

TELEFLEX INC  
Form 10-K  
February 23, 2017

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

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2016 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 1-5353

TELEFLEX INCORPORATED  
(Exact name of registrant as specified in its charter)

Delaware 23-1147939  
(State or other jurisdiction of incorporation or organization) (I.R.S. employer identification no.)

550 East Swedesford Road, Suite 400, Wayne, Pennsylvania 19087  
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (610) 225-6800  
Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class Name of Each Exchange On Which Registered  
Common Stock, par value \$1 per share New York Stock Exchange  
Securities registered pursuant to Section 12(g) of the Act:  
NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No   
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No   
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No   
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T 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 is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.   
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting

company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company

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

The aggregate market value of the Common Stock of the registrant held by non-affiliates of the registrant (31,133,991 shares) on June 24, 2016 (the last business day of the registrant’s most recently completed fiscal second quarter) was \$5,331,695,959 (1) . The aggregate market value was computed by reference to the closing price of the Common Stock on such date, as reported by the New York Stock Exchange.

The registrant had 44,905,133 Common Shares outstanding as of February 20, 2017.

**DOCUMENT INCORPORATED BY REFERENCE:**

Certain provisions of the registrant’s definitive proxy statement in connection with its 2017 Annual Meeting of Stockholders, to be filed within 120 days of the close of the registrant’s fiscal year, are incorporated by reference in Part III hereof.

(1) For purposes of this computation only, the registrant has defined “affiliate” as including executive officers and directors of the registrant and owners of more than five percent of the common stock of the registrant, without conceding that all such persons are “affiliates” for purposes of the federal securities laws.

TELEFLEX INCORPORATED  
 ANNUAL REPORT ON FORM 10-K  
 FOR THE YEAR ENDED DECEMBER 31, 2016  
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### Information Concerning Forward-Looking Statements

All statements made in this Annual Report on Form 10-K, other than statements of historical fact, are forward-looking statements. The words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “plan,” “will,” “would,” “should,” “guidance,” “continue,” “project,” “forecast,” “confident,” “prospects” and similar expressions typically are used to identify forward-looking statements. Forward-looking statements are based on the then-current expectations, beliefs, assumptions, estimates and forecasts about our business and the industry and markets in which we operate. These statements are not guarantees of future performance and are subject to risks and uncertainties, which are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed or implied by these forward-looking statements due to a number of factors, including:

- changes in business relationships with and purchases by or from major customers or suppliers, including delays or cancellations in shipments;
- demand for and market acceptance of new and existing products;
- our ability to integrate acquired businesses into our operations, realize planned synergies and operate such businesses profitably in accordance with our expectations;
- our ability to effectively execute our restructuring programs;
- our inability to realize savings resulting from restructuring plans and programs at anticipated levels;
- the impact of recently passed healthcare reform legislation and changes in Medicare, Medicaid and third-party coverage and reimbursements, as well as additional changes that may result due to policy initiatives under the new presidential administration;
- competitive market conditions and resulting effects on revenues and pricing;
- increases in raw material costs that cannot be recovered in product pricing;
- global economic factors, including currency exchange rates, interest rates and sovereign debt issues;
- difficulties entering new markets; and
- general economic conditions.

For a further discussion of the risks relating to our business, see Item 1A “Risk Factors” in this Annual Report on Form 10-K. We expressly disclaim any obligation to update these forward-looking statements, except as otherwise specifically stated by us or as required by law or regulation.

## PART I

### ITEM 1. BUSINESS

Teleflex Incorporated is referred to herein as “we,” “us,” “our,” “Teleflex” and the “Company.”

#### THE COMPANY

Teleflex is a global provider of medical technology products that enhance clinical benefits, improve patient and provider safety and reduce total procedural costs. We primarily design, develop, manufacture and supply single-use medical devices used by hospitals and healthcare providers for common diagnostic and therapeutic procedures in critical care and surgical applications. We market and sell our products to hospitals and healthcare providers worldwide through a combination of our direct sales force and distributors. Because our products are used in numerous markets and for a variety of procedures, we are not dependent upon any one end-market or procedure. We manufacture our products at approximately 30 manufacturing sites, with major manufacturing operations located in the Czech Republic, Germany, Malaysia, Mexico and the United States.

We are focused on achieving consistent, sustainable and profitable growth and improving our financial performance by increasing our market share and improving our operating efficiencies through:

- development of new products and product line extensions;
- investment in new technologies and broadening their applications;
- expansion of the use of our products in existing markets and introduction of our products into new geographic markets;
- achievement of economies of scale as we continue to expand by leveraging our direct sales force and distribution network for new products, as well as increasing efficiencies in our sales and marketing and research and development structures and our manufacturing and distribution facilities; and
- expansion of our product portfolio through select acquisitions, licensing arrangements and business partnerships that enhance, extend or expedite our development initiatives or our ability to increase our market share.

Our research and development capabilities, commitment to engineering excellence and focus on low-cost manufacturing enable us to bring cost effective, innovative products to market that improve the safety, efficacy and quality of healthcare. Our research and development initiatives focus on developing these products for both existing and new therapeutic applications, as well as enhancements to, and line extensions of, existing products. We introduced 25 new products and line extensions during 2016. Our portfolio of existing products and products under development consists primarily of Class I and Class II devices, most of which require 510(k) clearance by the United States Food and Drug Administration (“FDA”), for sale in the United States, and some of which are exempt from the requirement to obtain 510(k) clearance. We believe that 510(k) clearance (or 510(k)-exempt status) reduces our research and development costs and risks, and typically results in a shorter timetable for new product introductions as compared to the premarket approval, or PMA, process that would be required for Class III devices. See “Government Regulation” below.

#### OUR SEGMENTS

We have the following six reportable operating segments: Vascular North America, Anesthesia North America, Surgical North America, EMEA (Europe, Middle East and Africa), Asia and OEM (Original Equipment Manufacturer and Development Services). In connection with our presentation of segment information for our reportable segments, we also present, in the “All other” category, information pertaining to several immaterial operating segments. The following charts depict our net revenues by reportable operating segment and by the operating segments in the “all other” category as a percentage of our total consolidated net revenues for the years ended December 31, 2016, 2015 and 2014.

Vascular North America: Our Vascular North America segment is comprised of our North American vascular and interventional access businesses, which offer products that facilitate a variety of critical care therapies and other applications.

#### Vascular Access Products

Our vascular access products primarily consist of our Arrow branded catheters and related devices, including catheter positioning systems, that are used in a wide range of procedures, including the administration of intravenous medications and other therapies, the measurement of blood pressure and the withdrawal of blood samples through a single puncture site.

The vascular access product portfolio principally consists of the following products:

**Arrow Central Venous Catheters (CVCs):** Arrow CVCs are inserted in the neck or shoulder area and come in multiple lengths and up to four channels, or lumens. The Arrow CVC has a pressure injectable option which gives clinicians who perform contrast-enhanced CT scans the ability to use an indwelling (in the body) pressure injectable Arrow CVC to inject contrast dye for the scan without having to insert a second catheter.

**Arrow EZ-IO Intraosseous Vascular Access System:** The Arrow EZ-IO system provides vascular access for the delivery of medications and fluids via intraosseous, or in the bone, infusion when traditional vascular access is difficult or impossible. Sales of the Arrow EZ-IO system to our hospital customers are included in our Vascular North America segment results. As discussed below, sales of the Arrow EZ-IO to pre-hospital care customers, such as emergency medical service providers, are included in our Anesthesia North America segment results.

**Arrow Peripherally Inserted Central Catheters (PICCs):** Arrow PICCs are soft, flexible catheters that are inserted in the upper arm and advanced into a vein that carries blood to the heart to administer various types of intravenous medications and therapies. Arrow PICCs have a pressure injectable option that can withstand the higher pressures required by the injection of contrast media for CT scans.

**Arrow Jugular Axillo-subclavian Central Catheters (JACCs):** Arrow JACCs are designed to be inserted in the neck or shoulder area and provide an alternative to traditional CVCs and PICCs for acute care. Arrow JACCs may be used for short or long term periods to treat patients who may have poor peripheral circulation.

**Arrow Midline Catheters (Midlines):** Arrow Midlines are made of medical grade, flexible polyurethane material and are inserted in the upper arm. Midlines are appropriate when patients face difficult intravenous catheter insertions or therapy will last no longer than one to four weeks.

**Arrow® Catheter Tip Positioning Systems:** We offer two distinct catheter tip positioning systems that are designed to facilitate precise placement of catheters within the heart. The first is our VPS G4 Vascular Positioning System, which is an advanced vascular positioning system designed to facilitate precise placement of CVCs within the heart.

Indicated as an alternative to chest x-ray confirmation for CVC tip placement confirmation in adult patients, the VPS G4 analyzes multiple metrics, in real time, to help clinicians navigate through the circulatory system and identify the correct catheter tip placement in the heart. We also offer the Arrow® VPS Rhythm™ System, which provides electrocardiogram (ECG)-based tip confirmation in a highly portable, lightweight and versatile design. ECG technology facilitates catheter tip placement and confirmation within the superior vena-cava-cavatorial junction in the heart, and can be used with a broad range of catheter types. When paired with our VPS TipTracker™

stylet for insertion of PICCS, the Arrow VPS Rhythm System provides real-time visual navigation by tracing the catheter pathway with a blue line on a color screen.

**Arrow Arterial Catheterization Sets:** Our Arrow arterial catheterization sets facilitate arterial pressure monitoring and blood withdrawal for glucose, blood-gas and electrolyte measurement in a wide variety of critical care and intensive care settings.

**Arrow Multi-Lumen Access Catheters (MAC):** The Arrow MAC combines the access of a sheath introducer with the high-flow lumens of a central line. The MAC's hemostasis valve allows for easy access for additional devices, such as a thermodilution catheter or ARROW® MAC Companion Catheter, adding up to three additional lumens.

**Arrow Percutaneous Sheath Introducers:** Our Arrow percutaneous sheath introducers are used to insert cardiovascular and other catheterization devices into the vascular system during critical care procedures.

The large majority of our CVCs are treated with solutions based on our ARROWg+ard or ARROWg+ard Blue Plus antimicrobial technology, which have been shown to reduce the risk of catheter related bloodstream infection. Our Chlorag+ard technology, available on our PICCs, JACCs and Midlines, provides antimicrobial and antithrombogenic protection on inner and outer catheter surfaces as well as the entire fluid pathway of the catheter. Chlorag+ard technology has been shown to be effective in reducing microbial colonization and thrombus accumulation on catheter surfaces.

We also offer many of our vascular access catheters in Maximal Barrier Precautions trays, which are designed to assist healthcare providers in complying with clinical guidelines for reducing catheter-related bloodstream infections. These trays are available for CVCs, PICCs and multi access catheters and include a full body drape, coated or non-coated catheters and other accessories. In addition, our ErgoPACK system offers clinicians a broad range of tray configurations with components packaged in the tray in the order in which they will be needed during the procedure, and incorporates features designed to promote ease of use and patient and provider safety.

#### Interventional Access Products

Our interventional access products are used in a wide range of applications, including dialysis, oncology and critical care therapies. Our interventional access portfolio also includes several Arrow branded products, such as diagnostic and drainage kits, embolectomy balloons, and reinforced percutaneous sheath introducers. Our interventional access products include:

**Arrow OnControl® Powered Bone Marrow / Bone Access System:** The Arrow OnControl powered bone access system enables access for hematology and oncology diagnostic procedures. The system is used to obtain bone marrow samples, aspirate the bone and access bone lesions.

**Arrow Trerotola™ Percutaneous Thrombectomy Device ("PTD"):** The Arrow Trerotola PTD is used for declotting of dialysis grafts and fistulas.

- **Arrow Chronic Hemodialysis Catheters:** The Arrow chronic hemodialysis catheters include both antegrade and retrograde insertion options for split, step and symmetrical tip configurations.

**ARROW-Clark™ VectorFlow™ Hemodialysis Catheter:** The Arrow-Clark VectorFlow catheter is a symmetrical tip tunneled hemodialysis catheter designed to reduce loss of lock solution (which is used on catheters to reduce the risk of thrombosis), give sustained high flows and reduce the risk of thrombus accumulation due to platelet activation.

Additionally, the specially designed catheter tip allows for placement flexibility with minimal impact on recirculation.

**Arrow Acute Hemodialysis Catheters:** Similar to the Arrow CVC portfolio, the Arrow Acute hemodialysis catheters are offered with or without ARROWg+ard antimicrobial surface treatment.

**Arrow Polysite® Low Profile Hybrid Ports:** The Arrow Polysite Low Profile Hybrid Port is used for long-term access to the central nervous system and to facilitate repeated vascular access. It is available in multiple standard French sizes. The hybrid design provides a strong titanium reservoir and lightweight plastic body delivering the strength and the comfort needed for long-term treatment in patients of all sizes.

**Anesthesia North America:** Our Anesthesia North America segment is comprised of our North American airway management and pain management products.





### Airway Management Products

Our airway management products and related devices consist principally of the following:

**LMA<sup>®</sup> Airways:** Our LMA laryngeal masks are used by anesthesiologists and emergency responders to establish an airway to channel anesthesia gas or oxygen to a patient's lungs during surgery or trauma. The LMA Protector<sup>™</sup> Airway, our latest airway management device, is the first single-use laryngeal mask with a dual gastric drainage channel and pharyngeal chamber designed specifically to channel high volume, high pressure gastric contents away from the airway. It also integrates our Second Seal<sup>™</sup> technology to isolate the respiratory tract from the digestive tract, reducing the risk of aspiration of gastric contents. The LMA Protector Airway also includes our Cuff Pilot<sup>™</sup> technology, which enables clinicians to confirm that the inserted cuff is properly inflated and to monitor pressure levels.

**LMA<sup>®</sup> Atomization:** Our LMA atomization portfolio includes products designed to facilitate atomized delivery of certain medications. Included in the portfolio is our LMA MAD Nasal<sup>™</sup>, an intranasal mucosal atomization device that is designed to provide a safe and painless way to deliver medications approved for intranasal delivery to a patient's blood stream without an intravenous line or needle.

**RUSCH<sup>®</sup> Endotracheal Tubes and Laryngoscopes:** We offer a broad portfolio of products to facilitate and support endotracheal intubation to administer oxygen, and anesthetic gases in multiple settings (surgery, critical care and emergency settings). We also provide a broad range of products for laryngoscopy, a procedure that is primarily used to obtain a view of the airway to facilitate tracheal intubation during general anesthesia or cardiopulmonary resuscitation ("CPR"). Among these products is the Rusch DispoLED<sup>™</sup> Laryngoscope Handle and Green Rusch Lite Blade, a single-use system designed to help facilities comply with standards designed to reduce the potential for patient cross-contamination associated with reusable devices during intubation.

### Pain Management Products

Our pain management products, which are designed for use in a broad range of surgical and obstetric procedures, consist principally of the following:

**Arrow Epidural Catheters, Needles and Kits:** We offer a broad range of Arrow epidural products, including the Arrow FlexTip Plus epidural catheter, to facilitate epidural analgesia. Epidural analgesia may be used separately for pain management, as an adjunct to general anesthesia, as a sole technique for surgical anesthesia and for post-operative pain management.

