A new day for healthcare

Annual report 2018

BD

BD associates have a passion and commitment to help improve patient outcomes by advancing clinical therapy for patients, optimizing clinical processes for healthcare providers and enhancing safety for patients and healthcare workers.

More than

65,000

associates

Serving

190+

countries

Vincent A. Forlenza
Chairman and
Chief Executive Officer

To our shareholders, customers and associates

Every day is a new opportunity to experience and make a difference in an evolving world and a dynamic healthcare industry—both undergoing unprecedented change. We welcome the potential in each new day and the opportunity that the rising sun represents. At BD, we embrace every opportunity to keep *advancing the world of health*, and in no other time during the 120-plus year history of the company is there more to embrace than today.

BD has always been a critical supplier to the healthcare industry with a legacy of innovation. From the first safety-engineered syringe to the first evacuated blood collection tubes, the first commercial fluorescence-activated cell sorting system, the first automated medication dispensing cabinet and the first smart infusion pump, BD has been a leader in helping clinicians be more efficient and cost effective while helping to improve patient and healthcare worker safety. By adding C. R. Bard to the BD family, we have added transformative capabilities in the treatment of multiple chronic diseases. These new capabilities enable BD to elevate beyond a trusted innovator and supplier into a true partner of choice for the healthcare industry. BD and Bard are uniquely positioned with unmatched breadth, depth and capabilities to be an indispensable partner to hospitals and health systems to improve both the treatment of disease for patients and the process of care for healthcare providers. New capabilities, new call points, new opportunities. A new day.

FY18 results

The combination of BD and Bard has significantly accelerated our strategy and is already delivering measurable results. I feel incredibly proud of what our organization was able to accomplish—beginning the integration of Bard while completing the integration of CareFusion—and delivering on our commitments. We finished the year with very strong performance and momentum across our businesses and in every region. We saw this in both our legacy BD and Bard portfolios.

For the full year, we grew revenues, expanded margins and delivered double-digit adjusted earnings per share growth. We achieved all of this while overcoming significant headwinds and making strategic business investments. We continue to have well-balanced revenue growth between the United States and internationally, with emerging markets growing by double digits in FY18, led by China. Concurrently executing on both the CareFusion and Bard acquisitions, while

BD Pyxis™ MedStation™ ES system

continuing to drive our strategy forward and delivering strong performance is a testament to the agility of our organization. In FY18, we also divested several assets, including our remaining interest in the Vyaire Medical joint venture and our Advanced Bioprocessing business, and we sold select product lines necessary to achieve regulatory clearance for the Bard transaction. On the acquisition front, we announced the acquisition of TVA Medical into our BD Interventional–Peripheral Intervention business, which is a great example of our continued strategy to pursue tuck-in acquisitions to advance our category leadership in high-growth segments.

In addition, we continued our track record of significant margin expansion in FY18, which reflects the higher margin profile of Bard and disciplined cost control, operational efficiency and synergies as the "new BD." The cumulative effect is strong underlying operating margin expansion over the past four fiscal years, which highlights our solid execution and demonstrates that our strategy is sound. We also remain committed to returning cash to our shareholders in the form of dividends, and FY18 marked our 46th year of consecutive dividend increases.

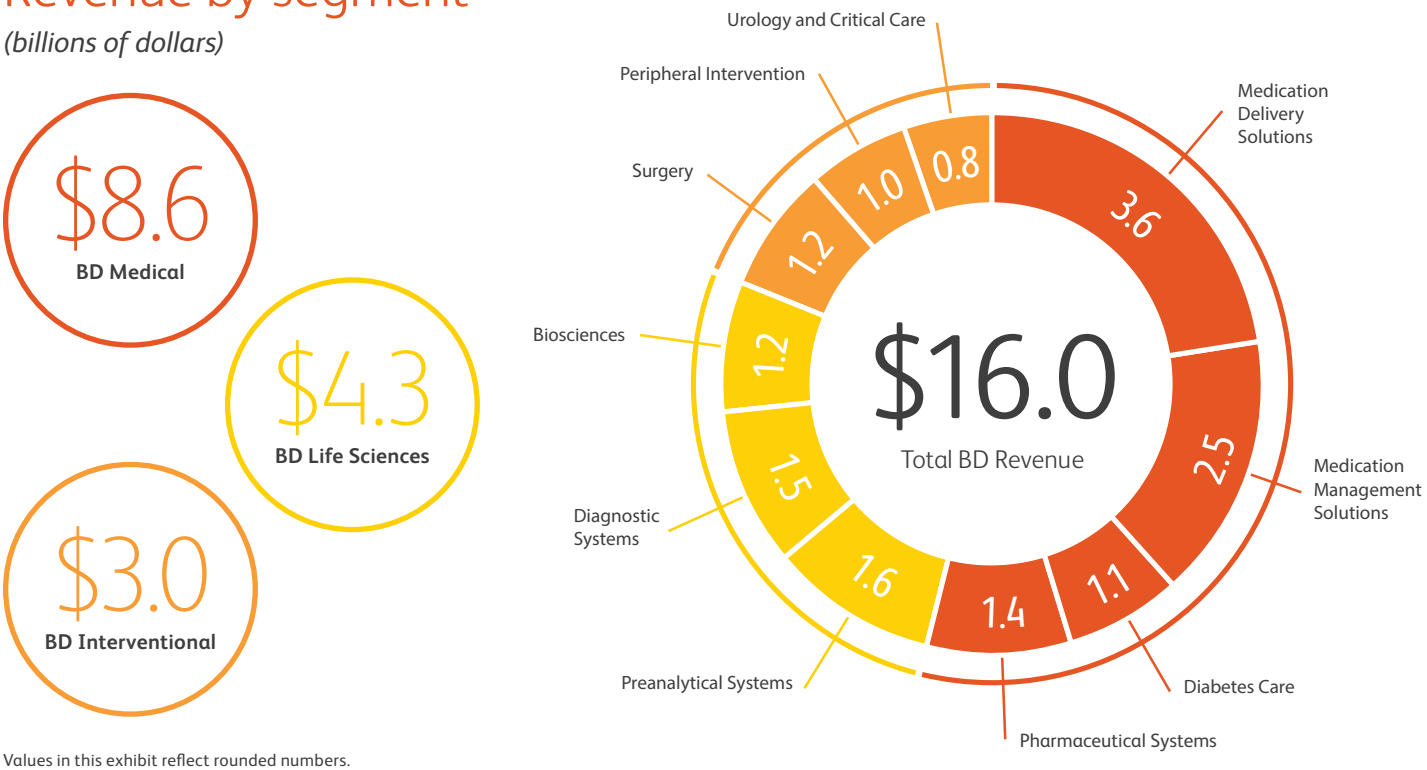
A new day for innovating

Our new product innovation is continuing to fuel growth. From the new BD Alaris™ infusion pump and BD HealthSight™ integrated platform in our Medical segment, to new diagnostic capabilities for the BD MAX™ platform and continued expansion of our BD Horizon Brilliant™ dyes portfolio in Life Sciences, and improving blood flow through LUTONIX™ AV catheters and Covera™ stent grafts in the Interventional segment, we saw 25 major product launches in FY18. There are even more major launches in the pipeline planned for 2019 that we are equally as excited about. These include a new solution to detect narcotic diversion and help curb the opioid epidemic, a new high-throughput molecular testing platform, a new lab automation solution for clinical flow cytometry, the first drug coated balloon with an indication for treatment below the knee, and the first minimally invasive endovascular fistula creation device. Not only do our associates wake up to embrace the opportunity to bring these life-changing innovations to market, but this also creates a new day for healthcare providers, researchers and patients.

