximum earnout period for acquisitions with open contingency periods does not exceed 1.78 years from December 30, 2018,

and the remaining weighted average expected earnout period at December 30, 2018 was 5 months. If the actual results differ from the estimates and judgments used in these fair values, the amounts recorded in the consolidated financial statements could result in a possible impairment of the intangible assets and goodwill, require acceleration of the amortization expense of definite-lived intangible assets or the recognition of additional contingent consideration which would be recognized as a component of operating expenses from continuing operations.

In connection with the purchase price allocations for acquisitions, the Company estimates the fair value of deferred revenue assumed with its acquisitions. The estimated fair value of deferred revenue is determined by the legal performance obligation at the date of acquisition, and is generally based on the nature of the activities to be performed and the related costs to be incurred after the acquisition date. The fair value of an assumed liability related to deferred revenue is estimated based on the current market cost of fulfilling the obligation, plus a normal profit margin thereon. The estimated costs to fulfill the deferred revenue are based on the historical direct costs related to providing the services. The Company does not include any costs associated with selling effort, research and development, or the related margins on these costs. In most acquisitions, profit associated with selling effort is excluded because the acquired businesses would have concluded the selling effort on the

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

support contracts prior to the acquisition date. The estimated research and development costs are not included in the fair value determination, as these costs are not deemed to represent a legal obligation at the time of acquisition. The sum of the costs and operating income approximates, in theory, the amount that the Company would be required to pay a third-party to assume the obligation.

Total acquisition and divestiture-related costs (income) for fiscal years 2018, 2017 and 2016 were \$15.8 million, \$(8.5) million and \$1.2 million, respectively. These amounts include \$6.9 million of compensation expense and \$0.7 million of net foreign exchange gain related to the foreign currency denominated stay bonus associated with the Tulip acquisition for fiscal year 2018 and \$35.6 million of net foreign exchange gain related to the foreign currency forward contracts associated with the acquisition of EUROIMMUN and \$14.9 million of compensation expense associated with the Tulip acquisition for fiscal year 2017. The acquisition-related interest expense amounted to \$0.7 million and \$0.3 million in fiscal years 2018 and 2017, respectively. These acquisition and divestiture-related costs were expensed as incurred and recorded in selling, general and administrative expenses and interest and other (income) expense, net in the Company's consolidated statements of operations.

Note 5: Disposition of Businesses and Assets

As part of the Company's continuing efforts to focus on higher growth opportunities, the Company has discontinued certain businesses. When the discontinued operations represented a strategic shift that will have a major effect on the Company's operations and financial statements, the Company has accounted for these businesses as discontinued operations and accordingly, has presented the results of operations and related cash flows as discontinued operations. Any business deemed to be a discontinued operation prior to the adoption of Accounting Standards Update 2014-08, Reporting Discontinued Operations and Disclosures of Disposals of Components of An Entity, continues to be reported as a discontinued operation, and the results of operations and related cash flows are presented as discontinued operations for all periods presented. Any remaining assets and liabilities of these businesses have been presented separately, and are reflected within assets and liabilities from discontinued operations in the accompanying consolidated balance sheets as of December 30, 2018 and December 31, 2017.

The Company recorded the following pre-tax gains and losses, which have been reported as a net gain or loss on disposition of discontinued operations during the three fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
(Loss) gain on disposition of the Medical Imaging business	\$(793)	\$ 179,615	\$ —
Gain on disposition of Technical Services business	—	—	1,753
Loss on disposition of Fluid Sciences Segment	(66)	—	(1,134)
(Loss) gain on disposition of discontinued operations before income taxes	\$(859)	\$ 179,615	\$ 619

On May 1, 2017 (the "Closing Date"), the Company completed the sale of its Medical Imaging business to Varex Imaging Corporation ("Varex") pursuant to the terms of the Master Purchase and Sale Agreement, dated December 21, 2016 (the "Agreement"), by and between the Company and Varian Medical Systems, Inc. ("Varian") and the subsequent Assignment and Assumption Agreement, dated January 27, 2017, between Varian and Varex, pursuant to which Varian assigned its rights under the Agreement to Varex. On the Closing Date, the Company received consideration of approximately \$277.4 million for the sale of the Medical Imaging business. During fiscal year 2017, the Company paid Varex \$4.2 million to settle a post-closing working capital adjustment. During fiscal year 2017, the Company recorded a pre-tax gain of \$179.6 million and income tax expense of \$43.1 million related to the sale of the Medical Imaging business in discontinued operations and dispositions. The corresponding tax liability was recorded

within the other tax liabilities in the consolidated balance sheet, and the Company expects to utilize tax attributes to minimize the tax liability. Following the closing, the Company provided certain customary transitional services during a period of up to 12 months. Commercial transactions between the parties following the closing of the transaction were not significant.

During the third quarter of fiscal year 2018, the Company completed the sale of substantially all of the assets and liabilities related to its multispectral imaging business for aggregate consideration of \$37.3 million, recognizing a pre-tax gain of \$13.0 million. The pre-tax gain is included in interest and other expense, net in the consolidated statement of operations. The multispectral imaging business was a component of the Company's DAS segment. The divestiture of the multispectral imaging business has not been classified as a discontinued operation in this Form 10-K because the disposition does not represent a strategic shift that will have a major effect on the Company's operations and financial statements.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

During fiscal year 2017, the Company sold Suzhou PerkinElmer Medical Laboratory Co., Ltd. for aggregate consideration of \$2.3 million, recognizing a pre-tax loss of \$1.1 million. The pre-tax loss recognized in fiscal year 2017 is included in interest and other expense, net in the consolidated statement of operations. Suzhou PerkinElmer Medical Laboratory Co., Ltd. was a component of the Company's Diagnostics segment. The divestiture of Suzhou PerkinElmer Medical Laboratory Co., Ltd. has not been classified as a discontinued operation in this Form 10-K because the disposition does not represent a strategic shift that will have a major effect on the Company's operations and financial statements.

During fiscal year 2016, the Company sold PerkinElmer Labs, Inc. for cash consideration of \$20.0 million, recognizing a pre-tax gain of \$7.1 million. The sale generated a capital loss for tax purposes of \$7.3 million, which resulted in an income tax benefit of \$2.5 million that was recognized as a discrete benefit during the second quarter of 2016. During fiscal year 2017, the Company recognized an additional pre-tax gain of \$1.1 million relating to the earn-out consideration received from the buyer. PerkinElmer Labs, Inc. was a component of the Company's Diagnostics segment. The pre-tax gain recognized in fiscal years 2017 and 2016 is included in interest and other expense, net in the consolidated statement of operations. The divestiture of PerkinElmer Labs, Inc. has not been classified as a discontinued operation in this Form 10-K because the disposition does not represent a strategic shift that will have a major effect on the Company's operations and financial statements.

In August 1999, the Company sold the assets of its Technical Service business. The Company recorded a pre-tax gain of \$1.8 million in fiscal year 2016 for a contingency related to this business. This was recognized as a gain on disposition of discontinued operations before income taxes.

The summary pre-tax operating results of the discontinued operations were as follows during the three fiscal years ended:

	December 31, 2018	December 31, 2017
	2018	2017
	(In thousands)	
Revenue	\$ 44,343	\$ 146,217
Cost of revenue	—32,933	95,395
Selling, general and administrative expenses	—5,869	13,657
Research and development expenses	—4,891	14,368
Restructuring and contract termination charges, net	—	568
Income from discontinued operations before income taxes	\$— 650	\$ 22,229

The Company recorded a (benefit from) provision for income taxes of \$(1.3) million, \$44.5 million and \$4.3 million on discontinued operations and dispositions in fiscal years 2018, 2017 and 2016, respectively.

Note 6: Restructuring and Contract Termination Charges, Net

The Company has undertaken a series of restructuring actions related to the impact of acquisitions and divestitures, the alignment of the Company's operations with its growth strategy, the integration of its business units and its productivity initiatives. The current portion of restructuring and contract termination charges is recorded in accrued restructuring and contract termination charges and the long-term portion of restructuring and contract termination charges is recorded in long-term liabilities. The activities associated with these plans have been reported as restructuring and contract termination charges, net, as applicable, and are included as a component of income from continuing operations.

The Company implemented a restructuring plan in each of the first, third and fourth quarters of fiscal year 2018 consisting of workforce reductions principally intended to realign resources to emphasize growth initiatives (the "Q1 2018 Plan", "Q3 2018 Plan" and "Q4 2018 Plan", respectively). The Company implemented a restructuring plan in each of the fourth and third quarters of fiscal year 2017 consisting of workforce reductions principally intended to realign resources to emphasize growth initiatives (the "Q4 2017 Plan and "Q3 2017 Plan", respectively). The Company implemented a restructuring plan in the first quarter of fiscal year 2017 consisting of workforce reductions and the closure of excess facility space principally intended to focus resources on higher growth end markets (the "Q1 2017 Plan"). The Company implemented a restructuring plan in the third quarter of fiscal year 2016 consisting of workforce reductions principally intended to focus resources on higher growth product lines (the "Q3 2016 Plan"). The Company implemented a restructuring plan in the second quarter of fiscal year 2016 consisting of workforce reductions principally intended to focus resources on higher growth end markets (the "Q2 2016 Plan"). All other previous restructuring plans were workforce reductions or the closure of excess facility space principally intended to integrate the Company's businesses in order to realign operations, reduce costs, achieve operational efficiencies and shift

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

resources into geographic regions and end markets that are more consistent with the Company's growth strategy (the "Previous Plans").

The following table summarizes the number of employees reduced, the initial restructuring or contract termination charges by operating segment, and the dates by which payments were substantially completed, or the expected dates by which payments will be substantially completed, for restructuring actions implemented during fiscal years 2018, 2017 and 2016 in continuing operations:

	Workforce Reductions		Closure of Excess Facility		Total	(Expected) Date Payments Substantially Completed by	
	Headcount Reduction	Discovery & Analytical Solutions	Discovery & Analytical Solutions	Discovery & Analytical Solutions		Severance	Excess Facility
(In thousands, except headcount data)							
Q4 2018 Plan	1	\$ —	\$ 348	\$ —	\$ —	Q1 FY2019	—
Q3 2018 Plan	61	618	1,146	—	—	1,764	Q2 FY2019 —
Q1 2018 Plan	47	902	5,096	—	—	5,998	Q2 FY2019 —
Q4 2017 Plan	29	255	1,680	—	—	1,935	Q1 FY2019 —
Q3 2017 Plan	27	1,021	1,321	—	—	2,342	Q4 FY2018 —
Q1 2017 Plan	90	1,631	5,000	33	33	6,697	Q2 FY2018 Q2 FY2018
Q3 2016 Plan	22	41	1,779	—	—	1,820	Q4 FY2017 —
Q2 2016 Plan	72	561	4,106	—	—	4,667	Q3 FY2017 —

The Company expects to make payments under the Previous Plans for remaining residual lease obligations, with terms varying in length, through fiscal year 2022.

The Company also has terminated various contractual commitments in connection with certain disposal activities and has recorded charges, to the extent applicable, for the costs of terminating these contracts before the end of their terms and the costs that will continue to be incurred for the remaining terms without economic benefit to the Company. The Company recorded additional pre-tax charges of \$5.0 million, \$3.6 million and \$0.1 million in the Discovery & Analytical Solutions segment during fiscal years 2018, 2017 and 2016, respectively, and \$0.5 million during fiscal year 2017 in the Diagnostics segment as a result of these contract terminations.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

At December 30, 2018, the Company had \$6.2 million recorded for accrued restructuring and contract termination charges, of which \$4.8 million was recorded in short-term accrued restructuring and \$1.4 million was recorded in long-term liabilities. At December 31, 2017, the Company had \$14.0 million recorded for accrued restructuring and contract termination charges, of which \$8.8 million was recorded in short-term accrued restructuring, \$2.3 million was recorded in long-term liabilities and \$2.9 million was recorded in other reserves. The following table summarizes the Company's restructuring accrual balances and related activity by restructuring plan, as well as contract termination accrual balances and related activity, during fiscal years 2018, 2017 and 2016 in continuing operations:

	Balance at January 3, 2016	2016 Charges and Changes in Estimates, Net	2016 Amounts Paid	Balance at January 1, 2017	2017 Charges and Changes in Estimates, Net	2017 Amounts Paid	Balance at December 31, 2017	2018 Charges and Changes in Estimates, Net	2018 Amounts Paid	Balance at December 30, 2018
(In thousands)										
Severance:										
Q4 2018 Plan	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$348	\$—	\$348
Q3 2018 Plan	—	—	—	—	—	—	—	2,054	(639)	1,415
Q1 2018 Plan	—	—	—	—	—	—	—	5,998	(4,389)	1,609
Q4 2017 Plan ⁽¹⁾	—	—	—	—	1,935	(16)	1,919	(381)	(1,538)	—
Q3 2017 Plan ⁽²⁾	—	—	—	—	2,342	(270)	2,072	(1,204)	(868)	—
Q1 2017 Plan ⁽³⁾	—	—	—	—	6,631	(4,133)	2,498	(983)	(1,232)	283
Q3 2016 Plan	—	1,820	(612)	1,208	(202)	(1,006)	—	—	—	—
Q2 2016 Plan	—	4,667	(3,231)	1,436	(829)	(607)	—	232	(156)	76
Facility:										
Q1 2017 Plan	—	—	—	—	66	(33)	33	—	(33)	—
Previous Plans Restructuring	22,018	(1,451)	(12,787)	7,780	(537)	(2,844)	4,399	338	(2,425)	2,312
Contract Termination	132	88	(103)	117	3,251	(320)	3,048	4,742	(7,653)	137
Total Restructuring and Contract Termination	\$22,150	\$5,124	\$(16,733)	\$10,541	\$12,657	\$(9,229)	\$13,969	\$11,144	\$(18,933)	\$6,180

During fiscal year 2018, the Company recognized pre-tax restructuring reversals of \$0.2 million each in the
(1) Discovery & Analytical Solutions and Diagnostics segments, related to lower than expected costs associated with workforce reductions for the Q4 2017 Plan.

During fiscal year 2018, the Company recognized pre-tax restructuring reversals of \$0.8 million in the Discovery
(2) & Analytical Solutions segment and \$0.4 million in the Diagnostics segment, related to lower than expected costs associated with workforce reductions for the Q3 2017 Plan.

During fiscal year 2018, the Company recognized pre-tax restructuring reversals of \$1.0 million in the Discovery
(3) & Analytical Solutions segment, related to lower than expected costs associated with workforce reductions for the Q1 2017 Plan.

Unrecognized tax benefits, end of year	\$ 33,009	\$30,308	\$ 29,607
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The Company classifies interest and penalties as a component of income tax expense. At December 30, 2018 and December 31, 2017, the Company had accrued interest and penalties of \$2.5 million and \$1.9 million, respectively. During fiscal years 2018, 2017 and 2016, the Company recognized a net expense (benefit) of \$0.4 million, \$(0.3) million and \$(0.1) million, respectively, for interest and penalties in its total tax provision primarily due to settlements and statutes of limitations that had lapsed. At December 30, 2018, the Company had gross tax effected unrecognized tax benefits of \$33.0 million, of which \$31.3 million, if recognized, would affect the continuing operations effective tax rate. The remaining amount, if recognized, would affect discontinued operations.

The Company believes that it is reasonably possible that approximately \$2.3 million of its uncertain tax positions at December 30, 2018, including accrued interest and penalties, and net of tax benefits, may be resolved over the next twelve months as a result of lapses in applicable statutes of limitations and potential settlements. Various tax years after 2010 remain open to examination by certain jurisdictions in which the Company has significant business operations, such as Finland, Germany, Italy, Netherlands, Singapore, the United Kingdom and the United States. The tax years under examination vary by jurisdiction.