**Arrow Peripheral Nerve Block ("PNB") Catheters, Pumps, Needles and Kits:** Our portfolio of Arrow PNB products, which includes the Arrow Stimucath and FlexBlock catheters, are designed to be used by anesthesiologists to provide localized pain relief by injecting anesthetics to deliberately interrupt the signals traveling along a nerve. Nerve blocks are used in a variety of different procedures, including orthopedics.

**AutoFuser Disposable Pain Pumps:** Our AutoFuser Disposable Pain Pumps are designed for general infusion use, which includes regional anesthesia and pain management. Routes of administration include percutaneous, subcutaneous and epidural, and into the intra-operative (soft tissue/body cavity) sites. The AutoFuser offers multiple reservoir sizes and configurations to meet a variety of clinical demands.

**Arrow EZ-IO System:** The EZ-IO system, as described in the Vascular North America segment summary above, complements our pain management product portfolio when administered in pre-hospital emergency settings.

**Surgical North America:** Our surgical products are designed to provide surgeons with a comprehensive range of devices for use in a variety of surgical procedures. Our portfolio consists of single-use and reusable products, including the following:

Weck®Ligation Systems: Our Weck Ligation Systems feature the Weck Ligating Clips and Hem-o-lok® Ligating Clips. Weck Ligating Clips are intended for use in procedures involving vessels or anatomic structures and are sold in various sizes, types and materials. Our Hem-o-lok Ligating Clips are intended for use in procedures involving ligation of vessels or tissue structures and are sold in various sizes.

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**Weck EFx Fascial Closure Systems:** Our Weck fascial closure systems are used in laparoscopic surgical procedures and are intended to facilitate placement and withdrawal of suture loops to repair port site defects following laparoscopic surgery. Our Weck EFx endo fascial closure system is a port site closure device intended to minimize complications and costs associated with port-site herniation. We expanded this product line in 2015 to include the EFx Shield fascial closure system, which uses a shielded wing design for enhanced sharps protection, and a more basic cone and suture system called EFx Classic.

**Percutaneous Surgical Systems:** Our Mini-Lap surgical instruments, which we added to our product portfolio through our December 2014 acquisition of Mini-Lap Technologies, Inc. ("Mini-Lap"), are designed to be inserted percutaneously (through the skin) to enable surgeons to perform laparoscopic surgery without the need for a trocar. The MiniLap family of surgical instruments consists of a ThumbGrip option on a 2.3mm shaft or a pistol design called MiniGrip option on a 2.4mm shaft. In addition, we have developed the Percuvance™ percutaneous surgical system - 2.9mm device shaft with 5 mm operating tips. Percuvance, is used to penetrate soft tissue to access certain areas of the human abdomen and to grasp, hold and manipulate tissue, and, like Minilap, enables surgeon to access the abdominal cavity without the need for access ports. We received 510(k) clearance for this product in January 2015 and initiated a controlled launch of the product in the United States and Europe in 2015. In 2016, we initiated a limited market release in the United States and Europe.

Our other branded surgical products include our Weck Vista bladeless access ports, Deknatel sutures and our Pilling® and Kmedic® surgical instruments.

**Europe, the Middle East and Africa ("EMEA"):** Our EMEA segment designs, manufactures and distributes medical devices primarily used in critical care, surgical applications and cardiac care and generally serves two end markets: hospitals and healthcare providers, and home health. The products offered by our EMEA segment are most widely used in acute care settings for a range of diagnostic and therapeutic procedures and in general and specialty surgical applications, such as urology.

**Asia:** Our Asia segment, like our EMEA segment, designs, manufactures and distributes medical devices primarily used in critical care, surgical applications and cardiac care and generally serves hospitals and healthcare providers. The products offered by our Asia segment are most widely used in acute care settings for a range of diagnostic and therapeutic procedures and in general and specialty surgical applications.

**OEM:** Our OEM segment designs, manufactures and supplies devices and instruments for other medical device manufacturers. Our OEM division, which includes the TFX OEM® and Deknatel® OEM brands, provides custom-engineered extrusions, diagnostic and interventional catheters, balloon sheath/dilator sets (introducers) and kits, sutures, performance fibers, and bioresorbable resins and fibers. We offer an extensive portfolio of integrated capabilities, including engineering, material selection, regulatory affairs, prototyping, testing and validation, manufacturing, assembly and packing.

**All other businesses:** Our other operating segments do not meet the threshold for separate disclosure under applicable accounting guidance and are therefore included in the "All other" line item in tabular presentations of segment information. Products offered by these operating segments include single-use respiratory, urology and cardiac care products, as well as capital equipment, which are provided to hospitals and other alternative channels of care. Also included in the "All other" line item is our Latin American business.

#### Respiratory/Urology Product Portfolio

In 2015, we combined our respiratory and urology businesses. Our respiratory products are used in a variety of care settings and include oxygen therapy products, aerosol therapy products, spirometry products, and ventilation management products. Our Hudson RCI brand has been a prominent name in respiratory care for over 65 years. Our urology product portfolio provides bladder management for patients in the hospital and individuals in the home care markets. The product portfolio consists principally of a wide range of catheters (including Foley, intermittent, external and suprapubic), urine collectors, catheterization accessories and products for operative endourology marketed under the Rusch brand name.



#### Cardiac Care Product Portfolio

Products in this portfolio include diagnostic and intra-aortic balloon catheters and capital equipment. Our diagnostic catheters include thermodilution and wedge pressure catheters; specialized catheters used during the x-ray examination of blood vessels, such as Berman and Reverse Berman catheters; therapeutic delivery catheters, such as temporary pacing catheters; sheaths for femoral and trans-radial aortic access used in diagnostic and therapeutic procedures; and intra-aortic balloon, or IAB, catheters. Capital equipment includes our intra-aortic balloon pump, or IABP, consoles. IABP products are used to augment oxygen delivery to the cardiac muscle and reduce the oxygen demand after cardiac surgery, serious heart attack or interventional procedures. We market our cardiac care products under the Arrow brand name.

#### Latin America

Our Latin America business generally engages in the same type of operations, and serves the same type of end markets, as the EMEA and Asia segments.

#### OUR MARKETS

We generally serve three end-markets: hospitals and healthcare providers, medical device manufacturers and home care. These markets are affected by a number of factors, including demographics, utilization and reimbursement patterns. The following charts depict the percentage of net revenues for the years ended December 31, 2016, 2015 and 2014 derived from each of our end markets.

#### HISTORY AND RECENT DEVELOPMENTS

Teleflex was founded in 1943 as a manufacturer of precision mechanical push/pull controls for military aircraft. From this original single market, single product orientation, we expanded and evolved through entries into new businesses, development of new products, introduction of products into new geographic or end-markets and acquisitions and dispositions of businesses. Throughout our history, we have continually focused on providing innovative, technology-driven, specialty-engineered products that help our customers meet their business requirements.

Beginning in 2007, we significantly changed the composition of our portfolio of businesses, expanding our presence in the medical device industry, while divesting all of our other businesses, which served the aerospace, automotive, industrial and marine markets. Following the divestitures of our marine business and cargo container and systems businesses in 2011, we became exclusively a medical device company.

We expect to continue to increase the size of our business through a combination of acquisitions and organic growth initiatives.

#### Acquisition of Vascular Solutions

On February 17, 2017, we acquired Vascular Solutions, Inc., a medical device company focused on developing clinical solutions for minimally invasive coronary and peripheral vascular procedures ("Vascular Solutions"). See Note 19 to the consolidated financial statements included in this Annual Report on Form 10-K for additional information.

#### Distributor-to-Direct Sales Conversions and Restructuring Programs

We have completed conversions from distributor sales to direct sales in several countries, including Australia, Korea, Japan and certain countries within our EMEA segment. We recently determined to undertake a distributor to direct sales conversion in China as a result of our decision to eliminate a key distributor within that sales channel. See Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations - Segment Results - Comparison of 2016 and 2015 - Asia" for further information regarding this initiative. These distributor to direct sales conversions generally involve eliminating a distributor from the sales channel, either by acquiring the distributor or terminating the distribution relationship. In some instances, particularly in Asia, the conversions relate to our acquisition or termination of a master distributor and the continued sale of our products through third party sub-distributors or through new distributors. The distributor to direct sales conversions enable us to obtain improved product pricing and more direct access to the end users of our products within the sales channel. Additionally, we continue to execute restructuring programs to improve efficiencies in our sales and marketing and research and development organizations and in our manufacturing and distribution facilities.

#### GOVERNMENT REGULATION

We are subject to comprehensive government regulation both within and outside the United States relating to the development, manufacture, sale and distribution of our products.

##### Regulation of Medical Devices in the United States

All of our medical devices manufactured or sold in the United States are subject to the Federal Food, Drug, and Cosmetic Act ("FDC Act"), and its implementing regulations, which are enforced by the FDA. The FDA and, in some cases, other government agencies administer requirements for the design, testing, safety, effectiveness, manufacturing, labeling, storage, record keeping, clearance, approval, advertising and promotion, distribution, post-market surveillance, import and export of our medical devices.

Unless an exemption or pre-amendment grandfather status applies, each medical device that we market must first receive either clearance as a Class I or Class II device (by submitting a premarket notification ("510(k)")) or approval as a Class III device (by filing a premarket approval application ("PMA")) from the FDA pursuant to the FDC Act. To obtain 510(k) clearance, a manufacturer must demonstrate that the proposed device is substantially equivalent to a legally marketed 510(k)-cleared device (or pre-amendment device for which FDA has not called for PMAs), referred to as the "predicate device." Substantial equivalence is established by the applicant showing that the proposed device has the same intended use as the predicate device, and it either has the same technological characteristics or has been shown to be equally safe and effective and does not raise different questions of safety and effectiveness as compared to the predicate device. The FDA's 510(k) clearance process usually takes from four to twelve months, but it can last longer. A device that is not eligible for the 510(k) process because there is no predicate device may be reviewed through the de novo process (the process for approval when no substantially equivalent device exists) if the FDA agrees it is a low to moderate risk device. A device not eligible for 510(k) clearance or de novo clearance is categorized as Class III and must follow the PMA approval pathway, which requires proof of the safety and effectiveness of the device to the FDA's satisfaction. The process of obtaining PMA approval is much more costly, lengthy and uncertain than the 510(k) process. It generally takes from one to three years or even longer. Our portfolio of existing products and pipeline of potential new products consist primarily of Class I and Class II devices that require 510(k) clearance, although a few are 510(k) exempt. In addition, modifications made to devices after they receive clearance or approval may require a new 510(k) clearance or approval of a PMA or PMA supplement. We cannot be sure that 510(k) clearance or PMA approval will be obtained in a timely matter if at all for any device that we propose to market.

A clinical trial is almost always required to support a PMA application and is sometimes required for a 510(k) clearance. The sponsor of a clinical study must comply with and conduct the study in accordance with the applicable federal regulations, including FDA's investigational device exemption ("IDE") requirements, and good clinical practice

("GCP"). Clinical trials must also be approved by an institutional review board ("IRB"), which is an appropriately constituted group that has been formally designated to review biomedical research involving human subjects and which

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has the authority to approve, require modifications in, or disapprove research to protect the rights, safety, and welfare of the human research subject. The FDA may order the temporary, or permanent, discontinuation of a clinical trial at any time, or impose other sanctions, if it believes that the clinical trial either is not being conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial patients. An IRB may also require the clinical trial at the site to be halted for failure to comply with the IRB's requirements, or may impose other conditions. A device placed on the market must comply with numerous regulatory requirements. Those regulatory requirements include the following:

- device listing and establishment registration;
- adherence to the Quality System Regulation ("QSR") which requires stringent design, testing, control, documentation, complaint handling and other quality assurance procedures;
- labeling requirements;
- FDA prohibitions against the promotion of off-label uses or indications;
- adverse event and malfunction reporting;
- post-approval restrictions or conditions, potentially including post-approval clinical trials or other required testing;
- post-market surveillance requirements;
- the FDA's recall authority, whereby it can require or ask for the recall of products from the market; and
- voluntary corrections or removals reporting and documentation.

In September 2013, the FDA issued final regulations and draft guidance documents regarding the Unique Device Identification ("UDI") System, which requires manufacturers to mark certain medical devices with unique identifiers. While the FDA expects that the UDI System will help track products during recalls and improve patient safety, it will require us to make changes to our manufacturing and labeling, which could increase our costs. The UDI System is being implemented in stages based on device risk, with the first requirements having taken effect in September 2014 and the last taking effect in September 2018.

Certain of our medical devices are sold in convenience kits that include a drug component, such as lidocaine. These types of kits are generally regulated as combination products within the Center for Devices and Radiological Health (or "CDRH") under the device regulations because the device provides the primary mode of action of the kit. Although the kit as a whole is regulated as a medical device, it may be subject to certain drug requirements such as current good manufacturing practices ("cGMPs") to the extent applicable to the drug-component repackaging activities and subject to inspection to verify compliance with cGMPs as well as other regulatory requirements. Our manufacturing facilities, as well as those of certain of our suppliers, are subject to periodic and for-cause inspections to verify compliance with the QSR as well as other regulatory requirements. If the FDA were to find that we or certain of our suppliers have failed to comply with applicable regulations, it could institute a wide variety of enforcement actions, ranging from issuance of a warning or untitled letter to more severe sanctions, such as product recalls or seizures, civil penalties, consent decrees, injunctions, criminal prosecution, operating restrictions, partial suspension or total shutdown of production, refusal to permit importation or exportation, refusal to grant, or delays in granting, clearances or approvals or withdrawal or suspension of existing clearances or approvals. The FDA also has the authority to request repair, replacement or refund of the cost of any medical device manufactured or distributed by us. Any of these actions could have an adverse effect on our business.

#### Regulation of Medical Devices Outside of the United States

Medical device laws also are in effect in many of the markets outside of the United States in which we do business. These laws range from comprehensive device approval requirements for some or all of our products to requests for product data or certifications. Inspection of and controls over manufacturing, as well as monitoring of device-related adverse events, are components of most of these regulatory systems.

#### Healthcare Laws

We are subject to various federal, state and local laws in the United States targeting fraud and abuse in the healthcare industry. These laws prohibit us from, among other things, soliciting, offering, receiving or paying any



remuneration to induce the referral or use of any item or service reimbursable under Medicare, Medicaid or other federally or state financed healthcare programs. Violations of these laws are punishable by imprisonment, criminal fines, civil monetary penalties and exclusion from participation in federal healthcare programs. In addition, we are subject to federal and state false claims laws in the United States that prohibit the submission of false payment claims under Medicare, Medicaid or other federally or state funded programs. Certain marketing practices, such as off-label promotion, and violations of federal anti-kickback laws may also constitute violations of these laws.

We are also subject to various federal and state reporting and disclosure requirements related to the healthcare industry. Recent rules issued by the Centers for Medicare & Medicaid Services ("CMS") require us to collect and report information on payments or transfers of value to physicians and teaching hospitals, as well as investment interests held by physicians and their immediate family members. The reported data is available to the public on the CMS website. Failure to submit required information may result in civil monetary penalties. In addition, several states now require medical device companies to report expenses relating to the marketing and promotion of device products and to report gifts and payments to individual physicians in these states. Other states prohibit various other marketing-related activities. The federal government and certain other states require the posting of information relating to clinical studies and their outcomes. The shifting commercial compliance environment and the need to build and maintain robust and expandable systems to comply with the different compliance and/or reporting requirements among a number of jurisdictions increases the possibility that a healthcare company may violate one or more of the requirements, resulting in increased compliance costs that could adversely impact our results of operations.