Innovation doesn't only result in new products and solutions. We are innovating new ways to create a more sustainable company. In FY18, BD participated in the Chemical Footprint Project to provide transparency around our chemicals management strategy, and work across the value chain to minimize environmental impact and maintain resilient global operations. The team also celebrated a decade of partnerships with PEPFAR and U.S. CDC through the Labs for Life collaboration that helps address HIV/AIDS and the Global Health Security Agenda by improving diagnostic laboratory capabilities in developing countries. We were proud to continue our innovative program to support some of the most vulnerable patients in the United States by awarding five community health centers a total of $1 million in grant funding, as part of the BD Helping Build Healthy Communities program. We are also accelerating our efforts to combat antimicrobial resistance through prevention, diagnostics and surveillance, while leading a global awareness campaign to recognize the efforts of thousands of antimicrobial resistance fighters across the world. And we are tackling some of the largest challenges in healthcare, such as cybersecurity, through the BD Product Security Partnership program, which emphasizes collaboration across the industry to enhance cybersecurity of medical technology and devices.

Revenue by segment

(billions of dollars)



Values in this exhibit reflect rounded numbers.

The new BD

The new BD is led by a team who embrace each new day. We've strengthened our management team with exceptional leaders from inside and outside of BD. We named new leaders for all three business segments at BD, with Alberto Mas appointed as President of the Medical segment, Patrick Kaltenbach as President of the Life Sciences segment and Simon Campion as President of the Interventional segment. Alberto brings a wealth of BD experience to his role in leading our largest segment. Patrick brings decades of experience in life sciences and has already made a significant impact on these businesses. Simon is a legacy Bard leader with expertise across the Interventional portfolio, most recently serving as President of the Surgery business. Another legacy Bard leader, John DeFord, was named Chief Technology Officer, responsible for all research and development activities for the company, including developing the current and future product portfolio. As part of the company's focus on improving the customer experience, Linda Tharby was named Chief Customer Experience Officer to work across BD on initiatives to simplify the customer experience and make it easier to do business with us. Betty Larson was promoted to Chief Human Resources Officer, a position she also held at Bard, to further elevate talent strategy and leadership competencies at BD. We also promoted Tom Polen to President and Chief Operating Officer, which reflects the leadership role he's played developing and implementing our strategy and vision over the past 18 months. I look forward to continuing to partner closely with Tom as we take BD to the next level and fulfill our potential as the partner of choice for the global healthcare industry.

A new day

While there is much to be proud of in FY18, we face each day as a new opportunity to build on our past and redefine the future of healthcare. We expect to maintain our momentum across our businesses into FY19 and continue our track record of delivering strong financial performance.

With each new day, BD is rising to accept the challenges of the complex global healthcare landscape. We are proud and inspired by our role in the healthcare ecosystem and humbled to serve the caregivers, researchers and other healthcare professionals who serve patients all around the world. They are our motivation to embrace each day as a new opportunity to keep *advancing the world of health.*

Thank you for your continued investment in our company,

Vincent A. Forlenza

Chairman and Chief Executive Officer

Corporate Officers

Vincent A. Forlenza
Chairman and Chief Executive Officer

Thomas E. Polen
President and Chief Operating Officer

Charles R. Bodner
Senior Vice President, Corporate Finance, and Chief Accounting Officer

Pierre A. Boisier
Executive Vice President and Chief Quality Officer

James W. Borzi
Executive Vice President and Chief Integrated Supply Chain Officer

Simon D. Campion
Executive Vice President and President, Interventional Segment

Gary M. Cohen
Executive Vice President, Global Health and President, BD Foundation

Gary M. DeFazio
Senior Vice President, Corporate Secretary and Associate General Counsel

John A. DeFord
Executive Vice President, Chief Technology Officer, Research and Development

John E. Gallagher
Senior Vice President, Treasurer and Chief Financial Officer, Medical Segment

Roland Goette
Executive Vice President and President, EMEA

Patrick K. Kaltenbach
Executive Vice President and President, Life Sciences Segment

Samrat S. Khichi
Executive Vice President and General Counsel

Betty D. Larson
Executive Vice President and Chief Human Resources Officer

James Lim
Executive Vice President and President, Greater Asia

Alberto Mas
Executive Vice President and President, Medical Segment

George J. Parr
Executive Vice President and Chief Marketing Officer

Linda J. Peters
Executive Vice President and Chief Regulatory Officer

Aaron Pettit
Senior Vice President and Chief Ethics and Compliance Officer

Christopher R. Reidy
Executive Vice President, Chief Financial Officer and Chief Administrative Officer

Antoinette F. Segreto
Senior Vice President, Taxes

William R. Sigmund
Executive Vice President and Chief Medical Officer

Linda M. Tharby
Executive Vice President, Customer Experience

Board of Directors

Catherine M. Burzik [3,5,6]
Former President and Chief Executive Officer — Kinetic Concepts, Inc.

R. Andrew Eckert [1,6]
President and Chief Executive Officer—Acelity L.P. Inc.

Vincent A. Forlenza [4]
Chairman and Chief Executive Officer

Claire M. Fraser, PhD [3,5,6]
Director—Institute for Genome Sciences, University of Maryland School of Medicine

Jeffrey W. Henderson [1,2]
Advisory Director — Berkshire Partners LLC

Christopher Jones [2,3,4,5]
Retired Chief Executive Officer—JWT Worldwide

Marshall O. Larsen [2,3,4,5]
Retired Chairman, President and Chief Executive Officer—Goodrich Corporation

Gary A. Mecklenburg [2,3,5]
Retired President and Chief Executive Officer—Northwestern Memorial HealthCare

David F. Melcher [1,2]
Retired President and Chief Executive Officer — Aerospace Industries Association

Willard J. Overlock, Jr. [1,4,6]
Retired Partner—Goldman, Sachs & Company

Claire Pomeroy, MD [3,5,6]
President—The Albert and Mary Lasker Foundation

Rebecca W. Rimel [1,6]
President and Chief Executive Officer—The Pew Charitable Trusts

Timothy M. Ring [5,6]
Former Chairman and Chief Executive Officer — C.R. Bard, Inc.