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U.S.	\$ 32,627	\$3,743	\$ 39,689
Non-U.S.	225,056	292,975	204,379
Total	\$ 257,683	\$296,718	\$244,068

On a U.S. income tax basis, the Company has reported significant taxable income over the three year period ended December 30, 2018. The Company has utilized tax attributes to minimize cash taxes paid on that taxable income.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The components of the provision for income taxes on continuing operations were as follows:

	Current Expense	Deferred Expense (Benefit)	Total
	(In thousands)		
Fiscal year ended December 30, 2018			
Federal	\$7,938	\$ (5,250)	) \$2,688
State	2,345	2,572	4,917
Non-U.S.	61,028	(48,425)	) 12,603
Total	\$71,311	\$ (51,103)	) \$20,208
Fiscal year ended December 31, 2017			
Federal	\$62,003	\$ 35,435	\$97,438
State	3,332	(792)	) 2,540
Non-U.S.	45,639	(5,789)	) 39,850
Total	\$110,974	\$ 28,854	\$139,828
Fiscal year ended January 1, 2017			
Federal	\$14	\$ 2,994	\$3,008
State	2,143	(575)	) 1,568
Non-U.S.	30,754	(6,968)	) 23,786
Total	\$32,911	\$ (4,549)	) \$28,362

The total provision for (benefit from) income taxes included in the consolidated financial statements is as follows for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Continuing operations	\$20,208	\$139,828	\$28,362
Discontinued operations	(1,311)	44,522	4,255
Total	\$18,897	\$184,350	\$32,617

A reconciliation of income tax expense at the U.S. federal statutory income tax rate to the recorded tax provision is as follows for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Tax at statutory rate	\$54,114	\$103,851	\$85,424
Non-U.S. rate differential, net	(27,281)	(65,836)	(52,648)
U.S. taxation of multinational operations	7,047	5,408	6,941
State income taxes, net	2,028	1,810	1,509
Prior year tax matters	(6,034)	(7,955)	(9,621)
Federal tax credits	(3,738)	(8,249)	(7,189)
Change in valuation allowance	(759)	1,951	(2,755)
Non-deductible acquisition expense	—	—	5,701

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Impact of federal tax reform	(2,025)	106,538	—
Others, net	(3,144)	2,310	1,000
Total	\$ 20,208	\$ 139,828	\$ 28,362

The variation in the Company's effective tax rate for each year is primarily a result of the recognition of earnings in foreign jurisdictions, predominantly Singapore, Finland and the Netherlands, which are taxed at rates lower than the U.S. federal statutory rate, resulting in a benefit from income taxes of \$18.7 million in fiscal year 2018, \$55.9 million in fiscal year 2017 and \$48.2 million in fiscal year 2016. These amounts include \$10.3 million in fiscal year 2018, \$10.1 million in fiscal

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

year 2017 and \$11.4 million in fiscal year 2016 of benefits derived from tax holidays in China and Singapore. The effect of these benefits derived from tax holidays on basic and diluted earnings per share for fiscal year 2018 was \$0.09 and \$0.09, respectively, for fiscal year 2017 was \$0.09 and \$0.09, respectively, and for fiscal year 2016 was \$0.10 and \$0.10, respectively. The tax holiday in one of the Company's subsidiaries in China expired in 2017 and the tax holiday in one other subsidiary in China is scheduled to expire in fiscal year 2019. The tax holiday in one of the Company's subsidiaries in Singapore is scheduled to expire in fiscal year 2023.

The tax effects of temporary differences and attributes that gave rise to deferred income tax assets and liabilities as of December 30, 2018 and December 31, 2017 were as follows:

	December 30, 2018	December 31, 2017
	(In thousands)	
Deferred tax assets:		
Inventory	\$—	\$ 6,376
Reserves and accruals	39,487	26,657
Accrued compensation	21,709	17,333
Net operating loss and credit carryforwards	144,421	88,503
Accrued pension	31,146	34,682
Restructuring reserve	1,780	2,586
Deferred revenue	31,045	28,478
Unrealized foreign exchange loss	—	10,910
Total deferred tax assets	269,588	215,525
Deferred tax liabilities:		
Inventory	(278)	—)
Postretirement health benefits	(3,406)	(3,391)
Depreciation and amortization	(309,958)	(392,293)
All other, net	(1,879)	(594)
Total deferred tax liabilities	(315,521)	(396,278)
Valuation allowance	(102,087)	(68,895)
Net deferred tax liabilities	\$(148,020)	\$(249,648)

The components of net deferred tax liabilities as of December 30, 2018 and December 31, 2017 were recognized in the consolidated balance sheets as follows:

	December 30, 2018	December 31, 2017
	(In thousands)	
Other assets, net	\$79,312	\$ 67,280
Long-term liabilities	(227,332)	(316,928)
Total	\$(148,020)	\$(249,648)

At December 30, 2018, for income tax return purposes, the Company had U.S. federal net operating loss carryforwards of \$38.3 million, state net operating loss carryforwards of \$200.6 million, foreign net operating loss carryforwards of \$515.5 million, state tax credit carryforwards of \$6.8 million, general business tax credit carryforwards of \$10.9 million, and foreign tax credit carryforwards of \$0.1 million. These are subject to expiration in

years ranging from 2019 to 2038, and without expiration for certain foreign net operating loss carryforwards and certain state credit carryforwards.

Valuation allowances take into consideration limitations imposed upon the use of the tax attributes and reduce the value of such items to the likely net realizable amount. The Company regularly evaluates positive and negative evidence available to determine if valuation allowances are required or if existing valuation allowances are no longer required. Valuation allowances have been provided on state net operating loss and state tax credit carryforwards and on certain foreign tax attributes that the Company has determined are not more likely than not to be realized. The increase in the valuation allowance of \$33.2 million in fiscal year 2018 is primarily due to an increase in tax attributes that the Company does not expect to realize for one of its non-U.S. subsidiaries.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The components of net deferred tax (liabilities) assets as of December 30, 2018 and December 31, 2017 were as follows:

	December 30, 2018	December 31, 2017
	(In thousands)	
U.S.	\$ 52,469	\$ 44,974
Non-U.S.	(200,489)	(294,622)
Total	\$(148,020)	\$(249,648)

Historically, deferred income tax expense has not been provided on the cumulative undistributed earnings of the Company's international subsidiaries. During fiscal year 2018, the Company has determined that previously undistributed earnings of certain international subsidiaries of \$1.0 billion no longer met the requirements of indefinite reinvestment and therefore recognized \$2.9 million of income tax expense in fiscal year 2018. The Company's intent is to continue to reinvest the remaining undistributed earnings of its international subsidiaries indefinitely. While federal income tax expense has been recognized as a result of the Tax Act, the Company has not provided any additional deferred taxes with respect to items such as foreign withholding taxes, state income tax or foreign exchange gain or loss. In addition, no additional income taxes have been provided for any remaining undistributed foreign earnings not subject to the transition tax, or any additional outside basis difference inherent in these entities, as these amounts continue to be indefinitely reinvested in foreign operations. As of December 30, 2018, the amount of foreign earnings that the Company has the intent and ability to keep invested outside the U.S. indefinitely and for which no additional incremental tax cost has been provided, other than the \$80.4 million from the one-time transition tax on deemed repatriation, was approximately \$652.1 million. It is not practicable for the Company to calculate the unrecognized deferred tax liability related to such incremental tax costs on those earnings.

Note 9: Earnings Per Share

Basic earnings per share was computed by dividing net income by the weighted-average number of common shares outstanding during the period less restricted unvested shares. Diluted earnings per share was computed by dividing net income by the weighted-average number of common shares outstanding plus all potentially dilutive common stock equivalents, primarily shares issuable upon the exercise of stock options using the treasury stock method. The following table reconciles the number of shares utilized in the earnings per share calculations for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Number of common shares—basic	110,561	109,857	109,478
Effect of dilutive securities:			
Stock options	761	708	640
Restricted stock awards	212	294	195
Number of common shares—diluted	111,534	110,859	110,313
Number of potentially dilutive securities excluded from calculation due to antidilutive impact	349	287	458

Antidilutive securities include outstanding stock options with exercise prices and average unrecognized compensation cost in excess of the average fair market value of common stock for the related period. Antidilutive options were

excluded from the calculation of diluted net income per share and could become dilutive in the future.

Note 10: Accounts Receivable, Net

Accounts receivable were net of reserves for doubtful accounts of \$30.6 million and \$31.3 million as of December 30, 2018 and December 31, 2017, respectively.

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Note 11: Inventories

Inventories as of December 30, 2018 and December 31, 2017 consisted of the following:

	December 30, 2018	December 31, 2017
	(In thousands)	
Raw materials	\$ 119,115	\$ 122,100
Work in progress	18,110	18,452
Finished goods	201,122	211,123
Total inventories	\$ 338,347	\$ 351,675

Note 12: Property, Plant and Equipment, Net

Property, plant and equipment as of December 30, 2018 and December 31, 2017, consisted of the following:

	December 30, 2018	December 31, 2017
	(In thousands)	
At cost:		
Land	\$ 5,482	\$ 5,624
Building and leasehold improvements	272,277	262,657
Machinery and equipment	402,424	362,638
Total property, plant and equipment	680,183	630,919
Accumulated depreciation	(361,593)	(332,853)
Total property, plant and equipment, net	\$ 318,590	\$ 298,066

Depreciation expense on property, plant and equipment for the fiscal years ended December 30, 2018, December 31, 2017 and January 1, 2017 was \$44.7 million, \$31.3 million and \$28.5 million, respectively.

Note 13: Marketable Securities and Investments

Investments as of December 30, 2018 and December 31, 2017 consisted of the following:

	December 30, 2018	December 31, 2017
	(In thousands)	
Marketable securities	\$ 2,447	\$ 2,208
Cost method investments	16,783	10,783
	\$ 19,230	\$ 12,991

Marketable securities. Marketable securities include equity and fixed-income securities held to meet obligations associated with the Company's supplemental executive retirement plan and other deferred compensation plans. The Company has, accordingly, classified these securities as long-term.

The net unrealized holding gain and loss on marketable securities, net of deferred income taxes, reported as a component of other comprehensive income (loss) in the statements of stockholders' equity, were not material in fiscal years 2018 and 2017. The proceeds from the sales of securities and the related gains and losses are not material for

any period presented.

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Marketable securities classified as available for sale as of December 30, 2018 and December 31, 2017 consisted of the following:

	Market Value	Gross Holding Cost (In thousands)	Unrealized Gains (Losses)
December 30, 2018			
Equity securities	\$671	\$1,037	\$ (366)
Fixed-income securities	22	22	—
Other	1,754	1,817	(63)
	\$2,447	\$2,876	\$ (429)
December 31, 2017			
Equity securities	\$811	\$1,161	\$ (350)
Fixed-income securities	22	22	—
Other	1,375	1,438	(63)
	\$2,208	\$2,621	\$ (413)

Cost method investments. The Company has equity interests in privately-held entities over which the Company neither has significant influence nor control and are accounted for using under the cost method. Under the cost method, the Company records the investment at cost and recognizes income for any dividends declared from distribution of investee's earnings.

The Company's investments consist of (i) investments carried at fair value, including available-for-sale securities, and (ii) investments accounted for using the cost method of accounting. The Company regularly reviews its investments for impairment, including when the carrying value of an investment exceeds its market value. If the Company determines that an investment has sustained an other-than-temporary decline in its value, the investment is written down to its fair value by a charge to earnings that is included in Impairment of long-term investments and other assets. Factors that are considered by the Company in determining whether an other-than-temporary decline in value has occurred include (i) the market value of the security in relation to its cost basis, (ii) the financial condition of the investee, and (iii) the Company's intent and ability to retain the investment for a sufficient period of time to allow for recovery in the market value of the investment.

For investments accounted for using the cost method of accounting, the Company evaluates information available (e.g., budgets, business plans, financial statements, etc.) in addition to quoted market prices, if any, in determining whether an other-than-temporary decline in value exists. Factors indicative of an other-than-temporary decline include recurring operating losses, credit defaults and subsequent rounds of financing at an amount below the cost basis of the Company's investment.

Note 14: Goodwill and Intangible Assets, Net

The Company tests goodwill and non-amortizing intangible assets at least annually for possible impairment. Accordingly, the Company completes the annual testing of impairment for goodwill and non-amortizing intangible assets on the later of January 1 or the first day of each fiscal year. In addition to its annual test, the Company regularly evaluates whether events or circumstances have occurred that may indicate a potential impairment of goodwill or non-amortizing intangible assets.

The process of testing goodwill for impairment involves the determination of the fair value of the applicable reporting units. The test consists of the comparison of the fair value to the carrying value of the reporting unit to determine if the carrying value exceeds the fair value. If the carrying value of the reporting unit exceeds its fair value, an impairment loss in an amount equal to that excess is recognized up to the amount of goodwill. The Company performed its annual

impairment testing for its reporting units as of January 1, 2018, its annual impairment date for fiscal year 2018. Non-amortizing intangibles are also subject to an annual impairment test. The Company consistently employed the relief from royalty model to estimate the current fair value when testing for impairment of non-amortizing intangible asset. The impairment test consists of a comparison of the fair value of the non-amortizing intangible asset with its carrying amount. If the carrying amount of a non-amortizing intangible asset exceeds its fair value, an impairment loss in an amount equal to that excess is recognized up to the amount of the amortizing intangible asset. In addition, the Company evaluates the remaining useful life of our non-amortizing intangible asset at least annually to determine whether events or circumstances continue to support an indefinite useful life. If events or circumstances indicate that the useful life of our non-amortizing intangible asset is no longer indefinite, the asset will be tested for impairment. This intangible asset will then be amortized prospectively over its estimated remaining useful life and accounted for in the same manner as other intangible assets that are subject to amortization.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The changes in the carrying amount of goodwill for fiscal years 2018 and 2017 are as follows:

	Discovery & Analytical Solutions	Diagnostics	Consolidated
Balance at January 1, 2017	\$1,303,936	\$944,030	\$2,247,966
Foreign currency translation	37,646	29,091	66,737
Acquisitions, earnouts and other	2,653	684,842	687,495
Balance at December 31, 2017	1,344,235	1,657,963	3,002,198
Foreign currency translation	(32,189)	(35,289)	(67,478)
Acquisitions, earnouts and other	22,946	(5,058)	17,888
Balance at December 30, 2018	\$1,334,992	\$1,617,616	\$2,952,608

Identifiable intangible asset balances at December 30, 2018 by category and by business segment were as follows:

	Discovery & Analytical Solutions	Diagnostics	Consolidated
Patents	\$28,030	\$14,616	\$42,646
Less: Accumulated amortization	(25,978)	(11,775)	(37,753)
Net patents	2,052	2,841	4,893
Trade names and trademarks	29,811	48,335	78,146
Less: Accumulated amortization	(21,728)	(12,073)	(33,801)
Net trade names and trademarks	8,083	36,262	44,345
Licenses	50,178	3,127	53,305
Less: Accumulated amortization	(44,376)	(1,174)	(45,550)
Net licenses	5,802	1,953	7,755
Core technology	240,734	300,177	540,911
Less: Accumulated amortization	(189,033)	(76,711)	(265,744)
Net core technology	51,701	223,466	275,167
Customer relationships	222,892	866,635	1,089,527
Less: Accumulated amortization	(128,142)	(165,822)	(293,964)
Net customer relationships	94,750	700,813	795,563
IPR&D	—	1,360	1,360
Net amortizable intangible assets	162,388	966,695	1,129,083
Non-amortizing intangible asset:			
Trade name	70,584	—	70,584
Total	\$232,972	\$966,695	\$1,199,667

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Identifiable intangible asset balances at December 31, 2017 by category and business segment were as follows:

	Discovery & Analytical Diagnostics Consolidated Solutions		
Patents	\$28,048	\$11,911	\$39,959
Less: Accumulated amortization	(24,448)	(10,637)	(35,085)
Net patents	3,600	1,274	4,874
Trade names and trademarks	29,950	51,024	80,974
Less: Accumulated amortization	(20,022)	(8,228)	(28,250)
Net trade names and trademarks	9,928	42,796	52,724
Licenses	43,061	10,239	53,300
Less: Accumulated amortization	(34,620)	(8,015)	(42,635)
Net licenses	8,441	2,224	10,665
Core technology	236,324	243,435	479,759
Less: Accumulated amortization	(190,423)	(59,920)	(250,343)
Net core technology	45,901	183,515	229,416
Customer relationships	233,573	907,938	1,141,511
Less: Accumulated amortization	(116,696)	(126,144)	(242,840)
Net customer relationships	116,877	781,794	898,671
IPR&D	—	80,006	80,006
Net amortizable intangible assets	184,747	1,091,609	1,276,356
Non-amortizing intangible asset:			
Trade name	70,584	—	70,584
Total	\$255,331	\$1,091,609	\$1,346,940

Total amortization expense related to definite-lived intangible assets was \$135.9 million in fiscal year 2018, \$73.7 million in fiscal year 2017 and \$71.5 million in fiscal year 2016. Estimated amortization expense related to definite-lived intangible assets for each of the next five years is \$149.7 million in fiscal year 2019, \$152.0 million in fiscal year 2020, \$136.7 million in fiscal year 2021, \$126.6 million in fiscal year 2022, and \$109.1 million in fiscal year 2023.