#### Other Regulatory Requirements

We are also subject to the United States Foreign Corrupt Practices Act and similar anti-bribery laws applicable in jurisdictions outside the United State that generally prohibit companies and their intermediaries from improperly offering or paying anything of value to non-United States government officials for the purpose of obtaining or retaining business. Because of the predominance of government-sponsored healthcare systems around the world, most of our customer relationships outside of the United States are with government entities and are therefore subject to such anti-bribery laws. Our policies mandate compliance with these anti-bribery laws. We operate in many parts of the world that have experienced government corruption to some degree, and in certain circumstances strict compliance with anti-bribery laws may conflict with local customs and practices. In the sale, delivery and servicing of our medical devices and software outside of the United States, we must also comply with various export control and trade embargo laws and regulations, including those administered by the Department of Treasury's Office of Foreign Assets Control ("OFAC") and the Department of Commerce's Bureau of Industry and Security ("BIS") which may require licenses or other authorizations for transactions relating to certain countries and/or with certain individuals identified by the United States government. Despite our global trade and compliance program, our internal control policies and procedures may not always protect us from reckless or criminal acts committed by our employees, distributors or other agents. Violations of these requirements are punishable by criminal or civil sanctions, including substantial fines and imprisonment.

#### COMPETITION

The medical device industry is highly competitive. We compete with many companies, ranging from small start-up enterprises to companies that are larger and more established than us and have access to significantly greater financial resources. Furthermore, extensive product research and development and rapid technological advances characterize the market in which we compete. We must continue to develop and acquire new products and technologies for our businesses to remain competitive. We believe that we compete primarily on the basis of clinical superiority and innovative features that enhance patient benefit, product reliability, performance, customer and sales support, and cost-effectiveness. Our major competitors include C. R. Bard, Inc., Medtronic plc and Becton, Dickinson and Company.

#### SALES AND MARKETING

Our product sales are made directly to hospitals, healthcare providers, distributors and to original equipment manufacturers of medical devices through our own sales forces, independent representatives and independent distributor networks.

#### BACKLOG

Most of our products are sold to hospitals or healthcare providers on orders calling for delivery within a few days or weeks, with longer order times for products sold to medical device manufacturers. Therefore, our backlog of orders is not indicative of revenues to be anticipated in any future 12-month period.

## PATENTS AND TRADEMARKS

We own a portfolio of patents, patents pending and trademarks. We also license various patents and trademarks. Patents for individual products extend for varying periods according to the date of patent filing or grant and the legal term of patents in the various countries where patent protection is obtained. Trademark rights may potentially extend for longer periods of time and are dependent upon national laws and use of the marks. All product names throughout this document are trademarks owned by, or licensed to, us or our subsidiaries. Although these have been of value and are expected to continue to be of value in the future, we do not consider any single patent or trademark, except for the Teleflex and Arrow brands, to be essential to the operation of our business.

## SUPPLIERS AND MATERIALS

Materials used in the manufacture of our products are purchased from a large number of suppliers in diverse geographic locations. We are not dependent on any single supplier for a substantial amount of the materials used or components supplied for our overall operations. Most of the materials and components we use are available from multiple sources, and where practical, we attempt to identify alternative suppliers. Volatility in commodity markets, particularly aluminum, steel and plastic resins, can have a significant impact on the cost of producing certain of our products. We may not be able to successfully pass cost increases through to all of our customers, particularly original equipment manufacturers.

## RESEARCH AND DEVELOPMENT

We are engaged in both internal and external research and development. Our research and development costs principally relate to our efforts to bring innovative new products to the markets we serve, and our efforts to enhance the clinical value, ease of use, safety and reliability of our existing product lines. Our research and development efforts support our strategic objectives to provide safe and effective products that reduce infections, improve patient and clinician safety, enhance patient outcomes and enable less invasive procedures. Our research and development expenditures were \$58.6 million, \$52.1 million and \$61.0 million for the years ended December 31, 2016, 2015 and 2014, respectively.

We also acquire or license products and technologies that are consistent with our strategic objectives and enhance our ability to provide a full range of product and service options to our customers.

## SEASONALITY

Portions of our revenues are subject to seasonal fluctuations. Incidence of flu and other disease patterns as well as the frequency of elective medical procedures affect revenues related to single-use products. Historically, we have experienced higher sales in the fourth quarter as a result of these factors.

## EMPLOYEES

We employed approximately 12,600 full-time and temporary employees at December 31, 2016. Of these employees, approximately 2,900 were employed in the United States and 9,700 in countries other than the United States. Approximately 12% of our employees in the United States and in other countries were covered by union contracts or collective-bargaining arrangements. We believe we have good relationships with our employees.

## ENVIRONMENTAL

We are subject to various environmental laws and regulations both within and outside the United States. Our operations, like those of other medical device companies, involve the use of substances regulated under environmental laws, primarily in manufacturing and sterilization processes. While we continue to make capital and operational expenditures relating to compliance with existing environmental laws and regulations, we cannot ensure that our costs of complying with current or future environmental protection, health and safety laws and regulations will not exceed our estimates or will not have a material adverse effect on our business, financial condition, results of operations and cash flows. Further, we cannot ensure that we will not be subject to environmental claims for personal injury or cleanup in the future based on our past, present or future business activities.

## INVESTOR INFORMATION

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Therefore, we file reports, proxy statements and other information with the Securities and Exchange Commission (SEC). Copies of these reports, proxy statements, and other information may be obtained by visiting the Public Reference Room of the SEC at 100 F Street, NE, Washington, DC 20549 or by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains a website (<http://www.sec.gov>) that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC.

You can access financial and other information about us in the Investors section of our website, which can be accessed at [www.teleflex.com](http://www.teleflex.com). We make available through our website, free of charge, copies of our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed with or furnished to the SEC under Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after electronically filing or furnishing such material to the SEC. The information on our website is not part of this Annual Report on Form 10-K. The reference to our website address is intended to be an inactive textual reference only. We are a Delaware corporation incorporated in 1943. Our executive offices are located at 550 East Swedesford Road, Suite 400, Wayne, PA 19087.

## EXECUTIVE OFFICERS

The names and ages of our executive officers and the positions and offices held by each such officer are as follows:

Name	Age	Positions and Offices with Company
Benson F. Smith	69	Chairman, Chief Executive Officer and Director
Liam J. Kelly	50	President and Chief Operating Officer
Thomas E. Powell	55	Executive Vice President and Chief Financial Officer
Thomas A. Kennedy	54	Senior Vice President, Global Operations
Karen T. Boylan	45	Vice President, Global RA/QA
Cameron P. Hicks	52	Vice President, Global Human Resources
James J. Leyden	50	Vice President, General Counsel and Secretary

Mr. Smith has been our Chairman and Chief Executive Officer since January 2011, and has served as a Director since April 2005. He also served as our President from January 2011 to April 2016. Prior to January 2011, Mr. Smith was the managing partner of Sales Research Group, a research and consulting organization. From 1999 to January 2011, he also served as the Chief Executive Officer of BFS & Associates LLC, which specialized in strategic planning and venture investing. From 2000 until 2005, Mr. Smith also served as a speaker and author at The Gallup Organization, a global research-based consultancy firm. Previously, Mr. Smith worked for C.R. Bard, Inc., a company specializing in medical devices, for approximately 25 years, where he held various executive and senior level positions, most recently as President and Chief Operating Officer from 1994 to 1998.

Mr. Kelly has been our President and Chief Operating Officer since May 2016. From April 2015 to April 2016, he served as Executive Vice President and Chief Operating Officer. From April 2014 to April 2015, Mr. Kelly served as Executive Vice President and President, Americas. From June 2012 to April 2014 Mr. Kelly served as Executive Vice President and President, International. He also has held several positions with regard to our EMEA segment, including President from June 2011 to June 2012, Executive Vice President from November 2009 to June 2011, and Vice President of Marketing from April 2009 to November 2009. Prior to joining Teleflex, Mr. Kelly held various senior level positions with Hill-Rom Holdings, Inc., a medical device company, from October 2002 to April 2009, serving as its Vice President of International Marketing and R&D from August 2006 to February 2009.

Mr. Powell has been our Executive Vice President and Chief Financial Officer since February 2013. From March 2012 to February 2013, Mr. Powell was Senior Vice President and Chief Financial Officer. He joined Teleflex in August 2011 as Senior Vice President, Global Finance. Prior to joining Teleflex, Mr. Powell served as Chief Financial Officer and Treasurer of Tomotherapy Incorporated, a medical device company, from June 2009 until June 2011. In 2008, he served as Chief Financial Officer of Textura Corporation, a software provider. From April 2001 until



January 2008, Mr. Powell was employed by Midway Games, Inc., a software provider, serving as its Executive Vice President, Chief Financial Officer and Treasurer from September 2001 until January 2008. Mr. Powell has also held leadership positions with Dade Behring, Inc. (now Siemens Healthcare Diagnostics), PepsiCo, Bain & Company, Tenneco Inc. and Arthur Andersen & Company.

Mr. Kennedy has been our Senior Vice President, Global Operations since May 2013. He previously held the position of Vice President, International Operations from December 2012 to May 2013. From July 2007 to December 2012, he held the position of Vice President, EMEA Operations. Prior to joining Teleflex, Mr. Kennedy was a managing director for Saint Gobain Performance Plastics, a producer of engineered, high-performance polymer products, from September 2004 to May 2007. Mr. Kennedy also has held leadership positions with Bio-Medical Research Limited, Marconi Plc, Fore Systems, Inc. and American Power Conversion Corporation.

Ms. Boylan has been our Vice President, Global RA/QA since August 2014. She joined Teleflex in January 2013 as Vice President, International RA/QA. Prior to joining Teleflex, Ms. Boylan served as QA Vice President, Corporate Quality Systems for Boston Scientific Corporation, a developer, manufacturer and marketer of medical devices, from April 1996 to December 2012.

Mr. Hicks has been our Vice President, Global Human Resources since April 2013. Prior to joining Teleflex, Mr. Hicks served as Executive Vice President of Human Resources & Organizational Effectiveness for Harlan Laboratories, Inc., a private global provider of pre-clinical and non-clinical research services, from July 2010 to March 2013. From April 1990 to January 2010, Mr. Hicks held various leadership roles with MDS Inc., a provider of products and services for the development of drugs and the diagnosis and treatment of disease, including Senior Vice President of Human Resources for MDS' global Pharma Services division from November 2000 to January 2010.

Mr. Leyden has been our Vice President, General Counsel and Secretary since February 2014. He previously held the positions of Acting General Counsel from November 2013 to February 2014, Deputy General Counsel from February 2013 to November 2013 and Associate General Counsel from December 2004 to February 2013. Prior to joining Teleflex, Mr. Leyden served as general counsel of InfraSource Services, Inc., a utility infrastructure construction company, from April 2004 to December 2004. From February 2002 to April 2004, he served as Associate General Counsel of Aramark Corporation, a provider of food, facility and uniform services.

Our officers are elected annually by our board of directors. Each officer serves at the discretion of the board.

#### ITEM 1A. RISK FACTORS

In addition to the other information set forth in this Annual Report on Form 10-K, you should carefully consider the following factors which could have a material adverse effect on our business, financial condition, results of operations or stock price. The risks below are not the only risks we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also adversely affect our business, financial condition, results of operations or stock price.

We face strong competition. Our failure to successfully develop and market new products could adversely affect our business.

The medical device industry is highly competitive. We compete with many domestic and foreign medical device companies ranging from small start-up enterprises that might sell only a single or limited number of competitive products or compete only in a specific market segment, to companies that are larger and more established than us, have a broad range of competitive products, participate in numerous markets and have access to significantly greater financial and marketing resources than we do.

In addition, the medical device industry is characterized by extensive product research and development and rapid technological advances. The future success of our business will depend, in part, on our ability to design and manufacture new competitive products and enhance existing products. Our product development efforts may require us to make substantial investments. There can be no assurance that we will be able to successfully develop new products, enhance existing products or achieve market acceptance of our products, due to, among other things, our inability to:

- identify viable new products;
- obtain adequate intellectual property protection;



gain market acceptance of new products; or  
successfully obtain regulatory approvals.

In addition, our competitors currently may be developing, or may develop in the future, products that provide better features, clinical outcomes or economic value than those that we currently offer or subsequently develop. Our failure to successfully develop and market new products or enhance existing products could have a material adverse effect on our business, financial condition and results of operations.

Our customers depend on third party coverage and reimbursements and the failure of healthcare programs to provide coverage and reimbursement, or the reduction in reimbursement levels, for our medical products could adversely affect us.

The ability of our customers to obtain coverage and reimbursement for our products is important to our business. Demand for many of our existing and new medical products is, and will continue to be, affected by the extent to which government healthcare programs and private health insurers reimburse our customers for patients' medical expenses in the countries where we do business. Even when we develop or acquire a promising new product, demand for the product may be limited unless reimbursement approval is obtained from private and government third party payors. Internationally, healthcare reimbursement systems vary significantly. In some countries, medical centers are constrained by fixed budgets, regardless of the volume and nature of patient treatment. Other countries require application for, and approval of, government or third party reimbursement. Without both favorable coverage determinations by, and the financial support of, government and third party insurers, the market for many of our medical products would be adversely affected. In this regard, we cannot be sure that third party payors will maintain the current level of coverage and reimbursement to our customers for use of our existing products. Adverse coverage determinations or any reduction in the amount of reimbursement could harm our business by discouraging customers' selection of our products and reducing the prices they are willing to pay.

In addition, as a result of their purchasing power, third party payors are implementing cost cutting measures such as seeking discounts, price reductions or other incentives from medical products suppliers and imposing limitations on coverage and reimbursement for medical technologies and procedures. These trends could compel us to reduce prices for our products and could cause a decrease in the size of the market or a potential increase in competition that could negatively affect our business, financial condition and results of operations.

We may not be successful in achieving expected operating efficiencies and sustaining or improving operating expense reductions, and may experience business disruptions associated with restructuring, facility consolidations, realignment, cost reduction and other strategic initiatives.

Over the past several years we have implemented a number of restructuring, realignment and cost reduction initiatives, including facility consolidations, organizational realignments and reductions in our workforce. While we have realized some efficiencies from these actions, we may not realize the benefits of these initiatives to the extent we anticipated. Further, such benefits may be realized later than expected, and the ongoing difficulties in implementing these measures may be greater than anticipated, which could cause us to incur additional costs or result in business disruptions. In addition, if these measures are not successful or sustainable, we may be compelled to undertake additional restructuring, realignment and cost reduction efforts, which could result in significant additional charges. Moreover, if our restructuring, realignment and cost reduction efforts prove ineffective, our ability to achieve our other strategic and business plan goals may be adversely affected.