Bertram L. Scott [1,2,4]
Senior Vice President of Population Health—Novant Health

Committees appointed by the Board of Directors

1. Audit Committee
2. Compensation and Management Development Committee
3. Corporate Governance and Nominating Committee
4. Executive Committee
5. Quality and Regulatory Committee
6. Science, Marketing, Innovation and Technology Committee

*BD would like to thank **Gary Mecklenburg** and **Willard Overlock** for their years of dedicated service as they retire from the Board of Directors in 2019. Their countless contributions have helped shape and grow BD into one of the largest medical technology companies in the world.*

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

Form 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2018
COMMISSION FILE NUMBER 1-4802

BECTON, DICKINSON AND COMPANY

(Exact name of registrant as specified in its charter)

New Jersey	**22-0760120**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
1 Becton Drive **Franklin Lakes, New Jersey** *(Address of principal executive offices)*	**07417-1880** *(Zip code)*

Registrant's telephone number, including area code **(201) 847-6800**

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 $1.00	New York Stock Exchange
Depositary Shares, each representing a 1/20th interest in a share of 6.125% Cumulative Preferred Stock Series A	New York Stock Exchange
0.368% Notes due June 6, 2019	New York Stock Exchange
1.000% Notes due December 15, 2022	New York Stock Exchange
1.900% Notes due December 15, 2026	New York Stock Exchange
1.401% Notes due May 24, 2023	New York Stock Exchange
3.020% Notes due May 24, 2025	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 every Interactive Data File required to be submitted 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 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 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, smaller reporting company, or an emerging growth company. See the definitions of large accelerated filer, accelerated filer, smaller reporting company, and emerging growth company in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☑	Accelerated filer	☐	Non-accelerated filer	☐
Smaller reporting company	☐	Emerging growth company	☐		

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

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

As of March 31, 2018, the aggregate market value of the registrant's outstanding common stock held by non-affiliates of the registrant was approximately $56,903,426,170.

As of October 31, 2018, 268,257,940 shares of the registrant's common stock were outstanding.

Documents Incorporated by Reference Portions of the registrant's Proxy Statement for the Annual Meeting of Shareholders to be held January 22, 2019 are incorporated by reference into Part III hereof.

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PART I

Item 1. *Business.*

General

Becton, Dickinson and Company (also known as “BD”) was incorporated under the laws of the State of New Jersey in November 1906, as successor to a New York business started in 1897. BD’s executive offices are located at 1 Becton Drive, Franklin Lakes, New Jersey 07417-1880, and its telephone number is (201) 847-6800. All references in this Form 10-K to "BD", "the Company", "we", "our" or "us" refer to Becton, Dickinson and Company and its domestic and foreign subsidiaries, unless otherwise indicated by the context.

BD is a global medical technology company engaged in the development, manufacture and sale of a broad range of medical supplies, devices, laboratory equipment and diagnostic products used by healthcare institutions, physicians, life science researchers, clinical laboratories, the pharmaceutical industry and the general public. We provide customer solutions that are focused on improving medication management and patient safety; supporting infection prevention practices; equipping surgical and interventional procedures; improving drug delivery; aiding anesthesiology care; enhancing the diagnosis of infectious diseases and cancers; advancing cellular research and applications; and supporting the management of diabetes.

Business Segments

BD’s operations consist of three worldwide business segments: BD Medical, BD Life Sciences and BD Interventional. As is further described below, BD completed its acquisition of C.R. Bard, Inc. ("Bard") on December 29, 2017, and BD Interventional includes the majority of Bard’s product offerings, along with certain product offerings formerly within BD Medical. Additionally, certain of Bard's product offerings are included within BD Medical as part of the Medication Delivery Solutions unit (formerly Medication and Procedural Solutions). Information with respect to BD’s business segments and the Bard acquisition is included in Note 6 and Note 9, respectively, to the consolidated financial statements contained in Item 8, Financial Statements and Supplementary Data, and is incorporated herein by reference.

BD Medical

BD Medical produces a broad array of medical technologies and devices that are used to help improve healthcare delivery in a wide range of settings. The primary customers served by BD Medical are hospitals and clinics; physicians’ office practices; consumers and retail pharmacies; governmental and nonprofit public health agencies; pharmaceutical companies; and healthcare workers. BD Medical consists of the following

organizational units:

Organizational Unit	*Principal Product Lines*
Medication Delivery Solutions	Peripheral IV catheters (conventional, safety); advanced peripheral catheters (guidewire assisted peripherally inserted venous catheters, midline catheters, port access); central lines (peripherally inserted central catheters); acute dialysis catheters; vascular access technology (ultrasonic imaging); vascular care (lock solutions, prefilled flush syringes, disinfecting caps); vascular preparation (skin antiseptics, dressings, securement); needle-free IV connectors and extensions sets; IV fluids; closed-system drug transfer devices; hazardous drug detection; conventional and safety hypodermic syringes and needles, anesthesia needles (spinal, epidural) and trays; enteral syringes, sharps disposal systems.
Medication Management Solutions	Intravenous medication safety and infusion therapy delivery systems, including infusion pumps and dedicated disposables; medication compounding workflow systems; automated medication dispensing; automated supply management systems; medication inventory optimization and tracking systems; and analytics related to all the above products.
Diabetes Care	Syringes, pen needles and other products related to the injection or infusion of insulin and other drugs used in the treatment of diabetes.
Pharmaceutical Systems	Prefillable drug delivery systems - prefillable syringes, safety, shielding and self-injection systems - provided to pharmaceutical companies for use as containers for injectable pharmaceutical products, which are then placed on the market as drug/device combinations.

BD Life Sciences

BD Life Sciences provides products for the safe collection and transport of diagnostics specimens, and instruments and reagent systems to detect a broad range of infectious diseases, healthcare-associated infections ("HAIs") and cancers. In addition, BD Life Sciences produces research and clinical tools that facilitate the study of cells, and the components of cells, to gain a better understanding of normal and disease processes. That information is used to aid the discovery and development of new drugs and vaccines, and to improve the diagnosis and management of diseases. The primary customers served by BD Life Sciences are hospitals, laboratories and clinics; blood banks; healthcare workers; public health agencies; physicians' office practices; academic and government institutions; and pharmaceutical and biotechnology companies. BD Life Sciences consists of the following organizational units:

Organizational Unit	*Principal Product Lines*
Preanalytical Systems	Integrated systems for specimen collection; and safety-engineered blood collection products and systems.
Diagnostic Systems	Automated blood culturing and tuberculosis culturing systems; molecular testing systems for infectious diseases and women's health; microorganism identification and drug susceptibility systems; liquid-based cytology systems for cervical cancer screening; rapid diagnostic assays; microbiology laboratory automation; and plated media.
Biosciences	Fluorescence-activated cell sorters and analyzers; monoclonal antibodies and kits for performing cell analysis; reagent systems for life science research; bench-side solutions for high-throughput targeted single-cell gene expression and RNA-Seq analysis; molecular indexing and next-generation sequencing sample preparation for genomics research; and clinical oncology, immunological (HIV) and transplantation diagnostic/ monitoring reagents and analyzers.