The Company entered into a strategic agreement in fiscal year 2012 under which it acquired certain intangible assets and received a license to certain core technology for an analytics and data discovery platform, as well as the exclusive right to distribute the platform in certain scientific research and development markets. During fiscal year 2012, the Company paid \$6.8 million for net intangible assets and \$25.0 million for prepaid royalties. During fiscal year 2013, the Company extended the existing agreement for an additional year. In addition, the Company entered into a new agreement to expand the distribution rights to the clinical and other related markets and acquired additional intangible assets. During fiscal year 2013, the Company paid \$7.0 million for net intangible assets and \$40.3 million for prepaid royalties. During fiscal year 2016, the Company extended the existing agreement for an additional 3 years and expanded the distribution rights to the related markets. During fiscal year 2016, the Company paid \$6.0 million for prepaid royalties related to the extension and new agreement. During the fiscal years 2017 and 2016, the Company paid \$5.1 million and \$9.4 million, respectively, for additional prepaid royalties. As of December 30, 2018, the Company recorded prepaid royalties of \$65.0 million, of which \$5.6 million was recorded in other current assets, and

\$59.4 million was recorded in other assets. The Company expenses royalties as revenue is recognized. These intangible assets are being amortized over their estimated useful lives. The Company has reported the amortization of these intangible assets within the results of the Company's Discovery & Analytical Solutions segment from the execution date.

Note 15: Debt

Senior Unsecured Revolving Credit Facility. The Company's senior unsecured revolving credit facility provides for \$1.0 billion of revolving loans and has an initial maturity of August 11, 2021. As of December 30, 2018, undrawn letters of credit in the aggregate amount of \$11.4 million were treated as issued and outstanding when calculating the borrowing availability under the senior unsecured revolving credit facility. As of December 30, 2018, the Company had \$570.6 million available for additional borrowing under the facility. The Company uses the senior unsecured revolving credit facility for general corporate

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

purposes, which may include working capital, refinancing existing indebtedness, capital expenditures, share repurchases, acquisitions and strategic alliances. The interest rates under the senior unsecured revolving credit facility are based on the Eurocurrency rate or the base rate at the time of borrowing, plus a margin. The base rate is the higher of (i) the rate of interest in effect for such day as publicly announced from time to time by JP Morgan Chase Bank, N.A. as its "prime rate," (ii) the Federal Funds rate plus 50 basis points or (iii) an adjusted one-month Libor plus 1.00%. The Eurocurrency margin as of December 30, 2018 was 110 basis points. The weighted average Eurocurrency interest rate as of December 30, 2018 was 2.51%, resulting in a weighted average effective Eurocurrency rate, including the margin, of 3.61%, which was the interest applicable to the borrowings outstanding under the Eurocurrency rate as of December 30, 2018. As of December 30, 2018, the senior unsecured revolving credit facility had outstanding borrowings of \$418.0 million, and \$2.4 million of unamortized debt issuance costs. As of December 31, 2017, the senior unsecured revolving credit facility had \$625.0 million outstanding borrowings, and \$3.3 million of unamortized debt issuance costs. The credit agreement for the facility contains affirmative, negative and financial covenants and events of default. The financial covenants include a debt-to-capital ratio that remains applicable for so long as the Company's debt is rated as investment grade. In the event that the Company's debt is not rated as investment grade, the debt-to-capital ratio covenant is replaced with a maximum consolidated leverage ratio covenant and a minimum consolidated interest coverage ratio covenant.

Senior Unsecured Term Loan Credit Facility. The Company entered into a senior unsecured term loan credit facility on August 11, 2017 that provided for \$200.0 million of term loans and had an initial maturity of twelve months from December 19, 2017, the date of the initial draw. The Company utilized the senior unsecured term loan facility for the acquisition of EUROIMMUN. The interest rates under the senior unsecured term loan credit facility were based on the Eurocurrency rate or the base rate at the time of the borrowing, plus a margin. The base rate was the higher of (i) the rate of interest in effect for such day as publicly announced from time to time by JP Morgan Chase Bank, N.A. as its "prime rate," (ii) the Federal Funds rate plus 50 basis points or (iii) an adjusted one-month Libor plus 1.00%. In April 2018, the Company paid in full the outstanding balance of \$200.0 million on the Company's senior unsecured term loan credit facility, from the proceeds of the 0.6% senior unsecured notes due in 2021 that were issued in April 2018.

5% Senior Unsecured Notes due in 2021. On October 25, 2011, the Company issued \$500.0 million aggregate principal amount of senior unsecured notes due in 2021 (the "November 2021 Notes") in a registered public offering and received \$493.6 million of net proceeds from the issuance. The November 2021 Notes were issued at 99.4% of the principal amount, which resulted in a discount of \$3.1 million. As of December 30, 2018, the November 2021 Notes had an aggregate carrying value of \$497.4 million, net of \$1.1 million of unamortized original issue discount and \$1.6 million of unamortized debt issuance costs. As of December 31, 2017, the November 2021 Notes had an aggregate carrying value of \$496.6 million, net of \$1.4 million of unamortized original issue discount and \$2.0 million of unamortized debt issuance costs. The November 2021 Notes mature in November 2021 and bear interest at an annual rate of 5%. Interest on the November 2021 Notes is payable semi-annually on May 15th and November 15th each year. Prior to August 15, 2021 (three months prior to their maturity date), the Company may redeem the November 2021 Notes in whole or in part, at its option, at a redemption price equal to the greater of (i) 100% of the principal amount of the November 2021 Notes to be redeemed, plus accrued and unpaid interest, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest in respect to the November 2021 Notes being redeemed, discounted on a semi-annual basis, at the Treasury Rate plus 45 basis points, plus accrued and unpaid interest. At any time on or after August 15, 2021 (three months prior to their maturity date), the Company may redeem the November 2021 Notes, at its option, at a redemption price equal to 100% of the principal amount of the November 2021 Notes to be redeemed plus accrued and unpaid interest. Upon a change of control (as defined in the indenture governing the November 2021 Notes) and a contemporaneous downgrade of the November 2021 Notes below investment grade, each holder of November 2021 Notes will have the right to require the Company to repurchase such holder's November 2021 Notes for 101% of their principal amount, plus accrued and unpaid interest.

1.875% Senior Unsecured Notes due 2026. On July 19, 2016, the Company issued €500.0 million aggregate principal amount of senior unsecured notes due in 2026 (the "2026 Notes") in a registered public offering and received

approximately €492.3 million of net proceeds from the issuance. The 2026 Notes were issued at 99.118% of the principal amount, which resulted in a discount of €4.4 million. The 2026 Notes mature in July 2026 and bear interest at an annual rate of 1.875%. Interest on the 2026 Notes is payable annually on July 19th each year. The proceeds from the 2026 Notes were used to pay in full the outstanding balance of the Company's previous senior unsecured revolving credit facility. As of December 30, 2018, the 2026 Notes had an aggregate carrying value of \$564.5 million, net of \$4.0 million of unamortized original issue discount and \$3.8 million of unamortized debt issuance costs. As of December 31, 2017, the 2026 Notes had an aggregate carrying value of \$591.7 million, net of \$4.7 million of unamortized original issue discount and \$4.3 million of unamortized debt issuance costs.

Prior to April 19, 2026 (three months prior to their maturity date), the Company may redeem the 2026 Notes in whole at any time or in part from time to time, at its option, at a redemption price equal to the greater of (i) 100% of the principal amount of the 2026 Notes to be redeemed, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest in respect to the 2026 Notes being redeemed, discounted on an annual basis, at the applicable Comparable

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Government Bond Rate (as defined in the indenture governing the 2026 Notes) plus 35 basis points; plus, in each case, accrued and unpaid interest. In addition, at any time on or after April 19, 2026 (three months prior to their maturity date), the Company may redeem the 2026 Notes, at its option, at a redemption price equal to 100% of the principal amount of the 2026 Notes due to be redeemed plus accrued and unpaid interest.

Upon a change of control (as defined in the indenture governing the 2026 Notes) and a contemporaneous downgrade of the 2026 Notes below investment grade, the Company will, in certain circumstances, make an offer to purchase the 2026 Notes at a price equal to 101% of their principal amount plus any accrued and unpaid interest.

0.6% Senior Unsecured Notes due in 2021. On April 11, 2018, the Company issued €300.0 million aggregate principal amount of senior unsecured notes due in 2021 (the “April 2021 Notes”) in a registered public offering and received approximately €298.7 million of net proceeds from the issuance. The April 2021 Notes were issued at 99.95% of the principal amount, which resulted in a discount of €0.2 million. As of December 30, 2018, the April 2021 Notes had an aggregate carrying value of \$341.3 million, net of \$0.1 million of unamortized original issue discount and \$2.0 million of unamortized debt issuance costs. The April 2021 Notes mature in April 2021 and bear interest at an annual rate of 0.6%. Interest on the April 2021 Notes is payable annually on April 9th each year. The proceeds from the April 2021 Notes were used to pay in full the outstanding balance of the Company’s senior unsecured term loan credit facility, and a portion of the outstanding senior unsecured revolving credit facility, and in each case the borrowings were incurred to pay a portion of the purchase price for the Company’s acquisition of EUROIMMUN, which closed on December 19, 2017. Prior to the maturity date of the April 2021 Notes, the Company may redeem them in whole at any time or in part from time to time, at its option, at a redemption price equal to the greater of (i) 100% of the principal amount of the April 2021 Notes to be redeemed, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest in respect to the April 2021 Notes being redeemed, discounted on an annual basis, at the applicable Comparable Government Bond Rate (as defined in the indenture governing the April 2021 Notes) plus 15 basis points; plus, in each case, accrued and unpaid interest. Upon a change of control (as defined in the indenture governing the April 2021 Notes) and a contemporaneous downgrade of the April 2021 Notes below investment grade, the Company will, in certain circumstances, make an offer to purchase the April 2021 Notes at a price equal to 101% of their principal amount, plus accrued and unpaid interest.

Other Debt Facilities. The Company’s other debt facilities include Euro-denominated bank loans with an aggregate carrying value of \$32.1 million (or €28.0 million) and \$57.2 million (or €47.6 million) as of December 30, 2018 and December 31, 2017, respectively. These bank loans are primarily utilized for financing fixed assets and are repaid in monthly or quarterly installments with maturity dates extending to 2028. Of these bank loans, loans in the aggregate amount of \$31.9 million bear fixed interest rates between 1.1% and 5.5% and a loan in the amount of \$0.2 million bears a variable interest rate based on the Euribor rate plus a margin of 1.5%. An aggregate amount of \$4.8 million of the bank loans are secured by mortgages on real property and the remaining \$27.3 million are unsecured. Certain credit agreements for the unsecured bank loans include financial covenants which are based on an equity ratio or an equity ratio and minimum interest coverage ratio.

In addition, the Company had other unsecured revolving credit facilities and a secured bank loan in the amount of \$5.8 million and \$0.3 million, respectively, as of December 30, 2018 and \$2.7 million and \$0.3 million, respectively, as of December 31, 2017. The unsecured revolving debt facilities bear fixed interest rates between 2.3% and 17.6%. The secured bank loan of \$0.3 million bears a fixed annual interest rate of 1.95% and is repaid in monthly installments until 2027.

Financing Lease Obligations. In fiscal year 2012, the Company entered into agreements with the lessors of certain buildings that the Company is currently occupying and leasing to expand those buildings. The Company provided a portion of the funds needed for the construction of the additions to the buildings, and as a result the Company was considered the owner of the buildings during the construction period. At the end of the construction period, the Company was not reimbursed by the lessors for all of the construction costs. The Company is therefore deemed to have continuing involvement and the leases qualify as financing leases under sale-leaseback accounting guidance, representing debt obligations for the Company and non-cash investing and financing activities. As a result, the

Company capitalized \$29.3 million in property, plant and equipment, net, representing the fair value of the buildings with a corresponding increase to debt. The Company has also capitalized \$11.5 million in additional construction costs necessary to complete the renovations to the buildings, which were funded by the lessors, with a corresponding increase to debt. At December 30, 2018, the Company had \$34.5 million recorded for these financing lease obligations, of which \$1.5 million was recorded as short-term debt and \$33.0 million was recorded as long-term debt. At December 31, 2017, the Company had \$35.9 million recorded for these financing lease obligations, of which \$1.4 million was recorded as short-term debt and \$34.5 million was recorded as long-term debt. The buildings are being depreciated on a straight-line basis over the terms of the leases to their estimated residual values, which will equal the remaining financing obligation at the end of the lease term. At the end of the lease term, the remaining balances in property, plant and equipment, net and debt will be reversed against each other. Upon adoption of ASC 842, the Company will derecognize the impact of this build-to-suit arrangement.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table summarizes the maturities of the Company's indebtedness as of December 30, 2018:

	Sr. Unsecured Revolving Credit Facility Maturing 2021 (In thousands)	November 2021 Notes	April 2021 Notes	2026 Notes	Other Debt Facilities	Financing Lease Obligations	Total
2019	\$—	\$—	\$—	\$—	\$ 13,324	\$ 1,532	\$ 14,856
2020	—	—	—	—	8,527	1,597	10,124
2021	418,000	500,000	343,410	—	8,197	1,665	1,271,272
2022	—	—	—	—	3,907	1,657	5,564
2023	—	—	—	—	2,641	1,681	4,322
2024 and thereafter	—	—	—	572,350	1,574	4,698	578,622
Total before unamortized discount and debt issuance costs and non-cash finance lease liabilities	418,000	500,000	343,410	572,350	38,170	12,830	1,884,760
Unamortized discount and debt issuance costs	(2,401)	(2,628)	(2,133)	(7,806)	—	—	(14,968)
Non-cash finance lease liabilities	—	—	—	—	—	21,688	21,688
Total	\$415,599	\$497,372	\$341,277	\$564,544	\$38,170	\$34,518	\$1,891,480

Note 16: Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities as of December 30, 2018 and December 31, 2017 consisted of the following:

	December 30, 2018	December 31, 2017
	(In thousands)	
Payroll and incentives	\$86,549	\$ 66,955
Employee benefits	44,060	37,354
Deferred revenue	155,064	159,923
Federal, non-U.S. and state income taxes	30,687	10,800
Other accrued operating expenses	212,467	225,610
Total accrued expenses and other current liabilities	\$528,827	\$ 500,642

Note 17: Employee Benefit Plans

Savings Plan: The Company has a 401(k) Savings Plan for the benefit of all qualified U.S. employees, with such employees receiving matching contributions in the amount equal to 100.0% of the first 5.0% of eligible compensation up to applicable Internal Revenue Service limits. Savings plan expense was \$13.2 million in fiscal year 2018, \$12.5 million in fiscal year 2017, and \$12.8 million in fiscal year 2016.

Pension Plans: The Company has a defined benefit pension plan covering certain U.S. employees and non-U.S. pension plans for certain non-U.S. employees. The principal U.S. defined benefit pension plan was closed to new hires effective January 31, 2001, and benefits for those employed by the Company's former Life Sciences business were frozen as of that date. Plan benefits were frozen as of March 2003 for those employed by the Company's former

Analytical Instruments business and corporate employees. Plan benefits were frozen as of January 31, 2011 for all remaining employees that were still actively accruing in the plan. The plans provide benefits that are based on an employee's years of service and compensation near retirement.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Net periodic pension cost (credit) for U.S. and non-U.S. plans included the following components for fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Service and administrative costs	\$6,853	\$ 4,951	\$4,337
Interest cost	16,146	16,707	18,638
Expected return on plan assets	(28,939)	(26,401)	(24,245)
Actuarial loss (gain)	17,146	(7,085)	15,890
Amortization of prior service cost	375	(195)	(210)
Net periodic pension cost (credit)	\$11,581	\$ (12,023)	\$ 14,410

The Company recognizes actuarial gains and losses, unless an interim remeasurement is required, in the fourth quarter of the year in which the gains and losses occur, in accordance with the Company's accounting method for defined benefit pension plans and other postretirement benefits as described in Note 1, Basis of Presentation. Such adjustments for gains and losses are primarily driven by events and circumstances beyond the Company's control, including changes in interest rates, the performance of the financial markets and mortality assumptions. As discussed in Note 1, the Company adopted ASU 2017-07 on January 1, 2018. Actuarial gains and losses are now recognized in the line item "Interest and other expense, net" in the consolidated statements of operations. Actuarial gains and losses were presented within operating income prior to the adoption. As such, prior year amounts, including other components of periodic pension cost, have been reclassified to "Interest and other expense, net" in the Company's consolidated statements of operations due to the retrospective adoption of ASU 2017-07.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table sets forth the changes in the funded status of the principal U.S. pension plan and the principal non-U.S. pension plans and the amounts recognized in the Company's consolidated balance sheets as of December 30, 2018 and December 31, 2017.