In addition, as part of our efforts to increase operating efficiencies, we have implemented a number of initiatives over the past several years to consolidate our enterprise resource planning, or ERP, systems. To date, we have not experienced any significant disruptions to our business or operations in connection with these initiatives. However, as we continue our efforts to further consolidate our ERP systems, we could experience business disruptions, which could adversely affect customer relationships and divert the attention of management away from daily operations. In addition, any delays in the implementation of these initiatives could cause us to incur additional unexpected costs. Should we experience such difficulties, our business, cash flows and results of operations could be adversely affected.



A significant portion of our United States revenues is derived from sales to distributors, and “destocking” activity by these distributors can adversely affect our revenues and results of operations.

A significant portion of our revenues in the United States is derived from sales to distributors, who, in turn, sell our products to hospitals and other health care institutions. From time to time, these distributors may decide to reduce their levels of inventory with regard to certain of our products, which we refer to as “destocking.” A distributor's decision to reduce inventory levels with respect to our products may be based on a number of factors, such as distributor expectations regarding demand for a particular product, distributor buying decisions (including with respect to competing products), changes in distributor policies regarding the maintenance of inventory levels, economic conditions and other factors. For example, during the third quarter of 2016, we experienced a decline in purchases by our United States distributors that adversely affected our revenues and results of operations. We believe the reduction resulted from the distributors' expectations of a less severe 2016-2017 flu season, which resulted in reduced levels of purchasing with respect to certain of our products that are used for treatment of hospitalized patients suffering from the flu. Following such instances of reduced purchases, distributors may revert to previous purchasing levels; nevertheless, we cannot assure that distributors will, in fact, increase purchases of our products in this manner. A decline in the level of product purchases by our United States distributors in the future could have a material adverse effect on our revenues and results of operations during a reporting period, and an extended decline in such product purchases could have a longer term material adverse effect.

We are subject to extensive government regulation, which may require us to incur significant expenses to ensure compliance. Our failure to comply with those regulations could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Our products are classified as medical devices and are subject to extensive regulation in the United States by the FDA and by comparable government agencies in other countries. The regulations govern, among other things, the development, design, approval, manufacturing, labeling, importing and exporting and sale and marketing of many of our products. Moreover, these regulations are subject to future change.

In the United States, before we can market a new medical device, or a new use of, or claim for, or significant modification to, an existing product, we generally must first receive either 510(k) or de novo clearance or approval of a premarket approval application, or PMA, from the FDA. Similarly, most major markets for medical devices outside the United States also require clearance, approval or compliance with certain standards before a product can be commercially marketed. The process of obtaining regulatory clearances and approvals to market a medical device, particularly from the FDA and certain foreign government authorities, can be costly and time consuming, and clearances and approvals might not be granted for new products on a timely basis, if at all. In addition, once a device has been cleared or approved, a new clearance or approval may be required before the device may be modified or its labeling changed. Furthermore, the FDA or a foreign government authority may make its review and clearance or approval process more rigorous, which could require us to generate additional clinical or other data, and expend more time and effort, in obtaining future product clearances or approvals. The regulatory clearance and approval process may result in, among other things, delayed realization of product revenues, substantial additional costs or limitations on indicated uses of products, any one of which could have a material adverse effect on our financial condition and results of operations. Even after a product has received marketing approval or clearance, such product approval or clearance can be withdrawn or limited due to unforeseen problems with the device or issues relating to its application. Failure to comply with applicable regulations could lead to adverse effects on our business, which could include:

- partial suspension or total shutdown of manufacturing;
- product shortages;
- delays in product manufacturing;
- warning or untitled letters;
- fines or civil penalties;
- delays in obtaining new regulatory clearances or approvals;
- withdrawal or suspension of required clearances, approvals or licenses;

product seizures or recalls;  
injunctions;  
criminal prosecution;

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advisories or other field actions;  
operating restrictions; and  
prohibitions against exporting of products to, or importing products from, countries outside the United States. We could be required to expend significant financial and human resources to remediate failures to comply with applicable regulations and quality assurance guidelines. In addition, civil and criminal penalties, including exclusion under Medicaid or Medicare, could result from regulatory violations. Any one or more of these events could have a material adverse effect on our business, financial condition and results of operations.

Medical devices are cleared or approved for one or more specific intended uses and performance claims must be adequately substantiated. Promoting a device for an off-label use or making misleading or unsubstantiated claims could result in government enforcement action.

Furthermore, our facilities are subject to periodic inspection by the FDA and other federal, state and foreign government authorities, which require manufacturers of medical devices to adhere to certain regulations, including the FDA's Quality System Regulation, which requires periodic audits, design controls, quality control testing and documentation procedures, as well as complaint evaluations and investigation. In addition, any facilities assembling convenience kits that include drug components and are registered as drug repackaging establishments are also subject to current good manufacturing practices requirements for drugs. The FDA also requires the reporting of certain adverse events and product malfunctions and may require the reporting of recalls or other field safety corrective actions. Issues identified through such inspections and reports may result in FDA enforcement action through any of the actions discussed above. Moreover, issues identified through such inspections and reports may require significant resources to resolve.

We are subject to healthcare fraud and abuse laws, regulation and enforcement; our failure to comply with those laws could have a material adverse effect on our results of operations and financial condition.

We are subject to healthcare fraud and abuse regulation and enforcement by the federal government and the governments of those states and foreign countries in which we conduct our business. The laws that may affect our ability to operate include:

the federal healthcare anti-kickback statute, which, among other things, prohibits persons from knowingly and willfully offering or paying remuneration to induce either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under federal healthcare programs such as Medicare and Medicaid, or soliciting payment for such referrals, purchases, orders and recommendations;  
federal false claims laws which, among other things, prohibit individuals or entities from knowingly presenting, or causing to be presented, false or fraudulent claims for payment from the federal government, including Medicare, Medicaid or other third-party payors;

the federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), which prohibits schemes to defraud any healthcare benefit program and false statements relating to healthcare matters; and  
state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payor, including commercial insurers.

If our operations are found to be in violation of any of these laws or any other government regulations, we may be subject to penalties, including civil and criminal penalties, damages, fines, the curtailment or restructuring of our operations, the exclusion from participation in federal and state healthcare programs and imprisonment of personnel, any of which could adversely affect our ability to operate our business and our financial results. The risk of our being found to have violated these laws is increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations.

Further, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act (collectively, the "Affordable Care Act"), imposed annual reporting and disclosure requirements on device manufacturers for any "transfer of value" made or distributed to physicians or teaching hospitals. Our first report was submitted in 2014, and the reported information was made publicly available in a searchable format in September 2014. In addition, device manufacturers are required to report and disclose any investment interests held by physicians and their immediate family members during the preceding calendar year. Failure to submit required information may result in civil monetary penalties for each payment, transfer of value or ownership or investment



interests not reported in an annual submission, up to an aggregate of \$150,000 per year (and up to an aggregate of \$1 million per year for “knowing failures”).

In addition, there has been a recent trend of increased federal and state regulation of payments made to healthcare providers. Some states, such as California, Connecticut, Nevada and Massachusetts, mandate implementation of compliance programs that include the tracking and reporting of gifts, compensation for consulting and other services, and other remuneration to healthcare providers. The shifting commercial compliance environment and the need to build and maintain robust and expandable systems to comply with the different compliance and/or reporting requirements among a number of jurisdictions increases the possibility that we may inadvertently violate one or more of the requirements, resulting in increased compliance costs that could adversely impact our results of operations.

We may incur material losses and costs as a result of product liability and warranty claims, as well as product recalls, any of which may adversely affect our results of operations and financial condition. Furthermore, our reputation as a medical device company may be damaged if one or more of our products are, or are alleged to be, defective.

Our businesses expose us to potential product liability risks that are inherent in the design, manufacture and marketing of our products. In particular, our medical device products are often used in surgical and intensive care settings for procedures involving seriously ill patients. In addition, many of our products are designed to be implanted in the human body for varying periods of time. Product defects or inadequate disclosure of product-related risks with respect to products we manufacture or sell could result in patient injury or death. In addition, in connection with the divestitures of our former non-medical businesses, we agreed to retain certain liabilities related to those businesses, which include, among other things, liability for products manufactured prior to the date on which we completed the sale of the business. Product liability and warranty claims often involve very large or indeterminate amounts, including punitive damages. The magnitude of potential losses from product liability lawsuits may remain unknown for substantial periods of time, and the related legal defense costs may be significant. We could experience material warranty or product liability losses in the future and incur significant costs to defend these claims.

In addition, if any of our products are, or are alleged to be, defective, we may voluntarily participate, or be required by regulatory authorities to participate, in a recall of that product. In the event of a recall, we may lose sales and be exposed to individual or class-action litigation claims. Moreover, negative publicity regarding a quality or safety issue, whether accurate or inaccurate, could harm our reputation, decrease demand for our products, lead to product withdrawals or impair our ability to successfully launch and market our products in the future. Product liability, warranty and recall costs may have a material adverse effect on our business, financial condition, results of operations and cash flows.

The ongoing volatility in the domestic and global financial markets, combined with a continuation of constrained global credit markets could adversely impact our results of operations, financial condition and liquidity.

We are subject to risks arising from adverse changes in general domestic and global economic conditions. The economic slowdown and disruption of credit markets that occurred in recent years led to recessionary conditions and depressed levels of consumer and commercial spending, resulting in reductions, delays or cancellations of purchases of our products and services. Despite some improvements in recent years, economic conditions continue to cause disruption in some financial markets, resulting in, among other things, diminished liquidity and credit availability. We cannot predict the duration or extent of any economic recovery or the extent to which our customers will return to more typical spending behaviors. The continuation of the present broadly applicable economic trends of weak economic growth, constricted credit, public sector austerity measures in response to public budget deficits and foreign currency volatility, particularly with respect to the euro, could have a material adverse effect on our results of operations, financial condition and liquidity.

Additionally, our customers, particularly in Italy, Spain, Portugal and Greece, have extended or delayed payments for products and services already provided, which has increased our focus on collectability with respect to our accounts receivable from these customers. To date, we have not experienced an inordinate amount of payment defaults by our customers, and we have sufficient lending commitments in place to enable us to fund our foreseeable additional operating needs. However, the ongoing uncertainty in the European financial markets, combined with a continuation of constrained European credit markets creates a risk that some of our European customers and suppliers may be unable to access liquidity. As of December 31, 2016 and 2015, our net current and long term trade accounts receivable

in Italy, Spain, Portugal and Greece were \$51.1 million and \$62.3 million, respectively. In 2016, 2015 and 2014, net

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revenues from these countries were approximately 7%, 7% and 8% of total net revenues, respectively, and average days that accounts receivable from these countries were outstanding were 182, 204 and 223 days, respectively. Although we maintain allowances for doubtful accounts to cover the estimated losses which may occur when customers cannot make their required payments, we cannot assure that we will continue to experience the same loss rate in the future given the volatility in the worldwide economy. If our allowance for doubtful accounts is insufficient to address receivables we ultimately determine are uncollectible, we would be required to incur additional charges, which could materially adversely affect our results of operations. Moreover, our inability to collect outstanding receivables could adversely affect our financial condition and cash flow from operations.

In addition, adverse economic and financial market conditions may result in future impairment charges with respect to our goodwill and other intangible assets, which would not directly affect our liquidity but could have a material adverse effect on our reported financial results.

Our strategic initiatives, including acquisitions, may not produce the intended growth in revenue and operating income.

Our strategic initiatives include making significant investments designed to achieve revenue growth and to enable us to meet or exceed margin improvement targets. If we do not achieve the expected benefits from these investments or otherwise fail to execute on our strategic initiatives, we may not achieve the growth improvement we are targeting and our results of operations may be adversely affected.

In addition, as part of our strategy for growth, we have made, and may continue to make, acquisitions and divestitures and enter into strategic alliances such as joint ventures and joint development agreements. However, we may not be able to identify suitable acquisition candidates, complete acquisitions or integrate acquisitions successfully, and our joint ventures or strategic alliances may not prove to be successful. In this regard, acquisitions involve numerous risks, including difficulties in the integration of acquired operations, technologies, services and products and the diversion of management's attention from other business concerns. Even if we are successful in completing an acquisition, the products and technologies that we acquire may not be successful or may require significantly greater resources and investments than we anticipated. We could also experience negative effects on our results of operations and financial condition from acquisition-related charges, amortization of intangible assets and asset impairment charges, and other issues that could arise in connection with the acquisition of a company or business, including issues related to internal control over financial reporting, regulatory compliance and short-term effects of increased costs on results of operations. Although our management will endeavor to evaluate the risks inherent in any particular transaction, there can be no assurance that we will identify all such risks or the magnitude of the risks. In addition, prior acquisitions have resulted, and future acquisitions could result, in the incurrence of substantial additional indebtedness and expenditures. Future acquisitions may also result in potentially dilutive issuances of equity securities. There can be no assurance that difficulties encountered in connection with acquisitions will not have a material adverse effect on our business, financial condition and results of operations.

Health care reform may have a material adverse effect on our industry and our business.

Political, economic and regulatory developments have effected fundamental changes in the healthcare industry. The Affordable Care Act substantially changed the way health care is financed by both government and private insurers. It also encourages improvements in the quality of health care products and services and significantly impacts the United States pharmaceutical and medical device industries. Among other things, the Affordable Care Act:

- established a 2.3% excise tax on sales of medical devices with respect to any entity that manufactures or imports specified medical devices offered for sale in the United States, although this tax has been suspended for 2016 and 2017 as a result of the enactment of the Consolidated Appropriations Act of 2016;

- established a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in and conduct comparative clinical effectiveness research;

- implemented payment system reforms, including a national pilot program to encourage hospitals, physicians and other providers to improve the coordination, quality and efficiency of certain health care services through bundled payment models; and

- created an independent payment advisory board that will submit recommendations to reduce Medicare spending if projected Medicare spending exceeds a specified growth rate.





In 2015 and 2014, we recorded expenses of \$10.2 million and \$12.7 million, respectively, with respect to the medical device excise tax. While the excise tax has been suspended in 2016 and 2017, unless the suspension is extended, we will again be subject to the excise tax in 2018. We cannot predict at this time the full impact of the Affordable Care Act or other healthcare reform measures that may be adopted in the future on our financial condition, results of operations and cash flows. In this regard, President Trump and several congressional leaders have expressed an intention to repeal the Affordable Care Act and adopt legislation to replace that act, although more recent statements by President Trump and several members of Congress indicate that some time may elapse before any legislative action with respect to the Affordable Care Act is effected. Therefore, the continued viability of, or the nature of any modification of, or legislative substitution for, the Affordable Care Act is highly uncertain, and we cannot predict the effect that any of these events would have on our financial condition, results of operations or cash flows.

We are subject to risks associated with our non-United States operations.

We have significant manufacturing and distribution facilities, research and development facilities, sales personnel and customer support operations in a number of countries outside the United States, including Belgium, the Czech Republic, Germany, Ireland, Malaysia, Mexico. In addition, a significant portion of our non-United States revenues are derived from sales to third party distributors. As of December 31, 2016, 77% of our full-time and temporary employees were employed in countries outside of the United States. As of December 31, 2016, and 2015, approximately 45% and 43%, respectively, of our net property, plant and equipment was located outside the United States. In addition, for the years ended December 31, 2016, 2015 and 2014 approximately 46%, 47% and 50%, respectively, of our net revenues (based on the Teleflex entity generating the sale) were derived from operations outside the United States.