BD Interventional

BD Interventional provides vascular, urology, oncology and surgical specialty products that are intended, with the exception of the V. Muller™ surgical and laparoscopic instrumentation products, to be used once and then discarded or are either temporarily or permanently implanted. The primary customers served by BD Interventional are hospitals, individual healthcare professionals, extended care facilities, alternate site facilities and directly to patients via our Homecare business. BD Interventional consists of the following organizational units:

Organizational Unit	*Principal Product Lines*
Surgery	Hernia and soft tissue repair, biological grafts, bioresorbable grafts, biosurgery, and other surgical products; BD ChloraPrep™ surgical infection prevention products, thoracic and abdominal drainage products and V. Mueller™ surgical and laparoscopic instrumentation products, which are products previously included within the former Medication and Procedural Solutions unit of BD Medical.
Peripheral Intervention	Percutaneous transluminal angioplasty ("PTA") balloon catheters, peripheral vascular stents, self-expanding and balloon-expandable stent grafts, vascular grafts, drug coated balloons, ports, biopsy, chronic dialysis, feeding, IVC filters, endovascular fistula creation devices and drainage products.
Urology and Critical Care	Urological drainage products, intermittent catheters, urinary and fecal management devices, kidney stone management devices, and Targeted Temperature Management.

Acquisitions

TVA Medical, Inc.

In July 2018, BD acquired TVA Medical, Inc., a company that develops minimally invasive vascular access solutions for patients with chronic kidney disease requiring hemodialysis.

C. R. Bard, Inc.

On December 29, 2017, BD completed the acquisition of Bard to create a medical technology company that is uniquely positioned to improve both the treatment of disease for patients and the process of care for health care providers. Under the terms of the transaction, Bard common shareholders received approximately $222.93 in cash and 0.5077 shares of BD stock per Bard share. BD financed the cash portion of total consideration transferred with available cash, which included net proceeds raised in the third quarter of fiscal year 2017 through registered public offerings of equity securities and debt transactions. Additional information regarding the Bard acquisition is contained in Note 9 to the consolidated financial statements contained in Item 8, Financial Statements and Supplementary Data, which is incorporated herein by reference.

CareFusion Corporation

On March 17, 2015, BD completed the acquisition of CareFusion Corporation ("CareFusion"), a global medical technology company with a comprehensive portfolio of products in the areas of medication management, infection prevention, operating room and procedural effectiveness, and respiratory care. The CareFusion acquisition positioned BD as a global leader in medication management.

Remaining interest in Caesarea Medical Electronics

Upon its acquisition of CareFusion, BD acquired a 40% ownership interest in Caesarea Medical Electronics ("CME"), an Israeli-based global infusion pump systems manufacturer. On April 3, 2017, BD acquired the remaining 60% ownership interest in CME.

Additional information regarding these acquisitions is contained in Note 9 to the consolidated financial statements contained in Item 8., Financial Statements and Supplementary Data, which is incorporated herein by reference.

Divestitures

Advanced Bioprocessing

In October 2018, BD completed the sale of its Advanced Bioprocessing business pursuant to a definitive agreement that was signed in September 2018.

Respiratory Solutions and Vyaire Medical

On October 3, 2016, BD sold a 50.1% controlling financial interest in its Respiratory Solutions business, a component of the Medical segment, to form a venture, Vyaire Medical. BD retained a 49.9% non-controlling interest in the new standalone entity. BD agreed to various contract manufacturing and certain logistical and transition services agreements with the new entity for a period of up to two years after the sale. In April 2018, BD completed the sale of its remaining interest in Vyaire Medical. BD received gross cash proceeds of approximately $435 million and recognized a pre-tax gain on the sale of approximately $303 million.

Additional information regarding these divestitures is contained in Note 10 to the consolidated financial statements contained in Item 8, Financial Statements and Supplementary Data, which is incorporated herein by reference.

International Operations

BD's products are manufactured and sold worldwide. For reporting purposes, we organize our operations outside the United States as follows: Europe, EMA (which includes the Commonwealth of Independent States, the Middle East and Africa); Greater Asia (which includes Japan and Asia Pacific); Latin America (which includes Mexico, Central America, the Caribbean and South America); and Canada. The principal products sold by BD outside the United States are hypodermic needles and syringes; insulin syringes and pen needles; BD Hypak™ brand prefillable syringe systems; infusion therapy products including Alaris™ infusion pumps; pharmacy automation equipment including Pyxis™ systems; devices and services for the treatment of peripheral arterial and venous disease, cancer detection, and end-stage renal disease and maintenance; synthetic and resorbable mesh, biologic implants and fixation systems to complement innovative techniques for inguinal, ventral and other hernia repair procedures; medical devices for urine drainage in the acute care hospital and home care settings; BD Vacutainer™ brand blood collection products; diagnostic systems and laboratory equipment and products; flow cytometry instruments and reagents. BD has manufacturing operations outside the United States in Bosnia and Herzegovina, Brazil, Canada, China, Dominican Republic, France, Germany, Hungary, India, Ireland, Israel, Italy, Japan, Malaysia, Mexico, the Netherlands, Singapore, Spain, and the United Kingdom. Geographic information with respect to BD's operations is included under the heading "Geographic Information" in Note 6 to the consolidated financial statements included in Item 8, Financial Statements and Supplementary Data, and is incorporated herein by reference.

Foreign economic conditions and exchange rate fluctuations have caused the profitability related to foreign revenues to fluctuate more than the profitability related to domestic revenues. BD believes its activities in some countries outside the United States involve greater risk than its domestic business due to the factors cited herein, as well as the economic environment, local commercial and economic policies and political uncertainties. See further discussion of this risk in Item 1A. Risk Factors.

Distribution

BD's products are marketed and distributed in the United States and internationally through independent distribution channels, and directly to hospitals and other healthcare institutions by BD and independent sales representatives. BD uses acute care, non-acute care, laboratory and drug wholesaler distributors to broadly support our overall disposable product demand from our end user customers in the United States. In international markets, products are distributed either directly or through distributors, with the practice varying by country. Order backlog is not material to BD's business inasmuch as orders for BD products generally are received and filled on a current basis, except for items temporarily out of stock. BD's worldwide sales are not generally seasonal, with the exception of certain medical devices in the Medication Delivery Solutions business unit, and flu diagnostic products in the Diagnostic Systems business unit, which relate to seasonal diseases such

as influenza. In order to service its customers, optimize logistics, lower facilities costs and reduce finished goods inventory levels, BD operates consolidated distribution facilities in both the United States and Europe. Orders are normally shipped within a matter of days after receipt.