	December 30, 2018		December 31, 2017		
	Non-U.S.	U.S.	Non-U.S.	U.S.	
	(In thousands)				
Actuarial present value of benefit obligations:					
Accumulated benefit obligations	\$ 304,065	\$ 283,310	\$ 334,151	\$ 308,713	
Change in benefit obligations:					
Projected benefit obligations at beginning of year	\$ 343,410	\$ 308,713	\$ 279,522	\$ 300,650	
Service and administrative costs	4,528	2,325	2,201	2,750	
Interest cost	5,484	10,662	4,870	11,836	
Benefits paid and plan expenses	(13,081)	(19,709)	(13,238)	(20,032)	
Participants' contributions	176	—	189	—	
Business acquisition	537	—	39,293	—	
Plan amendments	533	—	—	—	
Actuarial (gain) loss	(13,141)	(18,681)	(1,486)	13,509	
Effect of exchange rate changes	(17,278)	—	32,059	—	
Projected benefit obligations at end of year	\$ 311,168	\$ 283,310	\$ 343,410	\$ 308,713	
Change in plan assets:					
Fair value of plan assets at beginning of year	\$ 179,736	\$ 253,427	\$ 153,281	\$ 243,817	
Actual return on plan assets	(5,653)	(14,376)	15,866	29,642	
Benefits paid and plan expenses	(13,081)	(19,709)	(13,238)	(20,032)	
Employer's contributions	8,480	15,000	8,422	—	
Participants' contributions	176	—	189	—	
Effect of exchange rate changes	(10,495)	—	15,216	—	
Fair value of plan assets at end of year	\$ 159,163	\$ 234,342	\$ 179,736	\$ 253,427	
Net liabilities recognized in the consolidated balance sheets	\$ (152,005)	\$ (48,968)	\$ (163,674)	\$ (55,286)	
Net amounts recognized in the consolidated balance sheets consist of:					
Other assets	\$ 31,419	\$ —	\$ 26,591	\$ —	
Current liabilities	(6,752)	—	(7,017)	—	
Long-term liabilities	(176,672)	(48,968)	(183,248)	(55,286)	
Net liabilities recognized in the consolidated balance sheets	\$ (152,005)	\$ (48,968)	\$ (163,674)	\$ (55,286)	
Net amounts recognized in accumulated other comprehensive income consist of:					
Prior service cost	\$ (278)	\$ —	\$ (457)	\$ —	
Actuarial assumptions as of the year-end measurement date:					
Discount rate	2.07	% 4.05	% 1.99	% 3.56	%
Rate of compensation increase	3.48	% None	3.50	% None	

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Actuarial assumptions used to determine net periodic pension cost during the year were as follows:

	December 30, 2018		December 31, 2017		January 1, 2017	
	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.
Discount rate	1.99%	3.56%	2.06%	4.06%	2.88%	4.25%
Rate of compensation increase	3.50%	None	3.64%	None	3.26%	None
Expected rate of return on assets	5.90%	7.25%	6.00%	7.25%	5.30%	7.25%

The following table provides a breakdown of the non-U.S. benefit obligations and fair value of assets for pension plans that have benefit obligations in excess of plan assets:

	December 30, 2018	December 31, 2017
	(In thousands)	
Pension Plans with Projected Benefit Obligations in Excess of Plan Assets		
Projected benefit obligations	\$183,424	\$190,265
Fair value of plan assets	—	—
Pension Plans with Accumulated Benefit Obligations in Excess of Plan Assets		
Accumulated benefit obligations	\$180,560	\$187,329
Fair value of plan assets	—	—

Assets of the defined benefit pension plans are primarily equity and debt securities. Asset allocations as of December 30, 2018 and December 31, 2017, and target asset allocations for fiscal year 2019 are as follows:

Asset Category	Target Allocation		Percentage of Plan Assets			
	December 29, 2019		at			
	Non-U.S.	U.S.	December 30, 2018		December 31, 2017	
Equity securities	45-55%	35-50%	48%	39%	51%	41%
Debt securities	45-55%	50-65%	51%	61%	49%	59%
Other	0-5%	0-10%	1%	—%	0%	—%
Total	100%	100%	100%	100%	100%	100%

The Company maintains target allocation percentages among various asset classes based on investment policies established for the pension plans which are designed to maximize the total rate of return (income and appreciation) after inflation within the limits of prudent risk taking, while providing for adequate near-term liquidity for benefit payments.

The Company's expected rate of return on assets assumptions are derived from management's estimates, as well as other information compiled by management, including studies that utilize customary procedures and techniques. The studies include a review of anticipated future long-term performance of individual asset classes and consideration of the appropriate asset allocation strategy given the anticipated requirements of the plans to determine the average rate of earnings expected on the funds invested to provide for the pension plans benefits. While the study gives appropriate consideration to recent fund performance and historical returns, the assumption is primarily a long-term, prospective rate.

The Company's discount rate assumptions are derived from a range of factors, including a yield curve for certain plans, composed of the rates of return on high-quality fixed-income corporate bonds available at the measurement date and the related expected duration for the obligations, and a bond matching approach for certain plans.

During fiscal year 2016, for the plans in the United States, the Society of Actuaries issued an updated projection scale, MP-2016, which reduced the life expectancy used to determine the projected benefit obligation. The Company adopted MP-2016 as of January 1, 2017. The adoption of the updated projection scale resulted in a \$5.5 million decrease to the projected benefit obligation at January 1, 2017. The Company adopted a further updated projection scale, MP-2017, as of December 31, 2017. The adoption of MP-2017 resulted in a \$2.6 million decrease to the projected benefit obligation at December 31, 2017. During fiscal year 2018, the Society of Actuaries issued MP-2018 mortality improvement rates to replace MP-2017 rates for use with the RP-2014 mortality table, which incorporates an additional year (2016) of U.S. population. The Company adopted MP-2018 as of December 30, 2018. The adoption of MP-2018 resulted in a \$1.0 million decrease to the projected benefit obligation at December 30, 2018. The changes to the projected benefit obligations due to the adoption of the

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

mortality base table and projection scale are included within "Actuarial loss (gain)" in the Change in Benefit Obligations for fiscal years 2018 and 2017 above.

The target allocations for plan assets are listed in the above table. Equity securities primarily include investments in large-cap and mid-cap companies located in the United States and abroad, and equity index funds. Debt securities include corporate bonds of companies from diversified industries, high-yield bonds, and U.S. government securities. Other types of investments include investments in non-U.S. government index linked bonds, multi-strategy hedge funds and venture capital funds that follow several different strategies.

The fair values of the Company's pension plan assets as of December 30, 2018 and December 31, 2017 by asset category, classified in the three levels of inputs described in Note 23 to the consolidated financial statements are as follows:

	Fair Value Measurements at December 30, 2018 Using:			
	Total Carrying Value at December 30, 2018 (In thousands)	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Other Inputs Significant Unobservable Inputs (Level 3)
Cash	\$6,326	\$ 6,326	\$ —	\$ —
Equity securities:				
U.S. large-cap	35,072	35,072	—	—
International large-cap value	24,175	24,175	—	—
U.S. small mid-cap	1,928	1,928	—	—
Emerging markets growth	11,993	11,993	—	—
Equity index funds	54,342	—	54,342	—
Domestic real estate funds	1,353	1,353	—	—
Foreign real estate funds	22,196	—	—	22,196
Commodity funds	886	886	—	—
Fixed income securities:				
Non-U.S. treasury securities	23,352	—	23,352	—
Corporate and U.S. debt instruments	131,211	48,133	83,078	—
Corporate bonds	24,848	—	24,848	—
High yield bond funds	5,186	5,186	—	—
Other types of investments:				
Multi-strategy hedge funds	16,934	—	—	16,934
Non-U.S. government index linked bonds	33,703	—	33,703	—
Total assets measured at fair value	\$393,505	\$ 135,052	\$ 219,323	\$ 39,130

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Fair Value Measurements at December 31, 2017 Using:			
	Total Carrying Value at December 31, 2017 (In thousands)	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Other Inputs Significant Unobservable Inputs (Level 3)
Cash	\$4,307	\$ 4,307	\$ —	\$ —
Equity Securities:				
U.S. large-cap	30,008	30,008	—	—
International large-cap value	32,613	32,613	—	—
U.S. small-cap	2,104	2,104	—	—
Emerging markets growth	14,348	14,348	—	—
Equity index funds	90,838	—	90,838	—
Domestic real estate funds	1,401	1,401	—	—
Commodity funds	7,387	7,387	—	—
Fixed income securities:				
Non-U.S. Treasury Securities	24,946	—	24,946	—
Corporate and U.S. debt instruments	138,948	40,290	98,658	—
Corporate bonds	27,571	—	27,571	—
High yield bond funds	5,912	5,912	—	—
Other types of investments:				
Multi-strategy hedge funds	16,789	—	—	16,789
Non-U.S. government index linked bonds	35,991	—	35,991	—
Total assets measured at fair value	\$433,163	\$ 138,370	\$ 278,004	\$ 16,789

Valuation Techniques: Valuation techniques utilized need to maximize the use of observable inputs and minimize the use of unobservable inputs. There have been no changes in the methodologies utilized at December 30, 2018 compared to December 31, 2017. The following is a description of the valuation techniques utilized to measure the fair value of the assets shown in the table above.

Equity Securities: Shares of registered investment companies that are publicly traded are categorized as Level 1 assets; they are valued at quoted market prices that represent the net asset value of the fund. These instruments have active markets.

Equity index funds are mutual funds that are not publicly traded and are comprised primarily of underlying equity securities that are publicly traded on exchanges. Price quotes for the assets held by these funds are readily observable and available. Equity index funds are categorized as Level 2 assets.

Fixed Income Securities: Fixed income mutual funds that are publicly traded are valued at quoted market prices that represent the net asset value of securities held by the fund and are categorized as Level 1 assets.

Fixed income index funds that are not publicly traded are stated at net asset value as determined by the issuer of the fund based on the fair value of the underlying investments and are categorized as Level 2 assets.

Individual fixed income bonds are categorized as Level 2 assets except where sufficient quoted prices exist in active markets, in which case such securities are categorized as Level 1 assets. These securities are valued using third-party

pricing services. These services may use, for example, model-based pricing methods that utilize observable market data as inputs. Broker dealer bids or quotes of securities with similar characteristics may also be used.

Other Types of Investments: Non-U.S. government index link bond funds are not publicly traded and are stated at net asset value as determined by the issuer of the fund based on the fair value of the underlying investments.

Underlying investments consist of bonds in which payment of income on the principal is related to a specific price index and are categorized as Level 2 assets.

Hedge funds, private equity funds, foreign real estate funds and venture capital funds are valued at fair value by using the net asset values provided by the investment managers and are updated, if necessary, using analytical procedures, appraisals, public market data and/or inquiry of the investment managers. The net asset values are determined based upon the fair values of the underlying investments in the funds. These other investments invest primarily in readily available marketable securities and

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

allocate gains, losses, and expense to the investor based on the ownership percentage as described in the fund agreements. They are categorized as Level 3 assets.

The Company's policy is to recognize significant transfers between levels at the actual date of the event.

A reconciliation of the beginning and ending Level 3 assets for fiscal years 2018, 2017 and 2016 is as follows:

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3):			
	Venture Capital Funds	Foreign Real Estate Funds	Multi-strategy Hedge Funds	Total
	(In thousands)			
Balance at January 3, 2016	\$ 1	\$—	\$ 23,415	\$23,416
Realized losses	(1)	—	—	(1)
Unrealized gains	—	—	375	375
Balance at January 1, 2017	—	—	23,790	23,790
Sales	—	—	(8,189)	(8,189)
Realized gains	—	—	1,542	1,542
Unrealized losses	—	—	(354)	(354)
Balance at December 31, 2017	—	—	16,789	16,789
Purchases	—	22,196	—	22,196
Unrealized gains	—	—	145	145
Balance at December 30, 2018	\$—	\$22,196	\$ 16,934	\$39,130

With respect to plans outside of the United States, the Company expects to contribute \$8.3 million in the aggregate during fiscal year 2019. During fiscal year 2018, the Company contributed \$8.5 million, in the aggregate, to pension plans outside of the United States and \$15.0 million to its defined benefit pension plan in the United States for the plan year 2017. During fiscal year 2017, the Company made contributions of \$8.4 million, in the aggregate, to plans outside of the United States. During fiscal year 2016, the Company contributed \$9.6 million, in the aggregate, to plans outside of the United States.

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid as follows:

	Non-U.S.U.S. (In thousands)	
2019	\$11,313	\$18,774
2020	11,654	18,948
2021	12,200	19,176
2022	12,267	19,353
2023	12,551	19,462
2024-2028	67,457	95,403

The Company also sponsors a supplemental executive retirement plan to provide senior management with benefits in excess of normal pension benefits. Effective July 31, 2000, this plan was closed to new entrants. At December 30, 2018 and December 31, 2017, the projected benefit obligations were \$22.1 million and \$23.7 million, respectively. Assets with a fair value of \$1.8 million and \$1.4 million, segregated in a trust (which is included in marketable securities and investments on the consolidated balance sheets), were available to meet this obligation as of December 30, 2018 and December 31, 2017, respectively. Pension expenses and income for this plan netted to income of \$0.3 million in fiscal year 2018, expense of \$3.2 million in fiscal year 2017 and expense of \$1.6 million in fiscal year 2016.

Postretirement Medical Plans: The Company provides healthcare benefits for eligible retired U.S. employees under a comprehensive major medical plan or under health maintenance organizations where available. Eligible U.S. employees qualify for retiree health benefits if they retire directly from the Company and have at least ten years of service. Generally, the major medical plan pays stated percentages of covered expenses after a deductible is met and takes into consideration payments by other group coverage and by Medicare. The plan requires retiree contributions under most circumstances and has provisions for

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

cost-sharing charges. Effective January 1, 2000, this plan was closed to new hires. For employees retiring after 1991, the Company has capped its medical premium contribution based on employees' years of service. The Company funds the amount allowable under a 401(h) provision in the Company's defined benefit pension plan. Assets of the plan are primarily equity and debt securities and are available only to pay retiree health benefits.

Net periodic postretirement medical benefit cost (credit) included the following components for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Service cost	\$106	\$ 92	\$ 101
Interest cost	120	125	142
Expected return on plan assets	(1,254)	(1,114)	(1,035)
Actuarial loss (gain)	1,621	(741)	(539)
Net periodic postretirement medical benefit cost (credit)	\$593	\$ (1,638)	\$ (1,331)

The following table sets forth the changes in the postretirement medical plan's funded status and the amounts recognized in the Company's consolidated balance sheets as of December 30, 2018 and December 31, 2017.

	December 30, 2018	December 31, 2017
	(In thousands)	
Actuarial present value of benefit obligations:		
Retirees	\$688	\$ 804
Active employees eligible to retire	408	379
Other active employees	2,317	1,948
Accumulated benefit obligations at beginning of year	3,413	3,131
Service cost	106	92
Interest cost	120	125
Benefits paid	(117)	(122)
Actuarial (gain) loss	(611)	187
Change in accumulated benefit obligations during the year	(502)	282
Retirees	583	688
Active employees eligible to retire	362	408
Other active employees	1,966	2,317
Accumulated benefit obligations at end of year	\$2,911	\$ 3,413
Change in plan assets:		
Fair value of plan assets at beginning of year	\$17,374	\$ 15,453
Actual return on plan assets	(993)	1,921
Benefits reimbursements paid	(102)	—
Fair value of plan assets at end of year	\$16,279	\$ 17,374
Net assets recognized in the consolidated balance sheets	\$13,368	\$ 13,961
Net amounts recognized in the consolidated balance sheets consist of:		
Other assets	\$13,368	\$ 13,961

Net amounts recognized in accumulated other comprehensive income consist of:

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Prior service cost	\$—	\$—	
Actuarial assumptions as of the year-end measurement date:			
Discount rate	4.09	% 3.60	%

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Actuarial assumptions used to determine net cost during the year are as follows:

	December 30, 2018		December 31, 2017		January 1, 2017	
Discount rate	3.60	%	4.11	%	4.34	%
Expected rate of return on assets	7.25	%	7.25	%	7.25	%

The Company maintains a master trust for plan assets related to the U.S. defined benefit plans and the U.S. postretirement medical plan. Accordingly, investment policies, target asset allocations and actual asset allocations are the same as those disclosed for the U.S. defined benefit plans.

The fair values of the Company's plan assets at December 30, 2018 and December 31, 2017 by asset category, classified in the three levels of inputs described in Note 23, are as follows:

	Fair Value Measurements at December 30, 2018 Using:			
	Total Carrying Value at December 30, 2018	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Significant Other Unobservable Inputs (Level 3)
	(In thousands)			
Cash	\$390	\$ 390	\$ —	\$ —
Equity securities:				
U.S. large-cap	2,436	2,436	—	—
International large-cap value	1,679	1,679	—	—
U.S. small mid-cap	134	134	—	—
Emerging markets growth	833	833	—	—
Domestic real estate funds	94	94	—	—
Commodity funds	62	62	—	—
Fixed income securities:				
Corporate debt instruments	9,115	3,344	5,771	—
High yield bond funds	360	360	—	—
Other types of investments:				
Multi-strategy hedge funds	1,176	—	—	1,176
Total assets measured at fair value	\$16,279	\$ 9,332	\$ 5,771	\$ 1,176

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Fair Value Measurements at December 31, 2017 Using:			
	Total Carrying Value at December 31, 2017 (In thousands)	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Significant Other Inputs (Level 3) Unobservable Inputs (Level 3)
Cash	\$268	\$ 268	\$ —	\$ —
Equity securities:				
U.S. large-cap	2,057	2,057	—	—
International large-cap value	2,236	2,236	—	—
U.S. small mid-cap	144	144	—	—
Emerging markets growth	984	984	—	—
Domestic real estate funds	96	96	—	—
Commodity funds	506	506	—	—
Fixed income securities:				
Corporate debt instruments	9,526	2,762	6,764	—
High yield bond funds	406	406	—	—
Other types of investments:				
Multi-strategy hedge funds	1,151	—	—	1,151
Total assets measured at fair value	\$17,374	\$ 9,459	\$ 6,764	\$ 1,151

Valuation Techniques: Valuation techniques are the same as those disclosed for the U.S. defined benefit plans above.