Our international operations are subject to risks inherent in doing business outside the United States, including:

- exchange controls, currency restrictions and fluctuations in currency values;
- trade protection measures;
- potentially costly and burdensome import or export requirements;
- laws and business practices that favor local companies;
- changes in foreign medical reimbursement policies and procedures;
- subsidies or increased access to capital for firms that currently are or may emerge as competitors in countries in which we have operations;
- substantial foreign tax liabilities, including potentially negative consequences resulting from changes in tax laws;
- restrictions and taxes related to the repatriation of foreign earnings;
- differing labor regulations;
- additional United States and foreign government controls or regulations;
- difficulties in the protection of intellectual property; and
- unsettled political and economic conditions and possible terrorist attacks against American interests.

In addition, the United States Foreign Corrupt Practices Act (the “FCPA”) and similar worldwide anti-bribery laws in non-United States jurisdictions generally prohibit companies and their intermediaries from making improper payments to non-United States officials for the purpose of obtaining or retaining business. The FCPA also imposes accounting standards and requirements on publicly traded United States corporations and their foreign affiliates, which, among other things, are intended to prevent the diversion of corporate funds to the payment of bribes and other improper payments to government officials, and to prevent the establishment of “off the books” slush funds from which such improper payments can be made. Because of the predominance of government-sponsored health care systems around the world, many of our customer relationships outside of the United States are with government entities and are therefore subject to such anti-bribery laws. Our policies mandate compliance with these anti-bribery laws. However, we operate in many parts of the world that have experienced government corruption to some degree. Despite meaningful measures that we undertake to facilitate lawful conduct, which include training and compliance programs and internal control policies and procedures, we may not always prevent reckless or criminal acts by our employees, distributors or other agents. In addition, we may be exposed to liability due to pre-acquisition conduct of employees, distributors or other agents of businesses or operations we acquire. Violations of anti-bribery laws, or allegations of

such violations, could disrupt our operations, involve significant management distraction and have a material adverse effect on our business, financial condition, results of operations and cash flows. We also could be subject to severe

penalties and other adverse consequences, including criminal and civil penalties, disgorgement, substantial expenditures related to further enhancements to our procedures, policies and controls, personnel changes and other remedial actions.

Furthermore, we are subject to the export controls and economic embargo rules and regulations of the United States, including the Export Administration Regulations and trade sanctions against embargoed countries, which are administered by the Office of Foreign Assets Control within the Department of the Treasury, as well as other laws and regulations administered by the Department of Commerce. These regulations limit our ability to market, sell, distribute or otherwise transfer our products or technology to prohibited countries or persons. While we train our employees and contractually obligate our distributors to comply with these regulations, we cannot assure that a violation will not occur, whether knowingly or inadvertently. Failure to comply with these rules and regulations may result in substantial civil and criminal penalties, including fines and the disgorgement of profits, the imposition of a court-appointed monitor, the denial of export privileges and debarment from participation in United States government contracts.

The risks relating to our foreign operations may have a material adverse effect on our international operations or on our business, results of operations, financial condition and cash flows.

Foreign currency exchange rate, commodity price and interest rate fluctuations may adversely affect our results.

We are exposed to a variety of market risks, including the effects of changes in foreign currency exchange rates, commodity prices and interest rates. Products manufactured in, and sold into, foreign markets represent a significant portion of our operations. Our consolidated financial statements reflect translation of financial statements denominated in non-United States currencies to United States dollars, our reporting currency, as well as the foreign currency exchange gains and losses resulting from the remeasurement of assets and liabilities as well as transactions denominated in currencies other than the primary currency of the country in which the entity operates, which we refer to as "non-functional currencies." A strengthening or weakening of the United States dollar in relation to the foreign currencies of the countries in which we sell or manufacture our products, such as the euro, will affect our United States dollar-reported revenue and income. Although we have entered into forward contracts with several major financial institutions to hedge a portion of our monetary assets and liabilities and projected cash flows denominated in non-functional currencies in order to reduce the effects of currency rate fluctuations, changes in the relative values of currencies may, in some instances, have a significant effect on our results of operations.

Many of our products have significant plastic resin content. We also use quantities of other commodities, such as aluminum and steel. Increases in the prices of these commodities could increase the costs of our products and services. We may not be able to pass on these costs to our customers, particularly with respect to those products we sell under group purchase agreements, which could have a material adverse effect on our results of operations and cash flows. Increases in interest rates may adversely affect the financial health of our customers and suppliers, thereby adversely affecting their ability to buy our products and supply the components or raw materials we need. In addition, our borrowing costs could be adversely affected if interest rates increase. Any of these events could have a material adverse effect on our financial condition, results of operations and cash flows.

Fluctuations in our effective tax rate and changes to tax laws may adversely affect us.

As a global company, we are subject to taxation in numerous countries, states and other jurisdictions. Our effective tax rate is derived from a combination of applicable tax rates in the various countries, states and other jurisdictions in which we operate. In preparing our financial statements, we estimate the amount of tax that will become payable in each of these jurisdictions. Our effective tax rate may, however, differ from the estimated amount due to numerous factors, including a change in the mix of our profitability from country to country and changes in tax laws. Any of these factors could cause us to experience an effective tax rate significantly different from previous periods or our current expectations, which could have an adverse effect on our business, financial condition and results of operations and cash flows.

An interruption in our manufacturing or distribution operations or our supply of raw materials may adversely affect our business.

Many of our key products are manufactured at or distributed from single locations, and the availability of alternate facilities is limited. If operations at one or more of our facilities is suspended due to natural disasters or other events,



we may not be able to timely manufacture or distribute one or more of our products at previous levels or at all. Furthermore, our ability to establish replacement facilities or to substitute suppliers may be delayed due to regulations and requirements of the FDA and other regulatory authorities regarding the manufacture of our products. In addition, in the event of delays or cancellations in shipments of raw materials by our suppliers, we may not be able to timely manufacture or supply the affected products at previous levels or at all. The manufacture of our products is highly exacting and complex, due in part to strict regulatory requirements. Problems in the manufacturing process, including equipment malfunction, failure to follow specific protocols and procedures, defective raw materials and environmental factors, could lead to launch delays, product shortages, unanticipated costs, lost revenues and damage to our reputation. A failure to identify and address manufacturing problems prior to the release of products to our customers may also result in quality or safety issues. A reduction or interruption in manufacturing or distribution, or our inability to secure suitable alternative sources of raw materials or components, could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Our ability to attract, train, develop and retain key employees is important to our success.

Our success depends, in part, on our ability to continue to retain our key personnel, including our executive officers and other members of our senior management team. Our success also depends, in part, on our ability to attract, train, develop and retain other key employees, including research and development, sales, marketing and operations personnel. We may experience difficulties in retaining executives and other employees due to many factors, including:

- the intense competition for skilled personnel in our industry;

- fluctuations in global economic and industry conditions;

- changes in our organizational structure;

- our restructuring initiatives;

- competitors' hiring practices; and

- the effectiveness of our compensation programs.

Our inability to attract, train, develop and retain such personnel could have an adverse effect on our business, results of operations, financial condition and cash flows.

We depend upon relationships with physicians and other health care professionals.

Research and development for some of our products is dependent on our maintaining strong working relationships with physicians and other healthcare professionals. We rely on these professionals to provide us with considerable knowledge and advice regarding the development and use of our products. Physicians assist us as researchers, product consultants, inventors and public speakers. If we fail to maintain our working relationships with physicians and, as a result, no longer have the benefit of their knowledge and advice, our products may not be developed in a manner that is responsive to the needs and expectations of the professionals who use and support our products, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our technology is important to our success, and our failure to protect our intellectual property rights could put us at a competitive disadvantage.

We rely on the patent, trademark, copyright and trade secret laws of the United States and other countries to protect our proprietary rights. Although we own numerous United States and foreign patents and have submitted numerous patent applications, we cannot be assured that any pending patent applications will issue, or that any patents, issued or pending, will provide us with any competitive advantage or will not be challenged, invalidated or circumvented by third parties. In addition, we rely on confidentiality and non-disclosure agreements with employees and take other measures to protect our know-how and trade secrets. The steps we have taken may not prevent unauthorized use of our technology by competitors or other persons who may copy or otherwise obtain and use these products or technology, particularly in foreign countries where the laws may not protect our proprietary rights to the same extent as in the United States. We cannot assure that current and former employees, contractors and other parties will not breach their confidentiality agreements with us, misappropriate proprietary information, copy or otherwise obtain and use our information and proprietary technology without authorization or otherwise infringe on our intellectual property rights. Our inability to protect our proprietary technology could adversely affect our business, financial condition, results of operations and cash flows. Moreover, there can be no assurance that others will not independently develop know-how



and trade secrets comparable to ours or develop better technology than our own, which could reduce or eliminate any competitive advantage we have developed.

Our products or processes may infringe the intellectual property rights of others, which may cause us to pay unexpected litigation costs or damages or prevent us from selling our products.

We cannot be certain that our products do not and will not infringe issued patents or other intellectual property rights of third parties. We may be subject to legal proceedings and claims in the ordinary course of our business, including claims of alleged infringement of the intellectual property rights of third parties. Any such claims, whether or not meritorious, could result in litigation and divert the efforts of our personnel. If we are found liable for infringement, we may be required to enter into licensing agreements (which may not be available on acceptable terms or at all) or to pay damages or cease making or selling certain products. We may need to redesign some of our products or processes to avoid future infringement liability. Any of the foregoing events could be detrimental to our business.

Other pending and future litigation may involve significant costs and adversely affect our business.

We are party to various lawsuits and claims arising in the normal course of business involving, among other things, contracts, intellectual property, import and export regulations, employment and environmental matters. The defense of these lawsuits may divert our management's attention, and we may incur significant expenses in defending these lawsuits. In addition, we may be required to pay damage awards or settlements, or become subject to injunctions or other equitable remedies, that could have a material adverse effect on our financial condition and results of operations. While we do not believe that any litigation in which we are currently engaged would have such an adverse effect, the outcome of litigation, including regulatory matters, is often difficult to predict, and we cannot assure that the outcome of pending or future litigation will not have a material adverse effect on our business, financial condition, results of operations or cash flows.

Our substantial indebtedness could adversely affect our business, financial condition or results of operations.

As of December 31, 2016, we had total consolidated indebtedness of 1,046 million.

Our substantial level of indebtedness increases the risk that we may be unable to generate cash sufficient to satisfy our debt obligations. It could also have significant effects on our business. For example, it could:

- increase our vulnerability to general adverse economic and industry conditions;
- require us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures, research and development efforts and other general corporate purposes;
- limit our ability to borrow additional funds for such general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;
- restrict us from exploiting business opportunities; and
- place us at a competitive disadvantage compared to our competitors that have less indebtedness.

If we do not generate sufficient cash flow from operations or if future borrowings are not available to us in an amount sufficient to pay our indebtedness when due or to fund our other liquidity needs, we may be forced to:

- refinance all or a portion of our indebtedness;
- sell assets;
- reduce or delay capital expenditures; or
- seek to raise additional capital.

We may not be able to effect any of these actions on commercially reasonable terms or at all. Our ability to refinance our indebtedness will depend on our financial condition at the time, the restrictions in the instruments governing our outstanding indebtedness and other factors, including market conditions.

Our inability to generate sufficient cash flow to satisfy our debt service obligations, or to refinance or restructure our obligations on commercially reasonable terms or at all, could have a material adverse effect on our business, financial condition and results of operations.

Our debt agreements impose restrictions on our business, which could prevent us from capitalizing on business opportunities and taking some corporate actions and may adversely affect our ability to respond to changes in our business and manage our operations.

Our senior credit agreement and the indentures governing our 5.25% senior notes due 2024 (the "2024 Notes") and our 4.875% senior notes due 2026 (the "2026 Notes") contain covenants that, among other things, impose significant restrictions on our business. The restrictions that these covenants place on us and our restricted subsidiaries include limitations on our and their ability to, among other things:

- incur additional indebtedness or issue preferred stock or otherwise disqualified stock;
- create liens;
- pay dividends, make investments or make other restricted payments;
- sell assets;
- use the proceeds of permitted sales of our assets;
- merge, consolidate, sell or otherwise dispose of all or substantially all of our assets; and
- enter into transactions with our affiliates.

In addition, our senior credit agreement also contains financial covenants, including covenants requiring maintenance of a consolidated leverage ratio, a secured leverage ratio and a consolidated interest coverage ratio, calculated in accordance with the terms of the senior credit agreement. A breach of any covenants under any one or more of our debt agreements could result in a default, which if not cured or waived, could result in the acceleration of all of our debt. In addition, any debt agreements we enter into in the future may further limit our ability to enter into certain types of transactions.

The contingent conversion features of our convertible notes, if triggered, may adversely affect our financial condition. In August 2010, we issued \$400 million in aggregate principal amount of 3.875% convertible senior subordinated notes due 2017 (the "Convertible Notes"). The Convertible Notes are convertible under certain circumstances, including the attainment of a last reported sale price per share of our common stock equal to 130% of the conversion price (approximately \$79.72) for at least 20 trading days during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding fiscal quarter. Since the fourth quarter 2013 and in all subsequent fiscal quarters, the last reported sale price of our common stock exceeded the 130% threshold. Moreover, commencing on May 1, 2017 and through July 28, 2017, the Convertible Notes are convertible regardless of our stock price, and the Convertible Notes mature in August 2017. As a result, the Convertible Notes are classified as a current liability, which, in turn, has resulted in a material reduction of our net working capital. In April 2016 and January 2017, we exchanged \$310.9 million aggregate principal amount of Convertible Notes in for cash and our common stock pursuant to the terms of separate, privately negotiated agreements with certain holders of the Convertible Notes. In addition, holders of \$44.8 million aggregate principal amount of Convertible Notes have effected conversions in accordance with the terms of the Convertible Notes. See "Convertible Notes - Exchange Transactions" and "Convertible Notes - Conversions" within Note 8, and "Exchange Transactions" within Note 13, of our consolidated financial statements included in this Annual Report on Form 10-K for additional information. Following the exchange transactions and conversions, and as of February 13, 2017, \$44.3 million in aggregate principal amount of the Convertible Notes remain outstanding. At this time, we have elected the net settlement method to satisfy the conversion obligation, under which we will settle the principal amount of the Convertible Notes converted in cash and settle the excess conversion value in shares, plus cash in lieu of fractional shares. While our conversion obligations have been substantially reduced as a result of the exchange transactions and conversions described above, and we believe we have sufficient liquidity to repay the principal amount due on the remaining outstanding Convertible Notes through a combination of our existing cash on hand, amounts available under our revolving credit facility and, if necessary, amounts provided through the capital markets, our use of these funds could adversely affect our results of operations and liquidity. See "Convertible Notes" within Note 8 to the consolidated financial statements included in this Annual Report on Form 10-K for a further discussion regarding the conversion terms of the Convertible Notes.





The convertible note hedge transactions and warrant transactions entered into in connection with the issuance of our Convertible Notes may adversely affect the value of our common stock.