Raw Materials and Components

BD purchases many different types of raw materials and components, including plastics, glass, metals, textiles, paper products, agricultural products, electronic and mechanical sub-assemblies and various biological, chemical and petrochemical products. BD seeks to ensure continuity of supply by securing multiple options for sourcing. However, there are situations where raw materials and components are only available from one supplier, which are referred to as sole sourced. The use of sole sourced materials and components may be due to sourcing of proprietary and/or patented technology and processes that are intended to provide a unique market differentiation to our product. In other cases, while a raw material or component can be sourced from multiple manufacturers, only one supplier is qualified due to quality assurance, cost or other considerations. In order to provide alternate sources, BD must complete a rigorous qualification process, which most often includes completion of regulatory registration and approval. If clinical trials are not required, this qualification process can take 3-18 months depending on the criticality of the change. When clinical trials are required, this process may lengthen the qualification phase from one to three years. BD continuously assesses its sole sourced raw materials and components, and maintains business continuity plans with its suppliers. BD's continuity plans may include securing secondary supply with alternate suppliers, qualification of alternate manufacturing facilities, maintaining contingency stock, internal development of supply and establishment of technology escrow accounts. While BD works closely with its suppliers, no assurance can be given that these efforts will be successful, and there may be events that cause supply interruption, reduction or termination that adversely impacts BD's ability to manufacture and sell certain products.

Research and Development

BD conducts its research and development ("R&D") activities at its operating units and at BD Technologies in Research Triangle Park, North Carolina. The majority of BD's R&D activities are conducted in North America. Outside North America, BD primarily conducts R&D activities in China, France, India, Ireland and Singapore. BD also collaborates with certain universities, medical centers and other entities on R&D programs and retains individual consultants and partners to support its efforts in specialized fields. BD spent approximately $1,006 million, $774 million and $828 million on research and development during the fiscal years ended September 30, 2018, 2017, and 2016, respectively.

Intellectual Property and Licenses

BD owns significant intellectual property, including patents, patent applications, technology, trade secrets, know-how, copyrights and trademarks in the United States and other countries. BD is also licensed under domestic and foreign patents, patent applications, technology, trade secrets, know-how, copyrights and trademarks owned by others. In the aggregate, these intellectual property assets and licenses are of material importance to BD's business. BD believes, however, that no single patent, technology, trademark, intellectual property asset or license is material in relation to BD's business as a whole, or to any business segment.

Competition

BD operates in the increasingly complex and challenging medical technology marketplace. Technological advances and scientific discoveries have accelerated the pace of change in medical technology, the regulatory environment of medical products is becoming more complex and vigorous, and economic conditions have resulted in a challenging market. Companies of varying sizes compete in the global medical technology field. Some are more specialized than BD with respect to particular markets, and some have greater financial resources than BD. New companies have entered the field, particularly in the areas of molecular diagnostics, safety-engineered devices and in the life sciences, and established companies have diversified their business activities into the medical technology area. Other firms engaged in the distribution of medical technology products have become manufacturers of medical devices and instruments as well. Acquisitions and collaborations by and among companies seeking a competitive advantage also affect the competitive

environment. In addition, the entry into the market of low-cost manufacturers are creating increased pricing pressures. Some competitors have also established manufacturing sites or have contracted with suppliers located in these countries as a means to lower their costs.

BD competes in this evolving marketplace on the basis of many factors, including price, quality, innovation, service, reputation, distribution and promotion. The impact of these factors on BD's competitive position varies among BD's various product offerings. In order to remain competitive in the industries in which it operates, BD continues to make investments in research and development, quality management, quality improvement, product innovation and productivity improvement in support of its core strategies.

Third-Party Reimbursement

Reimbursement remains an important strategic consideration in the development and marketing of medical devices and procedures. Difficulty in obtaining coverage, coding and payment can be a significant barrier to the commercial success of a new product or procedure. The consequences can include slow adoption in the marketplace and inadequate payment levels that can continue for months or even years.

A majority of BD's customers rely on third-party payers, including government programs and private health insurance plans, to reimburse some or all of the cost of the procedures, products and services they provide. These payers in the United States and abroad are increasingly focused on strategies to control spending on healthcare and reward improvements in quality and patient outcomes.

BD is actively engaged in identifying and communicating value propositions of its products for payer, provider, and patient stakeholders, and it employs various efforts and resources to attempt to positively impact coverage, coding and payment pathways. However, BD has no direct control over payer decision-making with respect to coverage and payment levels for BD products. The manner and level of reimbursement in any given case may depend on the site of care, the procedure(s) performed, the final patient diagnosis, the device(s) and/or drug(s) utilized, the available budget, or a combination of these factors, and coverage and payment levels are determined at each payer's discretion. As BD's product offerings are diverse across a variety of healthcare settings, they are affected to varying degrees by the many payment pathways that impact the decisions of healthcare providers regarding which medical products they purchase and the prices they are willing to pay for those products. Therefore, changes in reimbursement levels or methods may either positively or negatively impact sales of BD products in any given country for any given product.

As government programs seek to expand healthcare coverage for their citizens, they have at the same time sought to control costs by limiting the amount of reimbursement they will pay for particular procedures, products or services. Many third-party payers have developed specific payment and delivery mechanisms to support these cost control efforts and to focus on paying for value. These mechanisms include payment reductions, pay for performance measures, quality-based performance payments, restrictive coverage policies, bidding and tender mechanics, studies to compare the effectiveness of therapies and use of technology assessments. These changes, whether the result of legislation, new strategic alliances or market consolidations, have created an increased emphasis on the delivery of more cost-effective and quality-driven healthcare.

For example, as a result of the Patient Protection and Affordable Care Act ("PPACA"), the U.S. is implementing value based payment methodologies and seeking to create alternative payment models such as bundled payments to continue to drive improved value. We see other governments around the world considering similar bundling reform measures, including the development of the Diagnosis Related Group ("DRG") as a payment mechanism to drive toward quality and resource based reimbursement.

Regulation

General

BD's medical technology products and operations are subject to regulation by the U.S. Food and Drug Administration ("FDA") and various other federal and state agencies, as well as by foreign governmental agencies. These agencies enforce laws and regulations that govern the development, testing, manufacturing, labeling, advertising, marketing and distribution, and market surveillance of BD's medical products. The scope of the activities of these agencies, particularly in the Europe, Japan, and Asia Pacific regions in which BD operates, has been increasing.

BD actively maintains FDA/ISO Quality Systems that establish standards for its product design, manufacturing, and distribution processes. Prior to marketing or selling most of its products, BD must secure approval from the FDA and counterpart non-U.S. regulatory agencies. Following the introduction of a product, these agencies engage in periodic reviews and inspections of BD's quality systems, as well as product performance and advertising and promotional materials. These regulatory controls, as well as any changes in FDA policies, can affect the time and cost associated with the development, introduction and continued availability of new products. Where possible, BD anticipates these factors in its product development and planning processes. These agencies possess the authority to take various administrative and legal actions against BD, such as product recalls, product seizures and other civil and criminal sanctions. BD also undertakes voluntary compliance actions, such as voluntary recalls.