A reconciliation of the beginning and ending Level 3 assets for fiscal years 2018, 2017 and 2016 is as follows:

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3): Multi-strategy Hedge Funds (In thousands)
Balance at January 3, 2016	\$ 1,374
Unrealized gains	134
Balance at January 1, 2017	1,508
Sales	(562)
Realized gains	229
Unrealized losses	(24)
Balance at December 31, 2017	1,151
Unrealized gains	25

Balance at December 30, 2018 \$ 1,176

The Company does not expect to make any contributions to the postretirement medical plan during fiscal year 2019.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid as follows:

Postretirement Medical Plan

	(In thousands)
2019	\$ 136
2020	149
2021	168
2022	184
2023	194
2024-2028	1,050

Deferred Compensation Plans: During fiscal year 1998, the Company implemented a nonqualified deferred compensation plan that provides benefits payable to officers and certain key employees or their designated beneficiaries at specified future dates, or upon retirement or death. The plan was amended to eliminate deferral elections, with the exception of Company 401(k) excess contributions for eligible participants, for plan years beginning January 1, 2011. Benefit payments under the plan are funded by contributions from participants, and for certain participants, contributions by the Company. The obligations related to the deferred compensation plan totaled \$1.1 million at December 30, 2018 and \$1.0 million at December 31, 2017.

Note 18: Contingencies

The Company is conducting a number of environmental investigations and remedial actions at current and former locations of the Company and, along with other companies, has been named a potentially responsible party (“PRP”) for certain waste disposal sites. The Company accrues for environmental issues in the accounting period that the Company's responsibility is established and when the cost can be reasonably estimated. The Company has accrued \$7.9 million and \$9.4 million as of December 30, 2018 and December 31, 2017, respectively, in accrued expenses and other current liabilities, which represents its management’s estimate of the cost of the remediation of known environmental matters, and does not include any potential liability for related personal injury or property damage claims. The Company's environmental accrual is not discounted and does not reflect the recovery of any material amounts through insurance or indemnification arrangements. The cost estimates are subject to a number of variables, including the stage of the environmental investigations, the magnitude of the possible contamination, the nature of the potential remedies, possible joint and several liability, the time period over which remediation may occur, and the possible effects of changing laws and regulations. For sites where the Company has been named a PRP, management does not currently anticipate any additional liability to result from the inability of other significant named parties to contribute. The Company expects that the majority of such accrued amounts could be paid out over a period of up to ten years. As assessment and remediation activities progress at each individual site, these liabilities are reviewed and adjusted to reflect additional information as it becomes available. There have been no environmental problems to date that have had, or are expected to have, a material adverse effect on the Company’s consolidated financial statements. While it is possible that a loss exceeding the amounts recorded in the consolidated financial statements may be incurred, the potential exposure is not expected to be materially different from those amounts recorded.

The Company is subject to various claims, legal proceedings and investigations covering a wide range of matters that arise in the ordinary course of its business activities. Although the Company has established accruals for potential losses that it believes are probable and reasonably estimable, in the opinion of the Company’s management, based on its review of the information available at this time, the total cost of resolving these contingencies at December 30, 2018 should not have a material adverse effect on the Company’s consolidated financial statements. However, each of

these matters is subject to uncertainties, and it is possible that some of these matters may be resolved unfavorably to the Company.

Note 19: Warranty Reserves

The Company provides warranty protection for certain products usually for a period of one year beyond the date of sale. The majority of costs associated with warranty obligations include the replacement of parts and the time for service personnel to respond to repair and replacement requests. A warranty reserve is recorded based upon historical results, supplemented by management's expectations of future costs. Warranty reserves are included in "Accrued expenses and other current liabilities" on the consolidated balance sheets.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

A summary of warranty reserve activity for the fiscal years ended December 30, 2018, December 31, 2017 and January 1, 2017 is as follows:

	(In thousands)
Balance at January 3, 2016	\$ 9,843
Provision charged to income	14,901
Payments	(14,749)
Adjustments to previously provided warranties, net	(850)
Foreign currency translation and acquisitions	(133)
Balance at January 1, 2017	9,012
Provision charged to income	13,700
Payments	(14,245)
Adjustments to previously provided warranties, net	(815)
Foreign currency translation and acquisitions	1,398
Balance at December 31, 2017	9,050
Provision charged to income	13,545
Payments	(13,775)
Adjustments to previously provided warranties, net	(157)
Foreign currency translation and acquisitions	(270)
Balance at December 30, 2018	\$ 8,393

Note 20: Stock Plans

Stock-Based Compensation:

In addition to the Company's Employee Stock Purchase Plan, the Company utilizes one stock-based compensation plan, the 2009 Incentive Plan (the "2009 Plan"). Under the 2009 Plan, 10.0 million shares of the Company's common stock are authorized for stock option grants, restricted stock awards, performance restricted stock units, performance units and stock grants as part of the Company's compensation programs. In addition to shares of the Company's common stock originally authorized for issuance under the 2009 Plan, the 2009 Plan includes shares of the Company's common stock previously granted under the Amended and Restated 2001 Incentive Plan and the 2005 Incentive Plan that were canceled or forfeited without the shares being issued.

The following table summarizes total pre-tax compensation expense recognized related to the Company's stock options, restricted stock, restricted stock units, performance restricted stock units, performance units and stock grants, net of estimated forfeitures, included in the Company's consolidated statements of operations for fiscal years 2018, 2017 and 2016:

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Cost of product and service revenue	\$1,466	\$ 1,254	\$ 1,031
Research and development expenses	1,359	1,389	902
Selling, general and administrative expenses	25,942	22,778	15,225
Total stock-based compensation expense	\$28,767	\$ 25,421	\$ 17,158

The total income tax benefit recognized in the consolidated statements of operations for stock-based compensation was \$13.6 million in fiscal year 2018, \$14.5 million in fiscal year 2017 and \$10.5 million in fiscal year 2016. Stock-based compensation costs capitalized as part of inventory were \$0.3 million as of each of December 30, 2018 and December 31, 2017.

Stock Options: The Company has granted options to purchase common shares at prices equal to the market price of the common shares on the date the option is granted. Conditions of vesting are determined at the time of grant. Options are generally exercisable in equal annual installments over a period of three years, and will generally expire seven years after the date of grant. Options replaced in association with business combination transactions are generally issued with the same terms of the respective plans under which they were originally issued.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The fair value of each option grant is estimated using the Black-Scholes option pricing model. The fair value is then amortized on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period. Use of a valuation model requires management to make certain assumptions with respect to selected model inputs. Expected volatility was calculated based on the historical and implied volatility of the Company's stock. The average expected life was based on the contractual term of the option and historic exercise experience. The risk-free interest rate is based on United States Treasury zero-coupon issues with a remaining term equal to the expected life assumed at the date of grant. The Company's weighted-average assumptions used in the Black-Scholes option pricing model were as follows for the fiscal years ended:

	December 30, 2018		December 31, 2017		January 1, 2017	
Risk-free interest rate	3.0	%	2.0	%	1.7	%
Expected dividend yield	0.4	%	0.4	%	0.6	%
Expected lives	5 years		5 years		5 years	
Expected stock volatility	20.7	%	22.4	%	25.2	%

The following table summarizes stock option activity for the fiscal year ended December 30, 2018:

	December 30, 2018	Weighted- Average Exercise Price
Outstanding at beginning of year	2,154	\$ 42.77
Granted	364	77.84
Exercised	(709)	35.02
Forfeited	(44)	51.56
Outstanding at end of year	1,765	\$ 52.91
Exercisable at end of year	965	\$ 44.60

The aggregate intrinsic value for stock options outstanding at December 30, 2018 was \$43.8 million with a weighted-average remaining contractual term of 4.2 years. The aggregate intrinsic value for stock options exercisable at December 30, 2018 was \$31.6 million with a weighted-average remaining contractual term of 3.2 years. At December 30, 2018, there were 1.8 million stock options that were vested, and expected to vest in the future, with an aggregate intrinsic value of \$43.0 million and a weighted-average remaining contractual term of 4.2 years.

The weighted-average per-share grant-date fair value of options granted during fiscal years 2018, 2017 and 2016 was \$17.56, \$11.83, and \$10.20, respectively. The total intrinsic value of options exercised during fiscal years 2018, 2017 and 2016 was \$35.0 million, \$17.6 million, and \$16.6 million, respectively. Cash received from option exercises for fiscal years 2018, 2017 and 2016 was \$24.8 million, \$18.0 million, and \$14.4 million, respectively. The total compensation expense recognized related to the Company's outstanding options was \$5.4 million in fiscal year 2018, \$4.7 million in fiscal year 2017 and \$4.4 million in fiscal year 2016.

There was \$6.7 million of total unrecognized compensation cost related to nonvested stock options granted as of December 30, 2018. This cost is expected to be recognized over a weighted-average period of 1.8 years.

Restricted Stock Awards: The Company has awarded shares of restricted stock and restricted stock units to certain employees and non-employee directors at no cost to them, which cannot be sold, assigned, transferred or pledged during the restriction period. The restricted stock and restricted stock units vest through the passage of time, assuming continued employment. The fair value of the award at the time of the grant is expensed on a straight line basis primarily in selling, general and administrative expenses over the vesting period, which is generally 3 years. These awards were granted under the Company's 2009 Plan. Recipients of the restricted stock have the right to vote such shares and receive dividends.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table summarizes restricted stock award activity for the fiscal year ended December 30, 2018:

	December 30, 2018	Weighted- Number of Grant- Date Fair Value (Shares in thousands)
Nonvested at beginning of year	496	\$ 50.30
Granted	214	76.00
Vested	(206)	50.37
Forfeited	(39)	55.73
Nonvested at end of year	465	\$ 61.72

The fair value of restricted stock awards vested during fiscal years 2018, 2017 and 2016 was \$10.4 million, \$10.6 million, and \$8.4 million, respectively. The total compensation expense recognized related to the restricted stock awards was \$11.7 million in fiscal year 2018, \$10.3 million in fiscal year 2017 and \$9.3 million in fiscal year 2016.

As of December 30, 2018, there was \$16.0 million of total unrecognized compensation cost, related to nonvested restricted stock awards. That cost is expected to be recognized over a weighted-average period of 1.4 years. Performance Restricted Stock Units: As part of the Company's executive compensation program, the Company granted 39,133 and 54,337 performance restricted stock units during fiscal years 2018 and 2017, respectively, that will vest based on performance of the Company. The weighted-average per-share grant date fair value of performance restricted stock units granted during fiscal years 2018 and 2017 was \$80.31 and \$52.78, respectively. During fiscal year 2018, 5,797 performance restricted stock units were forfeited. The total compensation expense recognized related to the performance restricted stock units was \$3.2 million in fiscal year 2018 and \$0.9 million in fiscal year 2017. As of December 30, 2018, there were 87,673 performance restricted stock units outstanding.

Performance Units: The Company's performance unit program provides a cash award based on the achievement of specific performance criteria. A target number of units are granted at the beginning of a three-year performance period. The number of units earned at the end of the performance period is determined by multiplying the number of units granted by a performance factor ranging from 0% to 200%. Awards are determined by multiplying the number of units earned by the stock price at the end of the performance period, and are paid in cash and accounted for as a liability based award. The compensation expense associated with these units is recognized over the period that the performance targets are expected to be achieved. The Company granted 37,281 performance units, 49,845 performance units, and 72,164 performance units during fiscal years 2018, 2017 and 2016, respectively. The weighted-average per-share grant-date fair value of performance units granted during fiscal years 2018, 2017 and 2016 was \$73.23, \$52.69, and \$42.79, respectively. During fiscal year 2018, no performance units were forfeited. During fiscal years 2017 and 2016, 15,139 and 19,584 performance units were forfeited, respectively. The total compensation expense related to performance units was \$7.7 million, \$8.7 million, and \$2.7 million for fiscal years 2018, 2017 and 2016, respectively. As of December 30, 2018, there were 144,151 performance units outstanding subject to forfeiture, with a corresponding liability of \$14.0 million recorded in accrued expenses and long-term liabilities.

Stock Awards: The Company's stock award program provides an annual equity award to non-employee directors. For fiscal years 2018, 2017 and 2016, the award equaled the number of shares of the Company's common stock which has an aggregate fair market value of \$100,000 on the date of the award. The stock award is prorated for non-employee directors who serve for only a portion of the year. The compensation expense associated with these stock awards is recognized when the stock award is granted. In fiscal years 2018, 2017 and 2016, the Company awarded 11,088 shares, 12,006 shares, and 15,419 shares, respectively, to non-employee directors. The weighted-average per-share grant-date fair value of stock awards granted during fiscal years 2018, 2017 and 2016 was \$72.17, \$63.14, and \$54.58, respectively. The total compensation expense recognized related to these stock awards was \$0.8 million in each of fiscal years 2018, 2017 and 2016.

Employee Stock Purchase Plan:

In April 1999, the Company's shareholders approved the 1998 Employee Stock Purchase Plan. In April 2005, the Compensation and Benefits Committee of the Board voted to amend the Employee Stock Purchase Plan, effective July 1, 2005, whereby participating employees have the right to purchase common stock at a price equal to 95% of the closing price on the last day of each six-month offering period. The number of shares which an employee may purchase, subject to certain aggregate limits, is determined by the employee's voluntary contribution, which may not exceed 10% of the employee's base

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

compensation. During fiscal year 2018, the Company issued 21,321 shares of common stock under the Company's Employee Stock Purchase Plan at a weighted-average price of \$69.57 per share. During fiscal year 2017, the Company issued 36,769 shares under this plan at a weighted-average price of \$67.09 per share. During fiscal year 2016, the Company issued 49,578 shares under this plan at a weighted-average price of \$49.67 per share. At December 30, 2018 there remains available for sale to employees an aggregate of 0.8 million shares of the Company's common stock out of the 5.0 million shares authorized by shareholders for issuance under this plan.

Note 21: Stockholders' Equity

Comprehensive Income:

The components of accumulated other comprehensive (loss) income consisted of the following:

	Foreign Currency Translation Adjustment, net of tax (In thousands)	Unrecognized Prior Service Costs, net of tax	Unrealized (Losses) Gains on Securities, net of tax	Accumulated Other Comprehensive Income (Loss)
Balance, January 3, 2016	\$ (46,846)	\$ 1,259	\$ (369)	\$ (45,956)
Current year change	(54,077)	(860)	32	(54,905)
Balance, January 1, 2017	(100,923)	399	(337)	(100,861)
Current year change	54,341	(77)	79	54,343
Balance, December 31, 2017	(46,582)	322	(258)	(46,518)
Current year change	(123,388)	(77)	(9)	(123,474)
Reclassification to retained earnings upon adoption of ASU 2018-02 (see Note 1)	(6,489)	—	—	(6,489)
Balance, December 30, 2018	\$ (176,459)	\$ 245	\$ (267)	\$ (176,481)

During fiscal years 2018, 2017 and 2016, pre-tax expense of \$0.1 million, \$0.1 million, and \$0.9 million, respectively, was reclassified from accumulated other comprehensive income into selling, general and administrative expenses as a component of net periodic pension cost.

Stock Repurchases:

On July 27, 2016, the Board of Directors (the "Board") authorized the Company to repurchase up to 8.0 million shares of common stock under a stock repurchase program (the "Repurchase Program"). On July 23, 2018, the Board authorized the Company to immediately terminate the Repurchase Program and further authorized the Company to repurchase shares of common stock for an aggregate amount up to \$250.0 million under a new stock repurchase program (the "New Repurchase Program"). The New Repurchase Program will expire on July 23, 2020 unless terminated earlier by the Board and may be suspended or discontinued at any time. During fiscal year 2018, the Company had no stock repurchases under the Repurchase Program. No shares remain available for repurchase under the Repurchase Program due to its cancellation. During the fourth quarter of fiscal year 2018, the Company repurchased 650,000 shares of common stock under the New Repurchase Program at an aggregate cost of \$52.2 million. As of December 30, 2018, \$197.8 million remained available for aggregate repurchases of shares under the New Repurchase Program.