In connection with our issuance of the Convertible Notes, we entered into privately negotiated hedge transactions with two counterparties, which we refer to as the "hedge counterparties." The hedge transactions cover, subject to customary anti-dilution adjustments, the number of shares of our common stock that underlie the Convertible Notes and reduce the dilution with respect to our common stock and/or cash payments that we may be required to make upon conversion of the Convertible Notes. Separately, we also entered into privately negotiated warrant transactions with the hedge counterparties under which we may be obligated to issue shares of our common stock. The warrants initially related to the same number of shares of our common stock as were initially subject to the hedge transactions and have an exercise price of \$74.65, subject to customary anti-dilution adjustments. In connection with the exchange transactions referenced in the preceding risk factor, we entered into agreements with the hedge counterparties that reduced the scope of the hedge transactions so that they cover only the number of shares of our common stock underlying the Convertible Notes that remained outstanding following the exchange transactions. We also entered into agreements with the such dealer counterparties to reduce the number of shares subject to the warrants. Nevertheless, based on recent market prices of our common stock, the warrant transactions have a dilutive effect with respect to our common stock or, if we so elect, obligate us to make cash payments to the extent that the market price per share of our common stock exceeds the exercise price of the warrants on any expiration date of the warrants. In addition, under applicable accounting guidance, changes in the share price of our common stock can have a significant impact on the number of shares that we must include in the fully diluted earnings per share calculation with respect to the Convertible Notes and warrants, which, in turn, could impact our reported financial results. Based on the average market price of our common stock during 2016, 1.7 million shares issuable upon exercise of the warrants were included in the total diluted shares outstanding for the year ended December 31, 2016. For additional information, see "Financing Arrangements" under Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations included in this Annual Report on Form 10-K.

In connection with establishing their positions under the convertible note hedge transactions and the warrant transactions, the hedge counterparties (and/or their affiliates) entered into various cash-settled over-the-counter derivative transactions with respect to our common stock concurrently with, or shortly following, the pricing of the Convertible Notes. The hedge counterparties (and/or their affiliates) may, in their sole discretion, with or without notice, modify their hedge positions from time to time (and are likely to do so during any conversion period related to the conversion of the Convertible Notes) by entering into or unwinding various over-the-counter derivative transactions with respect to shares of our common stock, and/or by purchasing or selling shares of our common stock or Convertible Notes in privately negotiated transactions and/or open market transactions. The effect, if any, of these transactions and activities on the market price of our common stock will depend in part on market conditions and cannot be ascertained at this time, but any of these activities could adversely affect the value of our common stock. We are subject to counterparty risk with respect to the convertible note hedge transactions.

Each hedge counterparty is a financial institution or the affiliate of a financial institution, and we will be subject to the risk that one or more hedge counterparties may default under the Convertible Note hedge transactions. Our exposure to the credit risk of each hedge counterparty is not secured by any collateral. If a hedge counterparty becomes subject to insolvency proceedings, we will become an unsecured creditor in those proceedings with a claim equal to our exposure at that time under the Convertible Note hedge transaction with that hedge counterparty. Our exposure will depend on many factors but, generally, the increase in our exposure will be correlated to the increase in the market price of our common stock and in the volatility of our common stock. In addition, upon a default by a hedge counterparty, we may suffer adverse tax consequences and dilution with respect to our common stock. We can provide no assurances as to the financial stability or viability of the hedge counterparties.

We may issue additional shares of our common stock or instruments convertible into our common stock, including in connection with conversions of our Convertible Notes, which could lower the price of our common stock.

We are not restricted from issuing additional shares of our common stock or other instruments convertible into our common stock. As of December 31, 2016, we had outstanding approximately 44 million shares of our common stock,

options to purchase approximately 1.6 million shares of our common stock (of which approximately 1.0 million were vested as of that date), restricted stock units covering approximately 0.3 million shares of our common stock

(which are expected to vest over the next three years) and approximately 12,000 shares of our common stock to be distributed from our deferred compensation plan. As of December 31, 2016, 14.2 million shares of our common stock are reserved for issuance upon the exercise of stock options, upon conversion of the Convertible Notes and upon the exercise of the warrants issued in connection with the Convertible Notes. We cannot predict the size of future issuances or the effect, if any, that they may have on the market price for our common stock.

If we issue additional shares of our common stock or instruments convertible into our common stock, such issuances may materially and adversely affect the price of our common stock. Furthermore, our issuance of shares following the exercise of some or all of the outstanding stock options and warrants, the vesting of restricted stock units and the conversion of some or all of the Convertible Notes will dilute the ownership interests of existing stockholders, and any sales in the public market of such shares of our common stock could adversely affect prevailing market prices of our common stock. In addition, the issuance and sale of substantial amounts of our common stock, including common stock issued as a result of the exercise of stock options and warrants, vesting of restricted stock units or conversion of the Convertible Notes, could depress the price of our common stock.

Disruption of critical information systems or material breaches in the security of our systems may adversely affect our business and customer relationships.

We rely on information technology systems to process, transmit, and store electronic information in our day-to-day operations. We also rely on our technology infrastructure, among other functions, to enable us to interact with customers and suppliers, fulfill orders, generate invoices, collect and make payments, ship products, provide support to customers, fulfill contractual obligations and otherwise conduct business. Our internal information technology systems, as well as those systems maintained by third-party providers, may be subjected to computer viruses or other malicious codes, unauthorized access attempts, and cyber-attacks, any of which could result in data leaks or otherwise compromise our confidential or proprietary information and disrupt our operations. Cyber-attacks are becoming more sophisticated and frequent, and in some cases have caused significant harm. Although we have taken numerous measures to protect our information systems and enhance data security, we cannot assure that these measures will prevent security breaches that could have a significant impact on our business, reputation and financial results. If we fail to monitor, maintain or protect our information technology systems and data integrity effectively or fail to anticipate, plan for or manage significant disruptions to these systems, we could, among other things, lose customers, have difficulty preventing fraud, have disputes with customers, physicians and other health care professionals, be subject to regulatory sanctions or penalties, incur expenses or lose revenues or suffer other adverse consequences. Any of these events could have a material adverse effect on our business, results of operations, financial condition or cash flows.

Regulations related to conflict minerals may increase our costs and adversely affect our business.

In 2012, the SEC promulgated rules under the Dodd-Frank Wall Street Reform and Consumer Protection Act regarding disclosure of the use of tin, tantalum, tungsten and gold, known as "conflict minerals," included in components of products either manufactured by public companies or for which public companies have contracted to manufacture. These rules require that we undertake due diligence efforts to determine whether such minerals originated from the Democratic Republic of Congo (the "DRC") or an adjoining country and, if so, whether such minerals helped finance armed conflict in the DRC or an adjoining country. In accordance with applicable regulations, we filed conflict minerals reports in 2014, 2015 and 2016. As discussed in these reports, we have determined that certain of our products contain the specified minerals, and we have undertaken, and continue to undertake, efforts to identify where such minerals originated. We have incurred, and expect to continue to incur, costs associated with complying with these disclosure requirements, including costs related to determining the sources of the specified minerals used in our products. These rules could adversely affect the sourcing, supply and pricing of materials used in our products. Our customers may require that our products be free of conflict minerals, and our revenues and margins may be adversely affected if we are unable to provide assurances to our customers that our products are "DRC conflict free" (generally, the product does not contain conflict minerals originating in the DRC or an adjoining country that directly or indirectly finance or benefit specified armed groups) due to, among other things, our inability to procure conflict free minerals at a reasonable price, or at all. Moreover, we may be adversely affected if we are unable to pass through any increased costs associated with meeting customer demands that we provide products that are DRC

conflict free. We also may face reputational challenges if our due diligence efforts do not enable us to verify the origins of all conflict minerals or to determine that any conflict minerals used in products we manufacture or in products manufactured by others for us are DRC conflict-free.

Our operations expose us to the risk of material environmental liabilities.

We are subject to numerous foreign, federal, state and local environmental protection and health and safety laws governing, among other things:

- the generation, storage, use and transportation of hazardous materials;
- emissions or discharges of substances into the environment; and
- the health and safety of our employees.

These laws and regulations are complex, change frequently and have tended to become more stringent over time. We cannot provide assurance that our costs of complying with current or future environmental protection and health and safety laws, or our liabilities arising from past or future releases of, or exposures to, hazardous substances, which may include claims for personal injury or cleanup, will not exceed our estimates or will not adversely affect our financial condition and results of operations.

Our workforce covered by collective bargaining and similar agreements could cause interruptions in our provision of products and services.

As of December 31, 2016, approximately 12% of our employees in the United States and in other countries were covered by union contracts or collective bargaining arrangements. It is likely that a portion of our workforce will remain covered by collective bargaining and similar agreements for the foreseeable future. Strikes or work stoppages could occur that would adversely impact our relationships with our customers and our ability to conduct our business. We may not pay dividends on our common stock in the future.

Holders of our common stock are entitled to receive dividends only as our board of directors may declare out of funds legally available for such payments. The declaration and payment of future dividends to holders of our common stock will be at the discretion of our board of directors and will depend upon many factors, including our financial condition, earnings, compliance with covenants in our debt instruments, legal requirements and other factors as our board of directors deems relevant. We cannot assure you that our cash dividend will not be reduced, or eliminated, in the future.

Certain provisions of our corporate governing documents, Delaware law and our Convertible Notes could discourage, delay, or prevent a merger or acquisition.

Provisions of our certificate of incorporation and bylaws could impede a merger, takeover or other business combination involving us or discourage a potential acquirer from making a tender offer for our common stock. For example, our certificate of incorporation authorizes our board of directors to determine the number of shares in a series, the consideration, dividend rights, liquidation preferences, terms of redemption, conversion or exchange rights and voting rights, if any, of unissued series of preferred stock, without any vote or action by our stockholders. Thus, our board of directors can authorize and issue shares of preferred stock with voting or conversion rights that could adversely affect the voting or other rights of holders of our common stock. We are also subject to Section 203 of the Delaware General Corporation Law, which imposes restrictions on mergers and other business combinations between us and any holder of 15% or more of our common stock. These provisions could have the effect of delaying or deterring a third party from acquiring us even if an acquisition might be in the best interest of our stockholders, and accordingly could reduce the market price of our common stock.

Certain provisions in the Convertible Notes and the indentures governing the Convertible Notes, the 2024 Notes and the 2026 Notes could make it more difficult or more expensive for a third party to acquire us. For example, if an acquisition event constitutes a “fundamental change,” as defined in the indenture governing the Convertible Notes, holders of the Convertible Notes will have the right to require us to purchase their notes in cash. Similarly, if an acquisition event constitutes a “change of control” as defined in the indenture governing the 2024 Notes and 2026 Notes, holders of such notes will have the right to require us to purchase their notes in cash. In addition, if an acquisition event constitutes a “make-whole fundamental change,” as defined in the indenture governing the Convertible Notes, we may be required, under certain circumstances, to increase the conversion rate for holders who convert their notes in connection with such acquisition event. In either case, and in other cases, our obligations under the Convertible Notes, the 2024 Notes and the 2026 Notes could increase the cost of acquiring us or otherwise discourage a third party from acquiring us or removing incumbent management, and accordingly could reduce the market price of our common stock.



ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

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## ITEM 2. PROPERTIES

We own or lease approximately 85 properties consisting of plants, engineering and research centers, distribution warehouses, offices and other facilities. We believe that the properties are maintained in good operating condition and are suitable for their intended use. In general, our facilities meet current operating requirements for the activities currently conducted within the facilities.

Our major facilities (those with 50,000 or greater square feet) at December 31, 2016 are as follows:

Location	Square Footage	Owned or Leased
Olive Branch, MS	627,000	Leased
Nuevo Laredo, Mexico	277,000	Leased
Asheboro, NC	204,000	Owned
Reading, PA	166,000	Owned
Tongeren, Belgium	163,000	Leased
Chihuahua, Mexico	153,000	Owned
Morrisville, NC	162,000	Leased
Kernen, Germany	112,000	Leased
Zdar nad Sazavou, Czech Republic	108,000	Owned
Kamunting, Malaysia	102,000	Owned
Chihuahua, Mexico	100,000	Leased
Tecate, Mexico	96,000	Leased
Hradec Kralove, Czech Republic	92,000	Owned
Chelmsford, MA	91,000	Leased
Kulim, Malaysia	90,000	Owned
Kernen, Germany	86,000	Owned
Arlington Heights, IL	86,000	Leased
Wayne, PA	84,000	Leased
Jaffrey, NH	81,000	Owned
Kamunting, Malaysia	77,000	Leased
Chihuahua, Mexico	68,000	Leased
Chihuahua, Mexico	63,000	Owned
Limerick, Ireland	59,000	Leased
Everett, MA	56,000	Leased
Bad Liebenzell, Germany	53,000	Leased

Operations in each of our business segments are conducted at locations both in and outside of the United States. Of the facilities listed above, with the exception of Jaffrey, NH and Limerick, Ireland, which are used solely for the OEM segment, our facilities generally serve more than one business segment and are often used for multiple purposes, such as administrative/sales, manufacturing and/or warehousing/distribution.

In addition to the properties listed above, we own or lease approximately 630,000 square feet of additional warehousing, manufacturing and office space in the North America, South America, Europe, Asia and Africa. We also own or lease properties that are no longer used in our operations, which we are actively marketing for sale or sublease.

**ITEM 3. LEGAL PROCEEDINGS**

We are party to various lawsuits and claims arising in the normal course of business. These lawsuits and claims include actions involving product liability and product warranty, intellectual property, contracts, employment and environmental matters. As of December 31, 2016 and 2015, we have accrued liabilities of \$2.5 million in connection with these matters, representing our best estimate of the cost within the range of estimated possible loss that will be incurred to resolve these matters. Of the \$2.5 million accrued at December 31, 2016, \$1.6 million pertains to discontinued operations. Based on information currently available, advice of counsel, established reserves and other resources, we do not believe that any such actions are likely to be, individually or in the aggregate, material to our business, financial condition, results of operations or liquidity. However, in the event of unexpected further developments, it is possible that the ultimate resolution of these matters, or other similar matters, if unfavorable, may be materially adverse to our business, financial condition, results of operations or cash flows. See Note 15 to the consolidated financial statements included in this Annual Report on Form 10-K for additional information.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

## PART II

## ITEM 5 MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is listed on the New York Stock Exchange, Inc. under the symbol "TFX." Our quarterly high and low stock prices and dividends for 2016 and 2015 are shown below.

## Price Range and Dividends of Common Stock

2016	High	Low	Dividends
First Quarter	\$ 155.05	\$ 125.28	\$ 0.34
Second Quarter	\$ 176.84	\$ 154.22	\$ 0.34
Third Quarter	\$ 188.79	\$ 168.00	\$ 0.34
Fourth Quarter	\$ 170.92	\$ 136.53	\$ 0.34
2015	High	Low	Dividends
First Quarter	\$ 123.09	\$ 107.45	\$ 0.34
Second Quarter	\$ 137.29	\$ 118.83	\$ 0.34
Third Quarter	\$ 140.50	\$ 122.13	\$ 0.34
Fourth Quarter	\$ 135.00	\$ 122.14	\$ 0.34

The terms of our senior credit facility as well as our 5.25% senior notes due 2024 and 4.875% notes due 2026, limit our ability to repurchase shares of our stock and pay cash dividends. Under the most restrictive of these provisions, on an annual basis \$1.0 billion of retained earnings was available for dividends at December 31, 2016. On February 23, 2017, the Board of Directors declared a quarterly dividend of \$0.34 per share on our common stock, which is payable on March 15, 2017 to holders of record on March 3, 2017. As of February 21, 2017, we had approximately 528 holders of record of our common stock.