BD also is subject to various federal and state laws, and laws outside the United States, concerning healthcare fraud and abuse (including false claims laws and anti-kickback laws), global anti-corruption, transportation, safety and health, and customs and exports. Many of the agencies enforcing these laws have increased their enforcement activities with respect to medical device manufacturers in recent years. This appears to be part of a general trend toward increased regulation and enforcement activity within and outside the United States.

In addition, as part of PPACA, the federal government has enacted the Sunshine Act provisions requiring BD to publicly report gifts and payments made to physicians and teaching hospitals. Failure to comply with these provisions could result in a range of fines, penalties and/or other sanctions.

Consent Decree

Our infusion pump organizational unit is operating under an amended consent decree entered into by CareFusion with the FDA in 2007. CareFusion's consent decree with the FDA related to its Alaris™ SE infusion pumps. In February 2009, CareFusion and the FDA amended the consent decree to include all infusion pumps manufactured by or for CareFusion 303, Inc., the organizational unit that manufactures and sells infusion pumps in the United States. The amended consent decree does not apply to intravenous administration sets and accessories.

While this BD organizational unit remains subject to the amended consent decree, which includes the requirements of the original consent decree, it has made substantial progress in its compliance efforts. However, we cannot predict the outcome of this matter, and the amended consent decree authorizes the FDA, in the event of any violations in the future, to order us to cease manufacturing and distributing infusion pumps, recall products and take other actions. We may be required to pay damages of $15,000 per day per violation if we fail to comply with any provision of the amended consent decree, up to $15 million per year.

We also cannot currently predict whether additional monetary investment will be incurred to resolve this matter or the matter's ultimate impact on our business. We may be obligated to pay more costs in the future because, among other things, the FDA may determine that we are not fully compliant with the amended consent decree and therefore impose penalties under the amended consent decree, and/or we may be subject to future proceedings and litigation relating to the matters addressed in the amended consent decree. As of September 30, 2018, we do not believe that a loss is probable in connection with the amended consent decree, and accordingly, we have no accruals associated with compliance with the amended consent decree.

FDA Warning Letters

In May 2017, the FDA conducted inspections at BD's Preanalytical Systems ("PAS") facility in Franklin Lakes, New Jersey. In July 2017, the FDA issued a Form 483 to BD PAS in connection with these inspections that contained observations of non-conformance relating to quality system regulations and medical device reporting relating to certain of our BD Vacutainer™ EDTA blood collection tubes. On January 11, 2018, BD received a Warning Letter from the FDA, citing certain alleged violations of quality system regulations and of law. The Warning Letter states that, until BD resolves the outstanding issues covered by the Warning Letter, the FDA will not clear or approve any premarket submissions for Class III devices to which the non-conformances are reasonably related or grant requests for certificates to foreign governments. We submitted our response to the Warning Letter on January 31, 2018.

The FDA conducted an inspection of BD's facility located in Franklin, Wisconsin ("BD Franklin site") from May 16, 2018 through August 1, 2018. On August 1, 2018, the FDA issued a Form 483 to the BD Franklin site in connection with these inspections that contained observations of non-conformance relating to quality system regulations relating to certain pre-filled Heparin lock flush syringes and pre-filled 0.9% sodium chloride lock flush syringes. On September 14, 2018, BD received a Warning Letter from the FDA, citing certain alleged violations of quality system regulations and of law. In the Warning Letter, FDA stated that BD's response appears to be adequate, but that several of the actions are still in progress and a follow-up inspection by FDA of the site will be necessary to verify compliance. We submitted our response to the Warning Letter on October 1, 2018.

BD is working closely with the FDA and intends to fully implement corrective actions to address the concerns identified in the Warning Letters. However, BD cannot give any assurances that the FDA will be satisfied with its responses to the Warning Letters or as to the expected date of resolution of matters included in the Warning Letters. While BD does not believe that the issues identified in the Warning Letters will have a material impact on BD's operation, no assurances can be given that the resolution of these matters will not have a material adverse effect on BD's business, results of operations, financial conditions and/or liquidity.

For further discussion of risks relating to the regulations to which we are subject, see Item 1A. Risk Factors.

Employees

As of September 30, 2018, BD had 76,032 employees, of which 28,734 were employed in the U.S. (including Puerto Rico). BD believes that its employee relations are satisfactory.

Available Information

BD maintains a website at www.bd.com. BD also makes available its Annual Reports on Form 10-K, its Quarterly Reports on Form 10-Q, and its Current Reports on Form 8-K (and amendments to those reports) as soon as reasonably practicable after those reports are electronically filed with, or furnished to, the Securities and Exchange Commission ("SEC"). These filings may be obtained and printed free of charge at www.bd.com/investors. In addition, the written charters of the Audit Committee; the Compensation and Management Development Committee; the Corporate Governance and Nominating Committee; the Executive Committee; the Quality and Regulatory Committee; and the Science, Marketing, Innovation and Technology Committee of the Board of Directors, BD's Corporate Governance Principles and its Code of Conduct, are available and may be printed free of charge at BD's website at www.bd.com/investors/corporate_governance/. Printed copies of these materials, this 2018 Annual Report on Form 10-K, and BD's reports and statements filed with, or furnished to, the SEC, may also be obtained, without charge, by contacting the Corporate Secretary, BD, 1 Becton Drive, Franklin Lakes, New Jersey 07417-1880, telephone 201-847-6800. In addition, the SEC maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov.

BD also routinely posts important information for investors on its website at www.bd.com/investors. BD may use this website as a means of disclosing material, non-public information and for complying with its disclosure obligations under Regulation FD adopted by the SEC. Accordingly, investors should monitor the Investor Relations portion of BD's website noted above, in addition to following BD's press releases, SEC filings, and

public conference calls and webcasts. Our website and the information contained therein or connected thereto shall not be deemed to be incorporated into this Annual Report.

Forward-Looking Statements

BD and its representatives may from time-to-time make certain forward-looking statements in publicly-released materials, both written and oral, including statements contained in filings with the SEC and in its reports to shareholders. Additional information regarding BD's forward-looking statements is contained in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations.

Item 1A. *Risk Factors.*

An investment in BD involves a variety of risks and uncertainties. The following describes some of the significant risks that could adversely affect BD's business, financial condition, operating results or cash flows.

Risks Relating to BD

A downturn in global economic conditions could adversely affect our operations.

Deterioration in the global economic environment, particularly in emerging markets and countries with government-sponsored healthcare systems, may cause decreased demand for our products and services and increased competition, which could result in lower sales volume and downward pressure on the prices for our products, longer sales cycles, and slower adoption of new technologies. A weakening of macroeconomic conditions may also adversely affect our suppliers, which could result in interruptions in supply. We have previously experienced delays in collecting government receivables in certain countries in Western Europe due to economic conditions, and we may experience similar delays in the future in these and other countries or regions experiencing financial problems.

The medical technology industry is very competitive.