In addition, the Board has authorized the Company to repurchase shares of common stock to satisfy minimum statutory tax withholding obligations in connection with the vesting of restricted stock awards and restricted stock unit awards granted pursuant to the Company's equity incentive plans and to satisfy obligations related to the exercise of

stock options made pursuant to the Company's equity incentive plans. During the fiscal year 2018, the Company repurchased 66,506 shares of common stock for this purpose at an aggregate cost of \$5.2 million. During fiscal year 2017, the Company repurchased 78,644 shares of common stock for this purpose at an aggregate cost of \$4.4 million. During fiscal year 2016, the Company repurchased 75,198 shares of common stock for this purpose at an aggregate cost of \$3.6 million. The repurchased shares have been reflected as additional authorized but unissued shares, with the payments reflected in common stock and capital in excess of par value.

Dividends:

The Board declared a regular quarterly cash dividend of \$0.07 per share in each quarter of fiscal years 2018 and 2017. At December 30, 2018, the Company had accrued \$7.7 million for a dividend declared on October 24, 2018 for the fourth quarter

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

of fiscal year 2018 that was paid in February 2019. On January 24, 2019, the Company announced that the Board had declared a quarterly dividend of \$0.07 per share for the first quarter of fiscal year 2019 that will be payable in May 2019. In the future, the Board may determine to reduce or eliminate the Company's common stock dividend in order to fund investments for growth, repurchase shares or conserve capital resources.

Note 22: Derivatives and Hedging Activities

The Company uses derivative instruments as part of its risk management strategy only, and includes derivatives utilized as economic hedges that are not designated as hedging instruments. By nature, all financial instruments involve market and credit risks. The Company enters into derivative instruments with major investment grade financial institutions and has policies to monitor the credit risk of those counterparties. The Company does not enter into derivative contracts for trading or other speculative purposes, nor does the Company use leveraged financial instruments. Approximately 70% of the Company's business is conducted outside of the United States, generally in foreign currencies. As a result, fluctuations in foreign currency exchange rates can increase the costs of financing, investing and operating the business.

In the ordinary course of business, the Company enters into foreign exchange contracts for periods consistent with its committed exposures to mitigate the effect of foreign currency movements on transactions denominated in foreign currencies. The intent of these economic hedges is to offset gains and losses that occur on the underlying exposures from these currencies, with gains and losses resulting from the forward currency contracts that hedge these exposures. Transactions covered by hedge contracts include intercompany and third-party receivables and payables. The contracts are primarily in European and Asian currencies, have maturities that do not exceed 12 months, have no cash requirements until maturity, and are recorded at fair value on the Company's consolidated balance sheets. The unrealized gains and losses on the Company's foreign currency contracts are recognized immediately in interest and other expense, net. The cash flows related to the settlement of these hedges are included in cash flows from operating activities within the Company's consolidated statements of cash flows.

Principal hedged currencies include the British Pound, Euro, Swedish Krona, Chinese Yuan and Singapore Dollar. The Company held forward foreign exchange contracts, designated as economic hedges, with U.S. dollar equivalent notional amounts totaling \$223.3 million at December 30, 2018, \$212.1 million at December 31, 2017, and \$137.5 million at January 1, 2017, and the fair value of these foreign currency derivative contracts was insignificant. The gains and losses realized on these foreign currency derivative contracts are not material. The duration of these contracts was generally 30 days or less during each of fiscal years 2018, 2017 and 2016.

In addition, in connection with certain intercompany loan agreements utilized to finance its acquisitions and stock repurchase program, the Company enters into forward foreign exchange contracts intended to hedge movements in foreign exchange rates prior to settlement of such intercompany loans denominated in foreign currencies. The Company records these hedges at fair value on the Company's consolidated balance sheets. The unrealized gains and losses on these hedges, as well as the gains and losses associated with the remeasurement of the intercompany loans, are recognized immediately in interest and other expense, net. The cash flows related to the settlement of these hedges are included in cash flows from financing activities within the Company's consolidated statements of cash flows.

The outstanding forward exchange contracts designated as economic hedges, which were intended to hedge movements in foreign exchange rates prior to the settlement of certain intercompany loan agreements, included combined Euro notional amounts of €37.3 million and combined U.S. Dollar notional amounts of \$5.7 million as of December 30, 2018, combined Euro notional amounts of €57.2 million and combined U.S. Dollar notional amounts of \$1.3 billion as of December 31, 2017, and combined Euro notional amounts of €58.6 million, combined U.S. Dollar

notional amounts of \$8.7 million and combined Swedish Krona notional amounts of kr969.5 million as of January 1, 2017. The net gains and losses on these derivatives, combined with the gains and losses on the remeasurement of the hedged intercompany loans were not material for each of the fiscal years 2018 and 2017. The Company paid \$34.1 million and \$13.8 million during the fiscal years 2018 and 2017, respectively, from the settlement of these hedges. During fiscal year 2018, the Company entered into a series of foreign currency forward contracts with a notional amount of €298.7 million to hedge its investments in certain foreign subsidiaries. Realized and unrealized translation adjustments from these hedges were included in the foreign currency translation component of AOCI, which offsets translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold. The foreign currency forward contracts were settled during the second quarter of 2018 and the Company recorded a net realized foreign exchange loss in AOCI of \$2.6 million for the fiscal year ended December 30, 2018.

During fiscal year 2016, the Company designated the 2026 Notes to hedge its investments in certain foreign subsidiaries. In January 2018, the Company removed the hedging relationship of its 2026 Notes and investments in certain foreign

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subsidiaries and recognized \$2.1 million of unrealized foreign exchange gain in AOCI. In April 2018, the Company designated a portion of the 2026 Notes to hedge its investments in certain foreign subsidiaries. Unrealized translation adjustments from a portion of the 2026 Notes were included in the foreign currency translation component of AOCI, which offsets translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold. As of December 30, 2018, the total notional amount of the 2026 Notes that was designated to hedge investments in foreign subsidiaries was €216.0 million. The unrealized foreign exchange gain recorded in AOCI related to the net investment hedge was \$9.3 million for the fiscal year ended December 30, 2018.

During fiscal year 2018, the Company designated the April 2021 Notes to hedge its investments in certain foreign subsidiaries. Unrealized translation adjustments from the April 2021 Notes were included in the foreign currency translation component of AOCI, which offsets translation adjustments on the underlying net assets of foreign subsidiaries. The cumulative translation gains or losses will remain in AOCI until the foreign subsidiaries are liquidated or sold. As of December 30, 2018, the total notional amount of the April 2021 Notes that was designated to hedge investments in foreign subsidiaries was €298.7 million. The unrealized foreign exchange gain recorded in AOCI related to the net investment hedge was \$27.5 million for the fiscal year ended December 30, 2018.

The Company does not expect any material net pre-tax gains or losses to be reclassified from accumulated other comprehensive (loss) income into interest and other expense, net within the next twelve months.

Note 23: Fair Value Measurements

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash equivalents, derivatives, marketable securities and accounts receivable. The Company believes it had no significant concentrations of credit risk as of December 30, 2018.

The Company uses the market approach technique to value its financial instruments and there were no changes in valuation techniques during fiscal years 2018 and 2017. The Company’s financial assets and liabilities carried at fair value are primarily comprised of marketable securities, derivative contracts used to hedge the Company’s currency risk, and acquisition related contingent consideration. The Company has not elected to measure any additional financial instruments or other items at fair value.

Valuation Hierarchy: The following summarizes the three levels of inputs required to measure fair value. For Level 1 inputs, the Company utilizes quoted market prices as these instruments have active markets. For Level 2 inputs, the Company utilizes quoted market prices in markets that are not active, broker or dealer quotations, or utilizes alternative pricing sources with reasonable levels of price transparency. For Level 3 inputs, the Company utilizes unobservable inputs based on the best information available, including estimates by management primarily based on information provided by third-party fund managers, independent brokerage firms and insurance companies. A financial asset’s or liability’s classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement. In determining fair value, the Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible.

The following tables show the assets and liabilities carried at fair value measured on a recurring basis as of December 30, 2018 and December 31, 2017 classified in one of the three classifications described above:

	Fair Value Measurements at December 30, 2018		
	Using:		
Total Carrying Value	Quoted Prices in Active Markets	Significant Observable Inputs	Significant Unobservable Inputs

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	at	Active	(Level 2)	(Level 3)
	December	Markets		
	30,	(Level		
	2018	1)		
	(In thousands)			
Marketable securities	\$2,447	\$ 2,447	\$ —	\$ —
Foreign exchange derivative assets	750	—	750	—
Foreign exchange derivative liabilities	(594)	—	(594)	—
Contingent consideration	(69,661)	—	—	(69,661)

key assumptions used to determine the fair value of the contingent consideration as of December 30, 2018 included projected milestone dates in 2019, discount rates ranging from 3.7% to 6.8%, conditional probabilities of success of each individual milestone ranging from 95% to 100% and cumulative probabilities of success for each individual milestone ranging from 89.3% to 100%. A significant delay in the product development (including projected regulatory milestone) achievement date in isolation could result in a significantly lower fair value measurement; a significant acceleration in the product development (including projected regulatory milestone) achievement date in isolation would not have a material impact on the fair value measurement; a significant change in the discount rate in isolation would not have a material impact on the fair value measurement; and a significant change in the probabilities of success in isolation could result in a significant change in fair value measurement.

During the fiscal year 2018, the Company recorded a contingent consideration obligation relating to other acquisitions with an estimated fair value of \$6.5 million and the Company paid \$16.5 million of contingent consideration to the former shareholders of Vanadis, of which \$12.8 million was included in financing activities and \$3.7 million was included in operating activities in the consolidated statements of cash flows.

The fair values of contingent consideration are calculated on a quarterly basis based on a collaborative effort of the Company's regulatory, research and development, operations, finance and accounting groups, as appropriate. Potential

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

valuation adjustments are made as additional information becomes available, including the progress towards achieving proof of concept, regulatory approvals and revenue targets as compared to initial projections, the impact of market competition and market landscape shifts from non-invasive prenatal testing products, with the impact of such adjustments being recorded in the consolidated statements of operations.

As of December 30, 2018, the Company may have to pay contingent consideration, related to acquisitions with open contingency periods, of up to \$76.5 million. The expected maximum earnout period for acquisitions with open contingency period does not exceed 1.78 years from the December 30, 2018, and the remaining weighted average expected earnout period at December 30, 2018 was 5 months.

A reconciliation of the beginning and ending Level 3 net liabilities for contingent consideration is as follows:

	(In thousands)
Balance at January 3, 2016	\$ (57,350)
Additions	—
Amounts paid and foreign currency translation	332
Reclassified to other current liabilities for milestone achieved	10,000
Change in fair value (included within selling, general and administrative expenses)	(16,183)
Balance at January 1, 2017	(63,201)
Additions	—
Amounts paid and foreign currency translation	34
Change in fair value (included within selling, general and administrative expenses)	(2,161)
Balance at December 31, 2017	(65,328)
Additions	(6,200)
Amounts paid and foreign currency translation	16,507
Change in fair value (included within selling, general and administrative expenses)	(14,640)
Balance at December 30, 2018	\$ (69,661)

The carrying amounts of cash and cash equivalents, accounts receivable, accounts payable and accrued expenses approximate fair value due to the short-term maturities of these assets and liabilities. If measured at fair value, cash and cash equivalents would be classified as Level 1.

As of December 30, 2018, the Company's senior unsecured revolving credit facility, which provides for \$1.0 billion of revolving loans, had a carrying value of \$415.6 million, net of \$2.4 million of unamortized debt issuance costs. As of December 31, 2017, the Company's senior unsecured revolving credit facility had a carrying value of \$621.7 million, net of \$3.3 million of unamortized debt issuance costs. The interest rate on the Company's senior unsecured revolving credit facility is reset at least monthly to correspond to variable rates that reflect currently available terms and conditions for similar debt. The Company had no change in credit standing during fiscal year 2018. Consequently, the carrying value approximates fair value and were classified as Level 2.

The Company's November 2021 Notes, with a face value of \$500.0 million, had an aggregate carrying value of \$497.4 million, net of \$1.1 million of unamortized original issue discount and \$1.6 million of unamortized debt issuance costs as of December 30, 2018. The November 2021 Notes had an aggregate carrying value of \$496.6 million, net of \$1.4 million of unamortized original issue discount and \$2.0 million of unamortized debt issuance costs as of December 31, 2017. The November 2021 Notes had a fair value of \$516.1 million and \$536.6 million as of December 30, 2018 and December 31, 2017, respectively. The fair value of the November 2021 Notes is estimated using market quotes from brokers and is based on current rates offered for similar debt.

The Company's 2026 Notes, with a face value of €500.0 million, had an aggregate carrying value of \$564.5 million, net of \$4.0 million of unamortized original issue discount and \$3.8 million of unamortized debt issuance costs as of December 30, 2018. The 2026 Notes had an aggregate carrying value of \$591.7 million, net of \$4.7 million of unamortized original issue discount and \$4.3 million of unamortized debt issuance costs as of December 31, 2017. The 2026 Notes had a fair value of €496.1 million and €508.9 million as of December 30, 2018 and December 31, 2017, respectively. The fair value of the 2026 Notes is estimated using market quotes from brokers and is based on current rates offered for similar debt.

The Company's April 2021 Notes, with a face value of €300.0 million, had an aggregate carrying value of \$341.3 million, net of \$0.1 million of unamortized original issue discount and \$2.0 million of unamortized debt issuance costs as of

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

December 30, 2018. The April 2021 Notes had a fair value of €300.5 million as of December 30, 2018. The fair value of the April 2021 Notes is estimated using market quotes from brokers and is based on current rates offered for similar debt.

The Company's other debt facilities that were assumed from the EUROIMMUN acquisition had an aggregate carrying value of \$38.2 million and \$60.2 million as of December 30, 2018 and December 31, 2017, respectively. As of December 30, 2018, these consisted of bank loans in the aggregate amount of \$38.0 million bearing fixed interest rates between 1.1% and 17.6% and a bank loan in the amount of \$0.2 million bearing a variable interest rate based on the Euribor rate plus a margin of 1.5%. The Company had no change in credit standing during fiscal year 2018.

Consequently, the carrying value approximates fair value.

As of December 30, 2018, the April 2021 Notes, November 2021 Notes, 2026 Notes and other debt facilities were classified as Level 2.

The Company's financing lease obligations had an aggregate carrying value of \$34.5 million and \$35.9 million as of December 30, 2018 and December 31, 2017, respectively. The non-cash finance lease liabilities due to build-to-suit accounting amounted to \$21.7 million as of each of the year ended December 30, 2018 and December 31, 2017. The remaining carrying amounts of the Company's financing lease obligations approximated their fair value as there has been minimal change in the Company's incremental borrowing rate.

As of December 30, 2018, there has not been any significant impact to the fair value of the Company's derivative liabilities due to credit risk. Similarly, there has not been any significant adverse impact to the Company's derivative assets based on the evaluation of its counterparties' credit risks.

Note 24: Leases

The Company leases certain property and equipment under operating leases. Rental expense charged to continuing operations for fiscal years 2018, 2017 and 2016 amounted to \$62.3 million, \$54.0 million, and \$52.0 million, respectively. Minimum rental commitments under noncancelable operating leases are as follows: \$56.4 million in fiscal year 2019, \$46.6 million in fiscal year 2020, \$33.5 million in fiscal year 2021, \$22.1 million in fiscal year 2022, \$15.6 million in fiscal year 2023 and \$67.6 million in fiscal year 2024 and thereafter.

On August 22, 2013, the Company sold one of its facilities located in Boston, Massachusetts for net proceeds of \$47.6 million. Simultaneously with the closing of the sale of the property, the Company entered into a lease agreement to lease back the property for its continued use. The lease has an initial term of 15 years and the Company has the right to extend the term of the lease for two additional periods of ten years each. The lease is accounted for as an operating lease and at the transaction date the Company had deferred \$26.5 million of gains which are being amortized in operating expenses over the initial lease term of 15 years. The Company amortized \$1.8 million of the deferred gains related to the lease during each of the fiscal years 2018, 2017 and 2016. The deferred gains remaining to be amortized were \$17.0 million at December 30, 2018, of which \$1.8 million was recorded in accrued expenses and other current liabilities, and \$15.3 million was recorded in long-term liabilities. The deferred gains remaining to be amortized were \$18.8 million at December 31, 2017, of which \$1.8 million was recorded in accrued expenses and other current liabilities, and \$17.0 million was recorded in long-term liabilities. Upon adoption of ASC 842, the Company will recognize the unamortized deferred gains in retained earnings.

Note 25: Industry Segment and Geographic Area Information

The Company discloses information about its operating segments based on the way that management organizes the segments within the Company for making operating decisions and assessing financial performance. The Company evaluates the performance of its operating segments based on revenue and operating income. Intersegment revenue and transfers are not significant. The accounting policies of the operating segments are the same as those described in

Note 1.