Stock Performance Graph

The following graph provides a comparison of five year cumulative total stockholder returns of Teleflex common stock, the Standard & Poor's (S&P) 500 Stock Index and the S&P 500 Healthcare Equipment & Supply Index. The annual changes for the five-year period shown on the graph are based on the assumption that \$100 had been invested in Teleflex common stock and each index on December 31, 2011 and that all dividends were reinvested.

MARKET PERFORMANCE

Company / Index	2011	2012	2013	2014	2015	2016
Teleflex Incorporated	100	119	159	197	228	282
S&P 500 Index	100	116	154	175	177	198
S&P 500 Healthcare Equipment & Supply Index	100	117	150	188	200	212

## ITEM 6. SELECTED FINANCIAL DATA

	2016 <sup>(1)</sup>	2015 <sup>(1)</sup>	2014 <sup>(1)</sup>	2013 <sup>(1)</sup>	2012 <sup>(1)</sup>
	(Dollars in thousands, except per share)				
Statement of Income Data:					
Net revenues	\$1,868,027	\$1,809,690	\$1,839,832	\$1,696,271	\$1,551,009
Income (loss) from continuing operations before interest, loss on extinguishment of debt and taxes	\$319,453	\$315,891	\$284,862	\$233,261	\$(97,375 ) <sup>(2)</sup>
Income (loss) from continuing operations	\$237,651	\$236,808	\$191,460	\$152,183	\$(181,782 ) <sup>(2)</sup>
Amounts attributable to common shareholders for income (loss) from continuing operations	\$237,187	\$235,958	\$190,388	\$151,316	\$(182,737 ) <sup>(2)</sup>
Per Share Data:					
Income (loss) from continuing operations — basic	\$5.47	\$5.68	\$4.60	\$3.68	\$(4.47 )
Income (loss) from continuing operations — diluted	\$4.98	\$4.91	\$4.10	\$3.46	\$(4.47 )
Cash dividends	\$1.36	\$1.36	\$1.36	\$1.36	\$1.36
Balance Sheet Data:					
Total assets <sup>(3)</sup>	\$3,891,213	\$3,871,774	\$3,912,431	\$4,151,193	\$3,674,449
Long-term borrowings <sup>(3)</sup>	\$850,252	\$641,850	\$693,720	\$927,496	\$954,291
Common shareholders' equity	\$2,137,517	\$2,009,272	\$1,911,309	\$1,913,527	\$1,778,950
Statement of Cash Flows Data:					
Net cash provided by operating activities from continuing operations	\$410,590	\$303,446	\$290,241	\$231,299	\$194,618
Net cash (used in) provided by investing activities from continuing operations	\$(56,974 )	\$(154,848 )	\$(108,137 )	\$(372,638 )	\$(368,258 )
Net cash (used in) provided by financing activities from continuing operations	\$(118,692 )	\$(85,583 )	\$(287,703 )	\$231,170	\$(65,653 )
Supplemental Data:					
Free cash flow <sup>(4)</sup>	\$357,455	\$241,998	\$222,670	\$167,719	\$129,224

Certain financial information is presented on a rounded basis, which may cause minor differences.

(1) Amounts include the impact of businesses acquired during the period. See Note 3 to the consolidated financial statements included in this Annual Report on Form 10-K for additional information.

(2) Includes a pretax goodwill impairment charge of \$332.1 million, or \$315.1 million net of tax.

Includes the impact of adopting, as of January 1, 2016, the accounting guidance related to the classification of debt (3) issuance costs. See Note 2 to the consolidated financial statements included in this Annual Report on Form 10-K for additional information.

(4) Free cash flow is calculated by subtracting capital expenditures from cash provided by operating activities from continuing operations. Free cash flow is considered a non-GAAP financial measure. This financial measure is used in addition to and in conjunction with results presented in accordance with generally accepted accounting principles in the United States, or GAAP, and should not be considered a substitute for net cash provided by operating activities from continuing operations, the most comparable GAAP financial measure. Management believes that free cash flow is a useful measure to investors because it facilitates an assessment of funds available to satisfy current and future obligations, pay dividends and fund acquisitions. We also use this financial measure for internal managerial purposes and to evaluate period-to-period comparisons. Free cash flow is not a measure of cash available for discretionary expenditures since we have certain non-discretionary obligations, such as debt service, that are not deducted from the measure. We strongly encourage investors to review our financial

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statements and publicly-filed reports in their entirety and not to rely on any single financial measure. The following is a reconciliation of free cash flow to the most comparable GAAP measure.

	2016	2015	2014	2013	2012
	(Dollars in thousands)				
Net cash provided by operating activities from continuing operations	\$410,590	\$303,446	\$290,241	\$231,299	\$194,618
Less: Capital expenditures	53,135	61,448	67,571	63,580	65,394
Free cash flow	\$357,455	\$241,998	\$222,670	\$167,719	\$129,224

## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

### Overview

We are a global provider of medical technology products that enhance clinical benefits, improve patient and provider safety and reduce total procedural costs. We primarily design, develop, manufacture and supply single-use medical devices used by hospitals and healthcare providers for common diagnostic and therapeutic procedures in critical care and surgical applications. We market and sell our products worldwide through a combination of our direct sales force and distributors. Because our products are used in numerous markets and for a variety of procedures, we are not dependent upon any one end-market or procedure. We are focused on achieving consistent, sustainable and profitable growth by increasing our market share and improving our operating efficiencies.

We evaluate our portfolio of products and businesses on an ongoing basis to ensure alignment with our overall objectives. Based on our evaluation, we may identify opportunities to expand our margins through strategic divestitures of existing businesses and product lines that do not meet our objectives. In addition, we may seek to optimize utilization of our facilities through restructuring initiatives designed to further reduce our cost base and enhance our competitive position. For a discussion of our ongoing restructuring programs, see "Restructuring and other impairment charges" under "Results of Operations" below. Finally, we may continue to explore opportunities to expand the size of our business and improve our margins through a combination of acquisitions and distributor to direct sales conversions, which generally involves eliminating a distributor from the sales channel, thereby enabling us to obtain improved product pricing and more direct access to the end users of our products within the sales channel. During 2016, we completed acquisitions of businesses that complement our OEM and Asia reportable operating segments. In addition, during this period, we acquired the remaining 26% ownership interest in an Indian affiliate, Teleflex Medical Private Limited, from the noncontrolling shareholders. The total fair value of the consideration for these transactions was \$22.8 million.

During 2015, we completed several acquisitions of businesses that complement the anesthesia, surgical ligation, vascular and OEM product portfolios, as well as several acquisitions of distributors of medical devices and supplies. The total fair value of consideration for these acquisitions was \$96.5 million.

On February 17, 2017, the Company acquired all of the common stock and voting equity interest in Vascular Solutions, Inc. ("Vascular Solutions") for \$56.00 per share in cash, or a total of approximately \$1.0 billion. Vascular Solutions is a medical device company that focuses on developing clinical solutions for minimally invasive coronary and peripheral vascular procedures. The acquisition is expected to meaningfully accelerate the growth of our vascular and interventional access product portfolios through increased revenue associated with entry into the coronary and peripheral vascular market, as well as increased cross-portfolio selling opportunities to both our and Vascular Solutions' customer bases.

### Health Care Reform

In 2010, the Patient Protection and Affordable Care Act (as amended, the "Affordable Care Act") was signed into law. The legislation is far-reaching and is intended to expand access to health insurance coverage and improve the quality and reduce the costs of healthcare. For medical device companies such as Teleflex, the expansion of medical insurance coverage should lead to greater utilization of the products we manufacture, but the provisions of the legislation designed to contain the cost of healthcare could negatively affect pricing of our products and encourage patient outcome driven results. The overall impact of the Affordable Care Act on our business is yet to be determined, mainly due to uncertainties around future customer behaviors, which we believe will be affected by reimbursement factors such as insurance coverage, statistics, patient outcomes and patient satisfaction. Moreover, in light of the expressed intent of President Trump and several members of congressional leadership to repeal the Affordable Care Act and adopt a form of replacement legislation, the continued viability of, or the nature of any modification of, or legislative substitution for, the Affordable Care Act, as well as the effect of any of these events, if they occur, is highly uncertain.

The Affordable Care Act imposed a 2.3% excise tax on sales of medical devices, beginning in 2013. Although the excise tax has been suspended for 2016 and 2017, its status remains unclear for 2018 and subsequent years. For the years ended December 31, 2015 and 2014, we recorded medical device excise taxes of \$10.2 million and \$12.7 million, respectively, which are included in selling, general and administrative expenses.



## Global Economic Conditions

Global economic conditions in recent years have had adverse impacts on market activities due to, among other things, failure of financial institutions, falling asset values, diminished liquidity, reduced demand for products and services and significant fluctuations in foreign currency exchange rates. In response, we adjusted production levels and engaged in new restructuring activities. We continue to review and evaluate our manufacturing, warehousing and distribution processes to maximize efficiencies through the elimination of redundancies in our operations and the consolidation of facilities. Although, on a consolidated basis, the consequences of economic conditions, other than fluctuations in foreign currency exchange rates, have not had a significant adverse impact on our financial position, results of operations or liquidity, healthcare policies and practice trends vary by country, and the impact of the global economic downturn was felt to varying degrees in each of our regional markets over the last several years. The continuation of the present broadly applicable economic trends of weak economic growth, constricted credit, public sector austerity measures in response to public budget deficits and foreign currency volatility, particularly with respect to the euro, could have a material adverse effect on our results of operations and our liquidity.

In recent years, hospitals in some regions of the United States experienced a decline in admissions, a weaker payor mix, and a reduction in elective procedures. Consequently, hospitals took actions to reduce their costs, including limiting their capital spending. More recently, the economic environment has improved somewhat, but has not returned to pre-recession levels, and challenges persist, particularly in some European countries, as discussed below. Approximately 94% of our net revenues come from single-use products primarily used in critical care and surgical applications, and our sales volume could be negatively impacted if hospital admission rates or payor mix change. Conversely, our sales volume could be positively impacted due to increases in the number of insured individuals as a result of the Affordable Care Act, which has had the effect of facilitating medical insurance coverage for many persons who previously were not covered, although, as noted above, the Affordable Care Act may be subject to repeal, modification or replacement.

A number of European countries continue to contend with considerable government debt, annual deficits and high levels of unemployment. Despite some indications of a more positive economic outlook in Europe, the healthcare sector remains weak. In particular, budgetary restraints among European countries have led to cost control measures, such as delays in approvals for elective surgeries. The public healthcare systems in certain countries in Western Europe, most notably Greece, Spain, Portugal and Italy, have experienced significantly reduced liquidity due to recessionary conditions, which continues to result in delays in payments to us by customers in these countries. Moreover, the impact of Brexit, economic and trade policies of the Trump administration and the results of several 2017 elections in European nations, including Germany and France, are uncertain and could have a profound economic effect in Europe and elsewhere.

In Asia, governments have intensified efforts to manage the cost of healthcare in response to an uncertain economic environment that has resulted in moderate growth rates across the region. We are experiencing an increasing trend of government-driven price management and reimbursement controls, particularly in China, Japan and Indonesia. There also has been an increase in government initiatives to help local manufacturers access a bigger share of the local market. Moreover, many countries in the region have become more proactive with respect to regulatory requirements, and as a result, we expect longer, costlier and more complicated regulatory approval processes in these countries. In Latin America, some highly regulated economies such as Argentina and Venezuela have experienced unusually high inflation rates and weakening currencies. This has impacted the budgets of the public healthcare systems resulting in delays in the importation of medical devices. Although Latin America does not represent a significant portion of our business, our operations in this region may be adversely affected by these factors.

## Results of Operations

As used in this discussion, "new products" are products that we have sold for 36 months or less, and "existing products" are products that we have sold for more than 36 months. Discussion of results of operations items that reference the effect of one or more acquired businesses (except as noted below with respect to acquired distributors) generally

reflects the impact of the acquisitions within the first 12 months following the date of the acquisition. In addition to increases and decreases in the per unit selling prices of our products to our customers, our discussion of the impact of product price increases and decreases also reflects, for the first 12 months following the acquisition of a distributor, the impact on the pricing of our products resulting from the elimination of the distributor from the sales channel. To the extent an acquired distributor had pre-acquisition sales of products other than ours, the impact of the post-acquisition

sales of those products on our results of operations is included within our discussion of the impact of acquired businesses.

Certain financial information is presented on a rounded basis, which may cause minor differences.

#### Revenues

	2016	2015	2014
	(Dollars in millions)		
Net Revenues	\$1,868.0	\$1,809.7	\$1,839.8

#### Comparison of 2016 and 2015

Net revenues for the year ended December 31, 2016 increased 3.2%, or \$58.3 million, compared to the prior year. The increase is primarily attributable to an increase in sales volumes of existing products of \$37.3 million and an increase in new product sales of \$24.2 million, both across all of our segments. The increase was partially offset by unfavorable fluctuations in foreign currency exchange rates.

#### Comparison of 2015 and 2014

Net revenues for the year ended December 31, 2015 decreased 1.6%, or \$30.1 million, compared to the prior year. The decrease is primarily attributable to unfavorable fluctuations in foreign currency exchange rates of \$129.1 million, primarily in the EMEA and Asia segments. The decrease in net revenues was partially offset by a net increase in sales volumes of existing products in most of our segments of \$51.9 million, and a net increase in new product sales in most of our segments of \$19.4 million. In addition, the decrease was further offset by sales by acquired businesses, primarily Human Medics Co., Ltd. ("Human Medics"), a distributor of medical devices and supplies primarily in the Korean market, Mini-Lap, a developer of micro-laparoscopic instrumentation, Mayo Healthcare Pty Limited, ("Mayo Healthcare"), a distributor of medical devices and supplies, primarily in the Australian market, N. Stenning & Co. Pty. Ltd. ("Stenning"), a distributor of medical devices and supplies primarily in the Australian market, and Truphatek Holdings (1993) Limited ("Truphatek"), a manufacturer of a broad range of disposable and reusable laryngoscope devices, which generated \$14.8 million, and net price increases, primarily in the Asia and Surgical North America segments, which generated \$12.8 million.

#### Gross profit

	2016	2015	2014
	(Dollars in millions)		
Gross profit	\$996.2	\$944.4	\$942.4
Percentage of revenues	53.3 %	52.2 %	51.2 %

#### Comparison of 2016 and 2015

For the year ended December 31, 2016, gross profit as a percentage of revenues increased 110 basis points, or 2.1%, compared to the prior year. The increase in gross margin is primarily attributable to the impact of an increase in sales of higher margin products, primarily in the Anesthesia North America and EMEA segments, as well as lower manufacturing costs resulting from cost improvement initiatives, including the 2014 Manufacturing Footprint Realignment Plan.