We are a global company that faces significant competition from a wide range of companies. These include large medical device companies with multiple product lines, some of which may have greater financial and marketing resources than we do, and firms that are more specialized than we are with respect to particular markets or product lines. Non-traditional entrants, such as technology companies, are also entering into the healthcare industry, some of which may have greater financial and marketing resources than we do. We face competition across all our product lines and in each market in which our products are sold on the basis of product features, clinical or economic outcomes, product quality, availability, price, services and other factors. In addition, we face changing customer preferences and requirements, including increased customer demand for more environmentally-friendly products, as well as changes in the ways health care services are delivered (including the transition of more care to non-acute settings).

The medical technology industry is also subject to rapid technological change and discovery and frequent product introductions. The development of new or improved products, processes or technologies by other companies (such as needle-free injection technology) that provide better features, pricing or clinical outcomes or economic value may render our products or proposed products obsolete or less competitive. In some instances, competitors, including pharmaceutical companies, also offer, or are attempting to develop, alternative therapies for disease states that may be delivered without a medical device. The entry into the market of manufacturers located in China and other low-cost manufacturing locations has also created pricing pressure, particularly in developing markets.

The medical technology industry has also experienced a significant amount of consolidation, resulting in companies with greater market presence. Health care systems and other health care companies are also consolidating, resulting in greater purchasing power for these companies. As a result, competition among medical device suppliers to provide goods and services has increased. Group purchasing organizations and integrated health delivery networks have also served to concentrate purchasing decisions for some customers, which has led to downward pricing pressure for medical device suppliers. Further consolidation in the industry

could intensify competition among medical device suppliers and exert additional pressure on the prices of our products.

We are subject to foreign currency exchange risk.

A substantial amount of our revenues are derived from international operations, and we anticipate that a significant portion of our sales will continue to come from outside the U.S. in the future. The revenues we report with respect to our operations outside the United States may be adversely affected by fluctuations in foreign currency exchange rates. A discussion of the financial impact of exchange rate fluctuations and the ways and extent to which we may attempt to address any impact is contained in Item 7., Management's Discussion of Financial Condition and Results of Operations. Any hedging activities we engage in may only offset a portion of the adverse financial impact resulting from unfavorable changes in foreign currency exchange rates. We cannot predict with any certainty changes in foreign currency exchange rates or the degree to which we can mitigate these risks.

Changes in reimbursement practices of third-party payers could affect the demand for our products and the prices at which they are sold.

Our sales depend, in part, on the extent to which healthcare providers and facilities are reimbursed by government authorities, private insurers and other third-party payers for the costs of our products (including Medicare, Medicaid and comparable foreign programs, as well as private payors). The coverage policies and reimbursement levels of third-party payers, which can vary among public and private sources and by country, may affect which products customers purchase and the prices they are willing to pay for those products in a particular jurisdiction. Reimbursement rates can also affect the acceptance rate of new technologies and products. Legislative or administrative reforms to reimbursement systems in the United States or abroad, changes in coverage or reimbursement rates by private payers, or adverse decisions relating to our products by administrators of these systems could significantly reduce reimbursement for procedures using our products or result in denial of reimbursement for those products, which would adversely affect customer demand or the price customers are willing to pay for such products. See "Third-Party Reimbursement" under Item 1. Business.

The reinstatement of the PPACA's medical device tax may adversely affect our results of operations.

The PPACA imposes on medical device manufacturers, such as BD, a 2.3% excise tax on U.S. sales of certain medical devices. While the excise tax has been suspended until the end of 2019, absent further legislative action, it will be reinstated in 2020, which would adversely affect our results of operation.

Cost volatility could adversely affect our operations.

Our results of operations could be negatively impacted by volatility in the cost of raw materials, components, freight and energy that increases the costs of producing and distributing our products. New laws or regulations adopted in response to climate change could also increase energy costs as well as the costs of certain raw materials and components. In particular, we purchase supplies of resins, which are oil-based components used in the manufacture of certain products, and any significant increases in resin costs could adversely impact future operating results. Increases in oil prices can also increase our packaging and transportation costs. We may not be able to offset any increases in these operational costs.

Breaches of our information technology systems could have a material adverse effect on our operations.

We rely on information technology systems to process, transmit, and store electronic information in our day-to-day operations, including sensitive personal information and proprietary or confidential information. In addition, some of our products include information technology that collects data regarding patients and patient therapy on behalf of our customers and some connect to our systems for maintenance purposes. Our information technology systems have been subjected to attack via malicious code execution, and cyber- or phishing- attacks, and we have experienced instances of unauthorized access to our systems in the past and expect to be subject to similar attacks in the future. In addition to our own information, in the course of doing business, we sometimes store information with third parties that could be subject to these types of attacks.

Cyber-attacks could result in our intellectual property and other confidential information being accessed or stolen. Likewise, we could suffer disruption of our operations and other significant negative consequences, including increased costs for security measures or remediation, diversion of management attention, and adverse impact on our relationships with vendors, business partners and customers. Unauthorized tampering, adulteration or interference with our products may also create issues with product functionality that could result in a loss of data, risk to patient safety, and product recalls or field actions. Cyber-attacks could result in unauthorized access to our systems and products which could also result in actions by regulatory bodies or civil litigation. While we will continue to dedicate significant resources to protect against unauthorized access to our systems and work with government authorities to detect and reduce the risk of future cyber incidents, cyber-attacks are becoming more sophisticated, frequent and adaptive. There can be no assurances that our protective measures will prevent future attacks that could have a material adverse impact on our business.

Our future growth is dependent in part upon the development of new products, and there can be no assurance that such products will be developed.

A significant element of our strategy is to increase revenue growth by focusing on innovation and new product development. New product development requires significant investment in research and development, clinical trials and regulatory approvals. The results of our product development efforts may be affected by a number of factors, including our ability to anticipate customer needs, innovate and develop new products and technologies, successfully complete clinical trials, obtain regulatory approvals and reimbursement in the United States and abroad, manufacture products in a cost-effective manner, obtain appropriate intellectual property protection for our products, and gain and maintain market acceptance of our products. In addition, patents attained by others can preclude or delay our commercialization of a product. There can be no assurance that any products now in development or that we may seek to develop in the future will achieve technological feasibility, obtain regulatory approval or gain market acceptance.

We cannot guarantee that any of our strategic acquisitions, investments or alliances will be successful.

We may seek to supplement our internal growth through strategic acquisitions, investments and alliances. Such transactions are inherently risky, and the integration of any newly-acquired business requires significant effort and management attention. The success of any acquisition, investment or alliance may be affected by a number of factors, including our ability to properly assess and value the potential business opportunity or to successfully integrate any business we may acquire into our existing business. There can be no assurance that any past or future transaction will be successful.

The international operations of our business may subject us to certain business risks.