The principal products and services of the Company's two operating segments are:

Discovery & Analytical Solutions. Provides products and services targeted towards the life sciences and applied markets.

Diagnostics. Develops diagnostics, tools and applications focused on clinically-oriented customers, especially within the reproductive health, emerging market diagnostics and applied genomics markets. The Diagnostics segment serves the diagnostics market.

The Company has included the expenses for its corporate headquarters, such as legal, tax, audit, human resources, information technology, and other management and compliance costs, as well as the activity related to the mark-to-market adjustment on postretirement benefit plans, as "Corporate" below. The Company has a process to allocate and recharge

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

expenses to the reportable segments when these costs are administered or paid by the corporate headquarters based on the extent to which the segment benefited from the expenses. These amounts have been calculated in a consistent manner and are included in the Company's calculations of segment results to internally plan and assess the performance of each segment for all purposes, including determining the compensation of the business leaders for each of the Company's operating segments.

Revenue and operating income (loss) from continuing operations by operating segment are shown in the table below for the fiscal years ended:

	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Discovery & Analytical Solutions			
Product revenue	\$ 1,010,899	\$ 941,328	\$ 934,098
Service revenue	682,312	637,131	578,886
Total revenue	1,693,211	1,578,459	1,512,984
Operating income from continuing operations ⁽¹⁾	230,481	205,259	196,508
Diagnostics			
Product revenue	924,594	536,086	462,798
Service revenue	160,191	142,437	139,735
Total revenue	1,084,785	678,523	602,533
Operating income from continuing operations ⁽²⁾	153,196	146,862	147,996
Corporate			
Operating loss from continuing operations	(59,793)	(56,506)	(49,922)
Continuing Operations			
Product revenue	1,935,493	1,477,414	1,396,896
Service revenue	842,503	779,568	718,621
Total revenue	2,777,996	2,256,982	2,115,517
Operating income from continuing operations	323,884	295,615	294,582
Interest and other expense, net (see Note 7)	66,201	(1,103)	50,514
Income from continuing operations before income taxes	\$ 257,683	\$ 296,718	\$ 244,068

⁽¹⁾ Legal costs for significant litigation matters in the Company's Discovery & Analytical Solutions segment were \$5.3 million for fiscal year 2018 and \$2.7 million for fiscal year 2017.

⁽²⁾ Legal costs for a significant litigation matter in the Company's Diagnostics segment were \$0.2 million for fiscal year 2018.

Additional information relating to the Company's reporting segments is as follows for the three fiscal years ended December 30, 2018:

	Depreciation and Amortization Expense			Capital Expenditures		
	December 30, 2018	December 31, 2017	January 1, 2017	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)			(In thousands)		
Discovery & Analytical Solutions	\$ 70,362	\$ 72,590	\$ 72,484	\$ 34,852	\$ 26,200	\$ 21,486
Diagnostics	107,434	31,204	25,339	54,737	11,262	8,556

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Corporate	2,792	1,206	2,149	3,664	1,627	1,660
Continuing operations	\$180,588	\$ 105,000	\$ 99,972	\$93,253	\$ 39,089	\$ 31,702
Discontinued operations	\$—	\$ 929	\$ 6,266	\$—	\$ 182	\$ 1,302

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Total Assets		
	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
Discovery & Analytical Solutions	\$2,567,054	\$ 2,611,737	\$2,612,757
Diagnostics	3,358,964	3,447,437	1,505,381
Corporate	49,504	32,289	31,171
Current and long-term assets of discontinued operations	—	—	127,374
Total assets	\$5,975,522	\$ 6,091,463	\$4,276,683

The following geographic area information for continuing operations includes revenue based on location of external customers for the three fiscal years ended December 30, 2018 and net long-lived assets based on physical location as of December 30, 2018 and December 31, 2017:

	Revenue		
	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
U.S.	\$906,398	\$ 837,018	\$842,364
International:			
China	559,865	374,931	336,728
United Kingdom	72,124	65,164	65,904
Germany	142,411	91,669	89,839
India	92,327	84,812	43,891
Italy	95,908	77,477	70,948
France	97,990	80,153	71,104
Japan	79,238	76,322	65,980
Other international	731,735	569,436	528,759
Total international	1,871,598	1,419,964	1,273,153
Total sales	\$2,777,996	\$ 2,256,982	\$2,115,517

	Net Long-Lived Assets		
	December 30, 2018	December 31, 2017	January 1, 2017
	(In thousands)		
U.S.	\$201,649	\$ 210,116	\$ 182,186
International:			
Germany	99,181	88,249	1,292
China	61,261	64,815	36,458
United Kingdom	33,429	28,028	14,638
India	14,636	14,820	2,020
Finland	16,211	14,764	12,295
Italy	11,324	10,334	3,398
Singapore	14,942	9,240	6,820
Brazil	8,237	7,963	1,452
Netherlands	3,750	4,281	4,162

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Sweden	3,038	3,869	2,645
Other international	22,653	19,565	7,684
Total international	288,662	265,928	92,864
Total net long-lived assets	\$490,311	\$ 476,044	\$275,050

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Note 26: Quarterly Financial Information (Unaudited)

Selected quarterly financial information is as follows for the fiscal years ended:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter ⁽¹⁾	Year
(In thousands, except per share data)					
December 30, 2018					
Revenue	\$643,972	\$703,362	\$674,313	\$756,349	\$2,777,996
Gross profit	292,222	340,140	332,327	376,250	1,340,939
Restructuring and contract termination charges, net	6,578	—	6,508	(1,942)	11,144
Operating income from continuing operations	39,935	88,064	80,202	115,683	323,884
Income from continuing operations before income taxes	28,505	71,708	78,041	79,429	257,683
Income from continuing operations	26,035	64,673	75,445	71,322	237,475
Loss (income) from discontinued operations and dispositions	(11)	(610)	1,103	(30)	452
Net income	26,024	64,063	76,548	71,292	237,927
Basic earnings per share:					
Income from continuing operations	\$0.24	\$0.59	\$0.68	\$0.64	\$2.15
Income (loss) from discontinued operations and dispositions	—	(0.01)	0.01	—	—
Net income	0.24	0.58	0.69	0.64	2.15
Diluted earnings per share:					
Income from continuing operations	\$0.23	\$0.58	\$0.68	\$0.64	\$2.13
Income (loss) from discontinued operations and dispositions	—	(0.01)	0.01	—	—
Net income	0.23	0.57	0.69	0.64	2.13
Cash dividends declared per common share	\$0.07	\$0.07	\$0.07	\$0.07	\$0.28
December 31, 2017					
Revenue	\$514,115	\$546,962	\$554,275	\$641,630	\$2,256,982
Gross profit	239,756	257,602	268,967	307,429	1,073,754
Restructuring and contract termination charges, net	9,651	—	3,269	(263)	12,657
Operating income from continuing operations	49,811	74,183	78,038	93,583	295,615
Income from continuing operations before income taxes	39,983	70,792	105,054	80,889	296,718
Income (loss) from continuing operations	36,062	62,726	96,546	(38,444)	156,890
Income (loss) from discontinued operations and dispositions	2,541	141,343	(5,468)	(2,673)	135,743
Net income (loss)	38,603	204,069	91,078	(41,117)	292,633
Basic earnings per share:					
Income (loss) from continuing operations	\$0.33	\$0.57	\$0.88	\$(0.35)	\$1.43
Income (loss) from discontinued operations and dispositions	0.02	1.29	(0.05)	(0.02)	1.24
Net income (loss)	0.35	1.86	0.83	(0.37)	2.67
Diluted earnings per share:					
Income (loss) continuing operations	\$0.33	\$0.57	\$0.87	\$(0.35)	\$1.42
	0.02	1.28	(0.05)	(0.02)	1.22

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Income (loss) from discontinued operations and
dispositions

Net income (loss)	0.35	1.84	0.82	(0.37) 2.64
Cash dividends declared per common share	\$0.07	\$0.07	\$0.07	\$0.07	\$0.28

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The fourth quarter of fiscal year 2018 includes a pre-tax loss of \$21.4 million as a result of the mark-to-market (1) adjustment on postretirement benefit plans. The fourth quarter of fiscal year 2017 includes a pre-tax gain of \$2.1 million as a result of the mark-to-market adjustment on postretirement benefit plans. See Note 1 for a discussion of this accounting policy.

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

Not applicable.

Item 9A. Controls and Procedures

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 30, 2018. The term “disclosure controls and procedures” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), means controls and other procedures of a company that are designed to provide reasonable assurance that information required to be disclosed by the company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 30, 2018, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

During the fiscal quarter ended December 30, 2018, we implemented a plan that called for modifications and additions to our internal control over financial reporting related to the accounting for leases as a result of the new lease accounting standard. The modified and new controls have been designed to address risks associated with recognizing leases under the new standard and disclosures required before the standard's effective date. We have therefore augmented our internal control over financial reporting as follows:

- Added new controls related to gathering the information and evaluating the analyses used in the development of disclosures required before the standard's effective date.

- Enhanced the risk assessment process to take into account risks associated with the new lease accounting standard.

There was no other change in our internal control over financial reporting during the fiscal quarter ended December 30, 2018, that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management’s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) or 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, the company's principal executive and principal financial officers and effected by the company's board of directors, management and other personnel, 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, and includes those policies and procedures that:

• Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the company;

• 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

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• 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. 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.

Our management assessed the effectiveness of our internal control over financial reporting as of December 30, 2018. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in the 2013 Internal Control-Integrated Framework.

Based on this assessment, our management concluded that, as of December 30, 2018, our internal control over financial reporting was effective based on those criteria.

Our registered public accounting firm has issued an attestation report on our internal control over financial reporting. This report appears below.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of PerkinElmer, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of PerkinElmer, Inc. and subsidiaries (the “Company”) as of December 30, 2018, 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 Company maintained, in all material respects, effective internal control over financial reporting as of December 30, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 30, 2018 of the Company and our report dated February 26, 2019 expressed an unqualified opinion on those financial statements, and included an explanatory paragraph relating to the adoption of Accounting Standards Codification (ASC) Topic 606, “Revenue from Contracts with Customers,” on January 1, 2018.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of 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 (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the 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 the conditions, or that the degree of compliance with policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP

Boston, Massachusetts
February 26, 2019

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Changes in Internal Control Over Financial Reporting

During the fiscal quarter ended December 30, 2018, we implemented a plan that called for modifications and additions to our internal control over financial reporting related to the accounting for leases as a result of the new lease accounting standard. The modified and new controls have been designed to address risks associated with recognizing leases under the new standard and disclosures required before the standard's effective date. We have therefore augmented our internal control over financial reporting as follows:

- Added new controls related to gathering the information and evaluating the analyses used in the development of disclosures required before the standard's effective date.

- Enhanced the risk assessment process to take into account risks associated with the new lease accounting standard.

There was no other change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the fiscal quarter ended December 30, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

Not applicable.

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PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required to be disclosed by this Item pursuant to Item 401 of Regulation S-K with respect to our executive officers is contained in Part I of this annual report on Form 10-K under the caption, “Executive Officers of the Registrant.” The remaining information required to be disclosed by the Item pursuant to Item 401 and Item 407 of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the captions “Proposal No. 1 Election of Directors” and “Information Relating to Our Board of Directors and Its Committees” and is incorporated in this annual report on Form 10-K by reference.

The information required to be disclosed by this Item pursuant to Item 405 of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the caption “Section 16(a) Beneficial Ownership Reporting Compliance,” and is incorporated in this annual report on Form 10-K by reference.

We have adopted a code of ethics, our Standards of Business Conduct, that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, and persons performing similar functions. Our Standards of Business Conduct, as well as our corporate governance guidelines and the charters for the audit, compensation and benefits, nominating and corporate governance, executive and finance committees of our Board of Directors, are each accessible under the “Corporate Governance” heading of the “Investors” section of our website, <http://www.perkinelmer.com>. This information is also available in print to any stockholder who requests it, by writing to PerkinElmer, Inc., 940 Winter Street, Waltham, Massachusetts 02451, Attention: Investor Relations. We also intend to disclose in the same location on our website, any amendments to, or waivers from, our Standards of Business Conduct that are required to be disclosed pursuant to the disclosure requirements of Item 5.05 of Form 8-K.

Item 11. Executive Compensation

The information required to be disclosed by this Item pursuant to Item 402 and Item 407(e) of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the captions “Information Relating to Our Board of Directors and Its Committees—Director Compensation,” “Information Relating to Our Board of Directors and Its Committees—Compensation Committee Interlocks and Insider Participation,” and “Executive Compensation,” and is incorporated in this annual report on Form 10-K by reference.

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

The information required to be disclosed by this Item pursuant to Item 403 of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the caption “Beneficial Ownership of Common Stock,” and is incorporated in this annual report on Form 10-K by reference.

The information required to be disclosed by this Item pursuant to Item 201(d) of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the caption “Executive Compensation—Equity Compensation Plan Information,” and is incorporated in this annual report on Form 10-K by reference.

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

The information required to be disclosed by this Item pursuant to Item 404 of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the caption “Information

Relating to Our Board of Directors and Its Committees—Certain Relationships and Policies on Related Party Transactions,” and is incorporated in this annual report on Form 10-K by reference.

The information required to be disclosed by this Item pursuant to Item 407(a) of Regulation S-K is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the caption “Information Relating to Our Board of Directors and Its Committees—Determination of Independence,” and is incorporated in this annual report on Form 10-K by reference.

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Item 14. Principal Accountant Fees and Services

The information required to be disclosed by this Item pursuant to Item 9(e) of Schedule 14A is contained in the proxy statement for our annual meeting of stockholders to be held on April 23, 2019 under the caption “Information Relating to Our Board of Directors and Its Committees—Independent Registered Public Accounting Firm Fees and Other Matters”, and is incorporated in this annual report on Form 10-K by reference.

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PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) DOCUMENTS FILED AS PART OF THIS REPORT:

1. FINANCIAL STATEMENTS

Included in Part II, Item 8:

Report of Independent Registered Public Accounting Firm

Consolidated Statements of Operations for Each of the Three Fiscal Years in the Period Ended December 30, 2018

Consolidated Statements of Comprehensive Income for Each of the Three Fiscal Years in the Period Ended December 30, 2018

Consolidated Balance Sheets as of December 30, 2018 and December 31, 2017

Consolidated Statements of Stockholders' Equity for Each of the Three Fiscal Years in the Period Ended December 30, 2018

Consolidated Statements of Cash Flows for Each of the Three Fiscal Years in the Period Ended December 30, 2018

Notes to Consolidated Financial Statements

2. FINANCIAL STATEMENT SCHEDULE

Schedule II—Valuation and Qualifying Accounts

We have omitted financial statement schedules, other than those we note above, because of the absence of conditions under which they are required, or because the required information is given in the financial statements or notes thereto.

3. EXHIBITS

Exhibit No.	Exhibit Title
2.1 ⁽¹⁾	<u>Master Purchase and Sale Agreement, dated as of December 21, 2016, by and between PerkinElmer, Inc. and Varian Medical Systems, Inc., filed with the Commission on December 22, 2016 as Exhibit 2.1 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.</u>

2.2 Amendment No. 1, dated January 17, 2017, to the Master Purchase and Sale Agreement, dated as of December 21, 2016, by and between PerkinElmer, Inc. and Varian Medical Systems, Inc., filed with the Commission on May 9, 2017 as Exhibit 2.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.

2.3⁽¹⁾ Amendment No. 2, dated April 28, 2017, to the Master Purchase and Sale Agreement, dated as of December 21, 2016, by and between PerkinElmer, Inc. and Varex Imaging Corporation, filed with the Commission on August 8, 2017 as Exhibit 2.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.

2.4⁽¹⁾ Share Sale and Transfer Agreement, dated June 16, 2017, by and among PerkinElmer, Inc., Prof. Dr. Winfried Stöcker and Stöcker Vermögensverwaltungsgesellschaft mbH & Co. KG, filed with the Commission on August 8, 2017 as Exhibit 2.2 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.

2.5⁽¹⁾ Amendment Agreement, dated December 19, 2017, to the Share Sale and Transfer Agreement, dated as of June 16, 2017, by and among PerkinElmer, Inc., Prof. Dr. Winfried Stöcker, Stöcker Vermögensverwaltungsgesellschaft mbH & Co. KG and PerkinElmer Germany Diagnostics GmbH filed with the Commission on February

27, 2018 as Exhibit 2.5 to our annual report on Form 10-K (file No. 001-05075) and herein incorporated by reference.

3.1 PerkinElmer, Inc.'s Restated Articles of Organization, filed with the Commission on May 11, 2007 as Exhibit 3.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.

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Exhibit No.	Exhibit Title
3.2	<u>PerkinElmer, Inc.'s Amended and Restated By-laws, filed with the Commission on December 13, 2018 as Exhibit 3.2 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.</u>
4.1	<u>Specimen Certificate of PerkinElmer, Inc.'s Common Stock, \$1 par value, filed with the Commission on August 15, 2001 as Exhibit 4.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein</u>

incorporated by
reference.