#### Comparison of 2015 and 2014

For the year ended December 31, 2015, gross profit as a percentage of revenues increased 100 basis points, or 2.0%, compared to the prior year. The increase in gross margin is primarily attributable to the 70 basis point impact of a net increase in sales of higher margin products, primarily in the Surgical North America and OEM segments, the 60 basis point impact of a net increase in sales volumes of existing products, primarily in the Vascular North America, EMEA and Asia segments and the 30 basis point impact of net price increases, primarily in the Asia and Surgical North America segments. Gross margin was negatively impacted by the 80 basis point impact of net unfavorable fluctuations in foreign currency exchange rates and costs associated with product recalls and quality issues first identified during the second quarter 2015 partially offset by lower manufacturing costs resulting from cost improvement initiatives.



## Selling, general and administrative

	2016	2015	2014
	(Dollars in millions)		
Selling, general and administrative	\$563.3	\$569.0	\$578.7
Percentage of revenues	30.2 %	31.4 %	31.5 %

## Comparison of 2016 and 2015

Selling, general and administrative expenses decreased \$5.7 million during the year ended December 31, 2016 compared to the prior year. The decrease is primarily attributable to the favorable impact of the suspension of the excise tax on medical devices under the Affordable Care Act of \$10.2 million and the favorable impact of fluctuations in foreign currency exchanges rates of \$2.7 million, partially offset by an increase in selling and marketing expenses of \$7.5 million.

## Comparison of 2015 and 2014

Selling, general and administrative expenses decreased \$9.7 million during the year ended December 31, 2015 compared to the prior year. The decrease is due to the favorable impact of foreign currency exchange rate fluctuations of \$28.5 million and a reduction in medical device excise tax of \$2.5 million. These declines were partially offset by expenses associated with our 2015 acquisitions and distributor-to-direct sales conversions of \$11.4 million, an increase in selling expenses of \$5.4 million, primarily related to higher sales commissions, a reduction, as compared to 2014, in the benefit resulting from the reversal of contingent consideration liabilities of \$2.9 million and higher amortization expense of \$2.6 million.

## Research and development

	2016	2015	2014
	(Dollars in millions)		
Research and development	\$58.6	\$52.1	\$61.0
Percentage of revenues	3.1 %	2.9 %	3.3 %

## Comparison of 2016 and 2015

The increase in research and development expenses for the year ended December 31, 2016 is primarily attributable to increased spending on new product development with respect to several of our segments.

## Comparison of 2015 and 2014

The decrease in research and development expenses for the year ended December 31, 2015 resulted from efficiencies realized through our integration of research and development projects commenced by certain businesses acquired in 2013 that were reflected in research and development expenses for the year ended December 31, 2014. The decrease is also attributable to the late stage technology acquisitions made in 2015, which supplement our organic research and development initiatives.

## Restructuring and other impairment charges

	2016	2015	2014
	(Dollars in millions)		
Other 2016 restructuring programs	\$3.2	\$—	\$—
2016 Manufacturing footprint realignment plan	12.5	—	—
2015 Restructuring programs	0.1	6.3	—
2014 Manufacturing footprint realignment plan	0.1	1.7	9.3
2014 European restructuring plan	—	(0.1 )	7.8
Other 2014 restructuring programs	—	—	3.6
LMA restructuring program	—	—	(3.3 )
Other restructuring programs	(0.1 )	(0.1 )	0.5
Other impairment charges	43.4	—	\$—
Total	\$59.2	\$7.8	\$17.9

## 2016 Restructuring charges

For the year ended December 31, 2016, the restructuring charges primarily related to the 2016 Manufacturing Footprint Realignment Plan and, to a lesser extent, to other restructuring programs, which are described below. The restructuring charges recognized for the year ended December 31, 2016 included termination benefits and contract termination costs of \$13.2 million and \$1.7 million, respectively.

## 2016 Manufacturing Footprint Realignment Plan

On February 23, 2016, our Board of Directors approved a restructuring plan involving the consolidation of operations and a related workforce reduction at certain of our facilities (the "2016 Manufacturing Footprint Realignment Plan"). We estimate that we will incur aggregate pre-tax charges in connection with these restructuring activities of approximately \$34 million to \$44 million, of which we estimate \$27 million to \$31 million will result in future cash outlays. Additionally, we expect to incur aggregate capital expenditures of approximately \$17 million to \$19 million in connection with the 2016 Manufacturing Footprint Realignment Plan. We currently expect to achieve annualized savings of \$12 million to \$16 million once the plan is fully implemented and currently expect to realize plan-related savings beginning in 2017.

## 2016 Other Restructuring Programs

During 2016, we committed to certain actions designed to further improve operating efficiencies and reduce costs. These actions include the consolidation of global administrative functions and manufacturing operations. These programs commenced in the second half of 2016 and are expected to be substantially complete by the end of the first quarter of 2018. We estimate that we will record aggregate pre-tax charges of \$3.8 million to \$4.7 million related to these programs, substantially all of which constitute termination benefits and lease termination costs that will result in future cash outlays. Additionally, we expect to incur approximately \$1.5 million of accelerated depreciation and other costs directly related to the programs, which will be recognized in cost of goods sold; we anticipate that approximately \$0.6 million of this amount will result in future outlays. We expect to achieve annualized pre-tax savings of \$6.9 million to \$8.5 million once this program has been fully implemented and anticipate that we will begin realizing savings related to the programs in 2017.

## 2015 Restructuring charges

For the year ended December 31, 2015, the restructuring charges primarily related to restructuring programs that were initiated in conjunction with the reorganization of certain of our businesses and shared service center functions as well as the consolidation of certain of our facilities in North America. The restructuring charges recognized for the year ended December 31, 2015 included termination benefits and contract termination costs of \$5.8 million and \$1.4 million, respectively.



## 2014 Restructuring charges

For the year ended December 31, 2014, we recognized restructuring charges related to several programs including the 2014 Manufacturing Footprint Realignment Plan, the 2014 European Restructuring Plan and other 2014 restructuring programs, which are described below. The restructuring charges recorded for the year ended December 31, 2014 included termination benefits and contract termination costs of \$16.9 million and \$3.3 million, respectively. The restructuring charges were partially offset by a net credit of \$3.2 million resulting from the reversal of contract termination costs due to the favorable settlement of a terminated distributor agreement related to the LMA restructuring program, which was initiated following our acquisition of substantially all of the assets of LMA International N.V. (the "LMA Business") in 2012 to integrate the LMA business into our other businesses.

### 2014 Manufacturing Footprint Realignment Plan

In April 2014, our Board of Directors approved a restructuring plan (the "2014 Manufacturing Footprint Realignment Plan") involving the consolidation of operations and a related reduction in workforce at certain facilities, and the relocation of manufacturing operations from certain higher-cost locations to existing lower-cost locations. These actions commenced in the second quarter 2014 and were initially expected to be substantially completed by the end of 2017.

To date, we have completed the consolidation and relocation of a significant portion of the operations subject to the 2014 Manufacturing Footprint Realignment Plan, and achieved annualized savings of \$17 million at December 31, 2016 directly related to these actions. With respect to the remaining actions to be taken under the plan, we revised our savings, expense and timing estimates during the third quarter 2016 to reflect the impact of changes we have implemented with respect to medication delivery devices included in certain kits primarily sold by our Vascular North America operating segment and, to a lesser extent, certain kits primarily sold by our Anesthesia North America operating segment. As a result of these changes, we have reduced our estimate with respect to the overall annualized savings we expect to realize under the plan from our prior estimate of \$28 million to \$35 million to a range of \$23 million to \$27 million. We anticipate that this decrease in projected savings will be offset, in large part, by an expected increase in annual revenues resulting from improved pricing on the affected Vascular kits directly related to the changes described above. We anticipate that this projected increase in annual revenues, taken together with the projected annualized savings we expect to realize under the 2014 Manufacturing Footprint Realignment Plan, should enable us to improve our pre-tax income on an annualized basis by approximately \$28 million to \$33 million once the plan has been completed.

As a result of the changes described above, we also revised our estimates with respect to the charges we expect to incur in connection with the plan. Specifically, we now estimate that we will incur \$43 million to \$48 million in aggregate pre-tax charges associated with the 2014 Manufacturing Footprint Realignment Plan, compared to our prior estimate of approximately \$37 million to \$44 million. In addition, we expect cash outlays associated with the plan to be in the range of \$33 million to \$38 million, compared to our prior estimate of approximately \$26 million to \$31 million. We continue to expect to incur \$24 million to \$30 million in aggregate capital expenditures under the plan. We currently expect that the 2014 Manufacturing Footprint Realignment Plan will be substantially complete by the end of the first half of 2020 rather than the end of 2017, which we previously anticipated.

We currently are evaluating the feasibility of alternative measures designed to mitigate the loss of expected savings and accelerate the currently estimated timetable for completion of the plan.

### 2014 European Restructuring Plan

In 2014, we committed to a restructuring plan, which impacts certain administrative functions in Europe and involves the consolidation of operations and a related reduction in workforce at certain of our European facilities. We expect future restructuring charges, if any, to be nominal and we expect to complete this plan in 2017.

### Other 2014 Restructuring Programs

In June 2014, we initiated programs to consolidate locations in Australia and terminate certain European distributor agreements in an effort to reduce costs. We completed these programs in 2015.





## Other impairment charges

## IPR&amp;D impairment charge

In May 2012, we acquired Semprus BioSciences Corp. (“Semprus”), a biomedical research and development company that developed a polymer surface treatment technology intended to reduce thrombus-related complications. Through 2016, we continued to engage in research and development activities designed to support an application for regulatory approval and achieve commercialization of the technology. However, upon considering the continuing challenges, remaining risks and uncertainties and significant additional resources required in connection with the development and commercialization of the technology, as well as the availability and advances made with respect to other technologies, during the fourth quarter of 2016, we determined it would not be commercially reasonable to continue our efforts to develop the Semprus technology. As a result, we significantly reduced, and over the course of 2017 will discontinue, our research and development efforts with regard to the Semprus technology. Consequently, we recognized a pre-tax impairment charge of \$41.0 million (\$26.1 million after tax) for the year ended December 31, 2016.

## Long-lived asset impairment charges

During the fourth quarter we recorded \$2.4 million in impairment charges related to two properties, one of which was classified as a held for sale building asset.

There were no impairment charges for the years ended December 31, 2015 or 2014.

For additional information regarding our restructuring programs and other impairment charges, see Note 4, and Note 18 to the consolidated financial statements included in this Annual Report on Form 10-K.

## Interest expense

	2016	2015	2014
	(Dollars in millions)		
Interest expense	\$54.9	\$61.3	\$65.5
Average interest rate on debt during the year	3.80 %	3.84 %	4.10 %

## Comparison of 2016 and 2015

The decrease in interest expense for the year ended December 31, 2016 compared to the prior year was primarily due to the repurchase through exchange transactions with holders of our 3.875% Convertible Senior Subordinated Notes due 2017 (the “Convertible Notes”) and conversions of the Convertible Notes, each of which is described in more detail in Note 8 to the consolidated financial statements included in this Annual Report on Form 10-K, resulting in lower average amounts of debt outstanding compared to the prior period. The decrease was also the result of a lower average interest rate due to our June 1, 2015 redemption of our 6.875% Senior Subordinated Notes due 2019 (the “2019 Notes”), which were replaced by borrowings under our revolving credit facility and subsequently by our issuance of 4.875% Senior Notes due 2026 (the “2026 Notes”). Both the revolving credit facility and the 2026 Notes carry interest rates that are lower than the 2019 Notes. The decrease in interest expense was partially offset by financing fees of \$3.4 million incurred for the year ended December 31, 2016 to secure the bridge financing commitments, as described in more detail in “Liquidity and Capital Resources” section below and Note 19 to the consolidated financial statements included in this Annual Report on Form 10-K.

## Comparison of 2015 and 2014

The decrease in interest expense for the year ended December 31, 2015 compared to the prior year reflects the benefit of the redemption, on June 1, 2015, of our 6.875% Senior Subordinated Notes due 2019, which had a fixed interest rate. Proceeds from our revolving credit facility, which bear a lower variable interest rate, were utilized to redeem the 2019 Notes.

## Loss on extinguishment of debt

	2016	2015	2014
	(Dollars in millions)		

Loss on extinguishment of debt	\$19.3	\$10.5	\$ —
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For the year ended December 31, 2016, we recognized a loss on the extinguishment of debt of \$19.3 million, of which, \$16.3 million related to our repurchase of Convertible Notes through exchange transactions we entered into with certain holders of the Convertible Notes and \$3.0 million related to the conversions of \$44.4 million in aggregate principal amount of the Convertible Notes. See Note 8 to the consolidated financial statements included in this report for additional information.

On June 1, 2015, we prepaid the \$250 million aggregate outstanding principal amount under the 2019 Notes. In addition to our prepayment of principal, we paid to the holders of the 2019 Notes an \$8.6 million prepayment make-whole amount plus accrued and unpaid interest. We recognized the prepayment make-whole amount and a \$1.9 million write-off of unamortized debt issuance costs as a loss on extinguishment of debt for the year ended December 31, 2015.

## Gain on sale of assets

	2016	2015	2014
	(Dollars in millions)		

Gain on sale of assets	\$4.4	\$0.4	\$ —
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During the year ended December 31, 2016, we recognized a gain of \$4.4 million, primarily as a result of the sale, for \$8.9 million, of two buildings, one of which was previously classified as held for sale.

## Taxes on income from continuing operations

	2016	2015	2014
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Effective income tax rate	3.3%	3.2%	13.0%
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## Comparison of 2016 and 2015

The effective income tax rate in 2016 was 3.3% compared to 3.2% in 2015. Taxes on income from continuing operations in 2016 were \$8.1 million compared to \$7.8 million in 2015. The effective income tax rate for 2016 was impacted by a tax benefit associated with U.S. federal tax return filings, a benefit resulting from the reduction of German tax reserves as a result of the conclusion of an audit, a benefit resulting from the expiration of various statutes of limitation and a benefit associated with the Semprus IPR&D asset impairment.

## Comparison of 2015 and 2014

The effective income tax rate in 2015 was 3.2% compared to 13.0% in 2014. Taxes on income from continuing operations in 2015 were \$7.8 million compared to \$28.7 million in 2014. The effective tax rate for 2015 was impacted by a tax benefit associated with U.S. federal tax return filings, a benefit associated with legislative tax rate changes, a benefit resulting from a reduction in our U.S. reserves as a result of the conclusion of an audit and a benefit associated with a reduction in the estimated deferred tax with respect to non-permanently reinvested income due to an increase in the estimated foreign tax credits available to reduce the U.S. tax on a future repatriation.

## Segment Results

## Segment Net Revenues

	Year Ended December 31			% Increase/(Decrease)	
	2016	2015	2014	2016 vs 2015	2015 vs 2014
	(Dollars in millions)				
Vascular North America	\$350.5	\$334.9	\$311.1	4.6	7.6
Anesthesia North America	198.8	189.2	183.9	5.0	2.9
Surgical North America	172.2	161.3	150.1	6.8	7.4
EMEA	510.9	514.5	593.1	(0.7 )	(13.3 )
Asia	249.4	241.7	237.7	3.2	1.7
OEM	161.0	149.4	144.0	7.8	3.8
All other	225.2	218.7	219.9	3.0	(0.6 )
Segment Net Revenues	\$1,868.0	\$1,809.7	\$1,839.8	3.2	(1.6