4.2 Indenture dated as
of October 25,
2011 between
PerkinElmer, Inc.
and U.S. Bank
National
Association, filed
with the
Commission on
October 27, 2011
as Exhibit 99.1 to
our current report
on Form 8-K (File
No. 001-05075)
and herein
incorporated by
reference.

4.3 Supplemental
Indenture dated as
of October 25,
2011 between
PerkinElmer, Inc.
and U.S. Bank
National
Association, filed
with the
Commission on
October 27, 2011
as Exhibit 99.2 to
our current report
on Form 8-K (File
No. 001-05075)
and herein
incorporated by
reference.

4.4 Second
Supplemental
Indenture dated as
of December 22,
2011 between
PerkinElmer, Inc.
and U.S. Bank
National

Association, filed with the Commission on February 28, 2012 as Exhibit 4.4 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.

4.5 Third Supplemental Indenture, dated as of July 19, 2016, among PerkinElmer, Inc., U.S. Bank National Association, as trustee, and Elavon Financial Services DAC, UK Branch, as paying agent, filed with the Commission on July 19, 2016 as Exhibit 4.2 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.

4.6 Paying Agency Agreement, dated July 19, 2016, among PerkinElmer, Inc., U.S. Bank National Association, as trustee, Elavon Financial Services DAC, UK Branch, as paying agent, and Elavon Financial Services DAC, as transfer agent and registrar, filed with the

Commission on July 19, 2016 as Exhibit 4.3 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.

4.7 Fourth Supplemental Indenture, dated as of April 11, 2018, among PerkinElmer, Inc., U.S. Bank National Association, as trustee, and Elavon Financial Services DAC, UK Branch, as paying agent (including the form of note contained therein) filed with the Commission on April 11, 2018 as Exhibit 4.2 to our current report on Form 8-K (File No. 001-05075)) and herein incorporated by reference

4.8 Paying Agency Agreement, dated as of April 11, 2018, among PerkinElmer, Inc., U.S. Bank National Association, as trustee, transfer agent and registrar, and Elavon Financial Services DAC, UK Branch, as paying agent, filed with the Commission on April 11, 2018 as

Exhibit 4.3 to our current report on Form 8-K (File No. 001-05075)) and herein incorporated by reference.

10.1 Credit Agreement, dated as of August 11, 2016, among PerkinElmer, Inc., Wallac Oy, and PerkinElmer Health Sciences, Inc. as Borrowers, JPMorgan Chase Bank, N.A., as Administrative Agent, Bank of America, N.A. and Barclays Bank PLC as Co-Syndication Agents, Citibank, N.A., Mizuho Bank, Ltd., TD Bank, N.A., U.S. Bank National Association and Wells Fargo Bank, National Association as Co-Documentation Agents, and J.P. Morgan Chase Bank, N.A., Merrill Lynch, Pierce, Fenner & Smith Incorporated and Barclays Bank PLC as Joint Bookrunners and Joint Lead Arrangers, and the other Lenders party thereto, filed with the Commission on August 12, 2016 as Exhibit 10.1 to our current report on Form 8-K (File No.

001-05075) and
herein incorporated
by reference.

10.2 Amendment No. 1,
dated as of August
11, 2017 to Credit
Agreement, dated
as of August 11,
2016, by and
among
PerkinElmer, Inc.,
Wallac Oy, and
PerkinElmer Health
Sciences, Inc., as
borrowers, the
lenders from time
to time party
thereto, and
JPMorgan Chase
Bank, N.A., as
Administrative
Agent, filed with
the Commission on
August 15, 2017 as
Exhibit 10.2 to our
current report on
Form 8-K (File No.
001-05075) and
herein incorporated
by reference.

10.3 Loan Agreement,
dated as of August
11, 2017, among
PerkinElmer, Inc.,
the lenders from
time to time party
thereto, and
JPMorgan Chase
Bank, N.A. as
Administrative
Agent, Sole
Bookrunner and
Sole Lead Arranger
filed with the
Commission on

August 15, 2017 as Exhibit 10.1 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.

10.4*

Employment
Contracts:

(1) Third Amended and Restated Employment Agreement between PerkinElmer, Inc. and Robert F. Friel, dated as of December 16, 2008, filed with the Commission on February 26, 2009 as Exhibit 10.4(2) to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference;

(2) Employment Agreement by and between Joel S. Goldberg and PerkinElmer, Inc. dated as of July 21, 2008, filed with the Commission on August 8, 2008 as Exhibit 10.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference;

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Exhibit No. Exhibit Title

(3) Employment Agreement by and between Frank A. Wilson and PerkinElmer, Inc. dated as of April 28, 2009, filed with the Commission on April 30, 2009 as Exhibit 10.1 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference;

(4) Form of Amendment, entered into by and between PerkinElmer, Inc. and each of the following executive officers on the dates indicated below, filed with the Commission on March 1, 2011 as Exhibit 10.4(7) to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference;

Executive Officer Date

Joel S. Goldberg December 3, 2010

Frank A. Wilson December 21, 2010

(5) Employment Agreement between James Corbett and PerkinElmer, Inc. dated as of February 1, 2012, filed with the Commission on May 8, 2012 as Exhibit 10.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.

(6) Amended and Restated Employment Agreement between Andrew Okun and PerkinElmer, Inc. dated as of January 1, 2014, filed with the Commission on February 25, 2014 as Exhibit 10.2(10) to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.

(7) Employment Agreement between Daniel R. Tereau and PerkinElmer, Inc. dated as of February 1, 2016, filed with the Commission on March 1, 2016 as Exhibit 10.2(8) to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.

(8) Employment Agreement between Deborah A. Butters and PerkinElmer, Inc. dated as of July 11, 2016, filed with the Commission on November 8, 2016 as Exhibit 10.2(9) to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.

(9) Employment Agreement between Prahlad Singh and PerkinElmer, Inc. dated as of October 3, 2016, filed with the Commission on February 28, 2017 as Exhibit 10.2(10) to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.

(10) Employment Agreement between Tajinder Vohra and PerkinElmer, Inc. dated January 29, 2018, filed with the Commission on May 8, 2018 as Exhibit 10.1 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.

(11) Employment Agreement between James Mock and PerkinElmer, Inc., dated as of April 10, 2018, filed with the Commission on April 13, 2018 as Exhibit 99.1 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.

10.5* PerkinElmer, Inc.'s 2009 Incentive Plan, filed with the Commission on March 12, 2014 as Appendix A to our definitive proxy statement on Schedule 14A (File No. 001-05075) and herein incorporated by reference.

10.6* PerkinElmer, Inc.'s 2008 Deferred Compensation Plan, filed with the Commission on December 12, 2008 as Exhibit 10.1 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.

10.7*

First Amendment to PerkinElmer, Inc.'s 2008 Deferred Compensation Plan, filed with the Commission on March 1, 2011 as Exhibit 10.9 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.

10.8* PerkinElmer, Inc.'s 2008 Supplemental Executive Retirement Plan, filed with the Commission on December 12, 2008 as Exhibit 10.2 to our current report on Form 8-K and herein incorporated by reference.

10.9* PerkinElmer, Inc.'s Performance Unit Program Description, filed with the Commission on February 26, 2009 as Exhibit 10.10 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.

10.10* PerkinElmer, Inc. 1998 Employee Stock Purchase Plan as Amended and Restated on December 10, 2009, filed with the Commission on March 1, 2010 as Exhibit 10.15 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.

10.11* Form of Stock Option Agreement given by PerkinElmer, Inc. to its chief executive officer for use under the 2009 Incentive Plan, filed with the Commission on April 28, 2009 as Exhibit 10.2 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.

10.12* Form of Stock Option Agreement given by PerkinElmer, Inc. to its executive officers for use under the 2009 Incentive Plan, filed with the Commission on April 28, 2009 as Exhibit 10.3 to our current report on Form 8-K (File No. 001-05075) and

herein incorporated by reference.

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Exhibit No.	Exhibit Title
10.13*	<u>Form of Stock Option Agreement given by PerkinElmer, Inc. to its non-employee directors for use under the 2009 Incentive Plan, filed with the Commission on April 28, 2009 as Exhibit 10.4 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.</u>
10.14*	<u>Form of Restricted Stock Agreement with time-based vesting for use under the 2009 Incentive Plan, filed with the Commission on April 28, 2009 as Exhibit 10.5 to our current report on Form 8-K (File No. 001-05075) and herein incorporated by reference.</u>
10.15*	<u>Form of Restricted Stock Agreement with performance-based vesting for use under the 2009 Incentive Plan, filed with the Commission on April 28, 2009 as Exhibit 10.6 to our current report on Form 8-K (File No.</u>

001-05075) and
herein incorporated
by reference.

10.16* Form of Restricted
Stock Unit
Agreement with
time-based vesting
for use under the
2009 Incentive
Plan, filed with the
Commission on
April 28, 2009 as
Exhibit 10.7 to our
current report on
Form 8-K (File No.
001-05075) and
herein incorporated
by reference.

10.17* Form of Restricted
Stock Unit
Agreement with
performance-based
vesting for use
under the 2009
Incentive Plan,
filed with the
Commission on
April 28, 2009 as
Exhibit 10.8 to our
current report on
Form 8-K (File No.
001-05075) and
herein incorporated
by reference.

10.18* Form of Restricted
Stock Agreement
with time-based
vesting for use
under the 2009
Incentive Plan,
filed with the
Commission on
May 10, 2011 as
Exhibit 10.2 to our
quarterly report on
Form 10-Q (File
No. 001-05075)
and herein

incorporated by reference.

10.19* Form of Stock Option Agreement for use under the 2009 Incentive Plan, filed with the Commission on May 10, 2011 as Exhibit 10.3 to our quarterly report on Form 10-Q (File No. 001-05075) and herein incorporated by reference.

10.20* Form of Restricted Stock Unit Agreement given by PerkinElmer, Inc. to its non-employee directors for use under the 2009 Incentive Plan, filed with the Commission on February 24, 2015 as Exhibit 10.25 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.

10.21* Form of 162(m)-compliant Restricted Stock Agreement with single-trigger acceleration for use under the 2009 Incentive Plan, filed with the Commission on February 28, 2017 as Exhibit 10.19 to our annual report

on Form 10-K (File No. 001-05075) and herein incorporated by reference.

10.22* Form of 162(m)-compliant Restricted Stock Agreement with double-trigger acceleration for use under the 2009 Incentive Plan, filed with the Commission on February 28, 2017 as Exhibit 10.20 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.

10.23* Form of 162(m)-compliant Restricted Stock Unit Agreement with single-trigger acceleration for use under the 2009 Incentive Plan, filed with the Commission on February 28, 2017 as Exhibit 10.21 to our annual report on Form 10-K (File No. 001-05075) and herein incorporated by reference.

10.24* Form of 162(m)-compliant Restricted Stock Unit Agreement with double-trigger acceleration for use under the 2009

- Incentive Plan,
filed with the
Commission on
February 28, 2017
as Exhibit 10.22 to
our annual report
on Form 10-K (File
No. 001-05075)
and herein
incorporated by
reference.
- 10.25* PerkinElmer, Inc.
Savings Plan
Amended and
Restated effective
January 1, 2012, as
further amended,
attached hereto as
Exhibit 10.25.
- 10.26* PerkinElmer, Inc.
Employees
Retirement Plan
Amended and
Restated effective
January 1, 2012, as
further amended,
attached hereto as
Exhibit 10.26.
- 10.27* PerkinElmer, Inc.
Global Incentive
Compensation Plan
(Executive
Officers) effective
January 1, 2018,
filed with the
Commission on
February 27, 2018
as Exhibit 10.27 to
our annual report
on Form 10-K (File
No. 001-05075)
and herein
incorporated by
reference.
- 21 Subsidiaries of
PerkinElmer, Inc.,
attached hereto as

Exhibit 21.

23 Consent of
Independent
Registered Public
Accounting Firm,
attached hereto as
Exhibit 23.

31.1 Certification of
Chief Executive
Officer pursuant to
Rule 13a-14(a)
under the Securities
Exchange Act of
1934, attached
hereto as Exhibit
31.1.

31.2 Certification of
Chief Financial
Officer pursuant to
Rule 13a-14(a)
under the Securities
Exchange Act of
1934, attached
hereto as Exhibit
31.2.

32.1 Certification of
Chief Executive
Officer and Chief
Financial Officer
pursuant to 18
U.S.C. Section
1350, as adopted
pursuant to Section
906 of the
Sarbanes-Oxley
Act of 2002,
attached hereto as
Exhibit 32.1.

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Exhibit No.	Exhibit Title
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Calculation Linkbase Document.
101.DEF	XBRL Definition Linkbase Document.
101.LAB	XBRL Labels Linkbase Document.
101.PRE	XBRL Presentation Linkbase Document.

The exhibits and schedules to this agreement have been omitted from this filing pursuant to Item 601(b)(2) of Regulation S-K. The registrant agrees to furnish copies of any of such exhibits or schedules to the SEC upon request.

* Management contract or compensation plan or arrangement required to be filed as an exhibit pursuant to Item 15(b) of Form 10-K.

Attached as Exhibit 101 to this report are the following formatted in XBRL (Extensible Business Reporting Language):

- (i) Consolidated Statements of Operations for each of the three years in the period ended December 30, 2018,
- (ii) Consolidated Balance Sheets as of December 30, 2018 and December 31, 2017, (iii) Consolidated Statements of Comprehensive Income for each of the three years in the period ended December 30, 2018, (iv) Consolidated Statements of Stockholders' Equity for each of the three years in the period ended December 30, 2018,
- (v) Consolidated Statements of Cash Flows for each of the three years in the period ended December 30, 2018,
- (vi) Notes to Consolidated Financial Statements, and (vii) Financial Schedule of Valuation and Qualifying Accounts.

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SCHEDULE II

PERKINELMER, INC. AND SUBSIDIARIES

VALUATION AND QUALIFYING ACCOUNTS

For the Three Years Ended December 30, 2018

Description	Balance at Beginning of Year (In thousands)	Provisions	Charges/ Write- offs	Other ⁽¹⁾	Balance at End of Year
Reserve for doubtful accounts:					
Year ended January 1, 2017	\$29,866	\$ 5,346	\$(5,499)	\$(501)	\$29,212
Year ended December 31, 2017	29,212	2,038	(1,900)	1,931	31,281
Year ended December 30, 2018	31,281	2,503	(2,295)	(899)	30,590

(1) Other amounts primarily relate to the impact of acquisitions, discontinued operations and foreign exchange movements.

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Item 16. Form 10-K Summary

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Signature	PERKINELMER, INC. Title	Date
By: /S/ ROBERT F. FRIEL Robert F. Friel	Chairman and Chief Executive Officer (Principal Executive Officer)	February 26, 2019
By: /S/ JAMES M. MOCK James M. Mock	Sr. Vice President and Chief Financial Officer (Principal Financial Officer)	February 26, 2019
By: /S/ ANDREW OKUN Andrew Okun	Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 26, 2019

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POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of PerkinElmer, Inc., hereby severally constitute Robert F. Friel and James M. Mock, and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names, in the capacities indicated below, this Annual Report on Form 10-K and any and all amendments to said Annual Report on Form 10-K, and generally to do all such things in our name and behalf in our capacities as officers and directors to enable PerkinElmer, Inc. to comply with the provisions of the Securities Exchange Act of 1934, and all requirements of the Securities and Exchange Commission, hereby rectifying and confirming signed by our said attorneys, and any and all amendments thereto.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

Signature	Title	Date
By:/S/ ROBERT F. FRIEL Robert F. Friel	Chairman and Chief Executive Officer (Principal Executive Officer)	February 26, 2019
By:/S/ JAMES M. MOCK James M. Mock	Sr. Vice President and Chief Financial Officer (Principal Financial Officer)	February 26, 2019
By:/S/ ANDREW OKUN Andrew Okun	Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 26, 2019
By:/S/ PETER BARRETT Peter Barrett	Director	February 26, 2019
By:/S/ SAMUEL R. CHAPIN Samuel R. Chapin	Director	February 26, 2019
By:/S/ SYLVIE GRÉGOIRE, PharmD Sylvie Grégoire, PharmD	Director	February 26, 2019
By:/S/ NICHOLAS A. LOPARDO Nicholas A. Lopardo	Director	February 26, 2019
By:/S/ ALEXIS P. MICHAS Alexis P. Michas	Director	February 26, 2019
By:/S/ PATRICK J. SULLIVAN Patrick J. Sullivan	Director	February 26, 2019
By:/S/ FRANK WITNEY, PhD Frank Witney, PhD	Director	February 26, 2019

By:/S/ PASCALE WITZ
Pascale Witz

Director

February 26, 2019

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