A substantial amount of our sales come from our operations outside the United States, and we intend to continue to pursue growth opportunities in foreign markets, especially in emerging markets. Our foreign operations subject us to certain risks, including, among others, the effects of fluctuations in foreign currency exchange (discussed above), the effects of local economic and political conditions, competition from local companies, trade protectionism and restrictions on the transfer of capital across borders, U.S. relations with the governments of the foreign countries in which we operate, foreign regulatory requirements or changes in such requirements, local product preferences and product requirements, longer payment terms for account receivables than we experience in the U.S., difficulty in establishing, staffing and managing foreign operations, changes to international trade agreements and treaties, changes in tax laws, weakening or loss of the protection of intellectual property rights in some countries, and import or export licensing requirements. The success of our operations outside the United States also depends, in part, on our ability to make necessary infrastructure enhancements to, among other things, our production facilities and sales and distribution networks.

In addition, our international operations are governed by the U.S. Foreign Corrupt Practices Act and similar anti-corruption laws outside the U.S. Global enforcement of anti-corruption laws has increased substantially in recent years, with more enforcement proceedings by U.S. and foreign governmental agencies and the imposition of significant fines and penalties. While we have implemented policies and procedures to enhance compliance with these laws, our international operations, which often involve customer relationships with foreign

governments, create the risk that there may be unauthorized payments or offers of payments made by employees, consultants, sales agents or distributors. Any alleged or actual violations of these laws may subject us to government investigations, significant criminal or civil sanctions and other liabilities, and negatively affect our reputation.

Changes in U.S. policy regarding international trade, including import and export regulation and international trade agreements, could also negatively impact our business. In 2018, the U.S. imposed tariffs on steel and aluminum as well as on goods imported from China and certain other countries, which has resulted in retaliatory tariffs by China and other countries. Additional tariffs imposed by the U.S. on a broader range of imports, or further retaliatory trade measures taken by China or other countries in response, could result in an increase in supply chain costs that we may not be able to offset or otherwise adversely impact our results of operations.

The June 2016 referendum result in the United Kingdom ("UK") to exit the European Union ("EU") (commonly known as "Brexit"), and the subsequent commencement of the official withdrawal process by the UK government in March 2017, has created uncertainties affecting business operations in the UK and the EU. Until the terms of the UK's exit from the EU in March 2019 are determined, including any transition period, it is difficult to predict its impact. It is possible that the withdrawal could, among other things, affect the legal and regulatory environments to which our businesses are subject, impact trade between the UK and the EU and other parties and create economic and political uncertainty in the region.

Reductions in customers' research budgets or government funding may adversely affect our business.

We sell products to researchers at pharmaceutical and biotechnology companies, academic institutions, government laboratories and private foundations. Research and development spending of our customers can fluctuate based on spending priorities and general economic conditions. A number of these customers are also dependent for their funding upon grants from U.S. government agencies, such as the U.S. National Institutes of Health ("NIH") and agencies in other countries. The level of government funding of research and development is unpredictable. For instance, there have been instances where NIH grants have been frozen or otherwise unavailable for extended periods. The availability of governmental research funding may be adversely affected by economic conditions and governmental spending reductions. Any reduction or delay in governmental funding could cause our customers to delay or forego purchases of our products.

A reduction or interruption in the supply of certain raw materials and components would adversely affect our manufacturing operations and related product sales.

We purchase many different types of raw materials and components used in our products. Certain raw materials and components are not available from multiple sources. In addition, for quality assurance, cost-effectiveness and other reasons, certain raw materials and components are purchased from sole suppliers. The price and supply of these materials and components may be impacted or disrupted for reasons beyond our control. While we work with suppliers to ensure continuity of supply, no assurance can be given that these efforts will be successful. In addition, due to regulatory requirements relating to the qualification of suppliers, we may not be able to establish additional or replacement sources on a timely basis or without excessive cost. The termination, reduction or interruption in supply of these raw materials and components could adversely impact our ability to manufacture and sell certain of our products.

Interruption of our manufacturing operations could adversely affect our future revenues and operating income.

We have manufacturing sites all over the world. In some instances, however, the manufacturing of certain of our product lines is concentrated in one or more of our plants. Damage to one or more of these facilities from weather or natural disasters, or issues in our manufacturing process, equipment failure or other factors, could adversely affect our ability to manufacture these products, resulting in lost revenues and damage to our relationships with customers.

We are subject to lawsuits.

We are or have been a defendant in a number of lawsuits, including purported class action lawsuits for alleged antitrust violations, product liability claims (which may involve lawsuits seeking class action status or seeking to establish multi-district litigation proceedings, including claims relating to our hernia repair implant products, surgical continence and pelvic organ prolapse products for women and vena cava filter products), and suits alleging patent infringement. We have also been subject to government subpoenas seeking information with respect to alleged violations of law, including in connection with federal and/or state healthcare programs (such as Medicare or Medicaid) and/or sales and marketing practices (such as the civil investigative demands received by BD and Bard). A more detailed description of the foregoing is contained in Note 5 to the consolidated financial statements included in Item 8. Financial Statements and Supplementary Data. We could be subject to additional lawsuits or governmental investigations in the future. Reserves established for estimated losses with respect to legal proceedings do not represent an exact calculation of our actual liability, but instead represent our estimate of the probable loss at the time the reserve is established. Due to the inherent uncertainty of litigation and our underlying loss reserve estimates, additional reserves may be established from time-to-time. Also, in some instances, we are not able to estimate the amount or range of loss that could result from an unfavorable outcome of the litigation to which we are a party. In view of these uncertainties, we could incur charges materially in excess of any currently established accruals and, to the extent available, excess liability insurance. Any such future charges, individually or in the aggregate, could have a material adverse effect on our results of operations, financial condition and/or liquidity.

With respect to our existing product liability litigation, we believe that some settlements and judgments, as well as legal defense costs, may be covered in whole or in part under our product liability insurance policies with a limited number of insurance companies, or, in some circumstances, indemnification obligations to us from other parties. However, amounts recovered under these arrangements may be less than the stated coverage limits or less than otherwise expected and may not be adequate to cover damages and/or costs. In addition, there is no guarantee that insurers or other parties will pay claims or that coverage or indemnity will be otherwise available. For certain product liability claims or lawsuits, the Company does not maintain or has limited remaining insurance coverage, and we may not be able to obtain additional insurance on acceptable terms or at all that will provide adequate protection against potential liabilities.

We are subject to extensive regulation.

Our operations are global and are affected by complex state, federal and international laws relating to healthcare, environmental protection, antitrust, anti-corruption, marketing, fraud and abuse (including anti-kickback and false claims laws), export control, employment, privacy and other areas. Violations of these laws can result in criminal or civil sanctions, including substantial fines and, in some cases, exclusion from participation in health care programs such as Medicare and Medicaid. Environmental laws, particularly with respect to the emission of greenhouse gases, are also becoming more stringent throughout the world, which may increase our costs of operations or necessitate changes in our manufacturing plants or processes or those of our suppliers, or result in liability to BD. The enactment of additional laws in the future may increase our compliance costs or otherwise adversely impact our operations.

We are also subject to extensive regulation by the FDA pursuant to the Federal Food, Drug and Cosmetic Act, by comparable agencies in foreign countries, and by other regulatory agencies and governing bodies. Most of our products must receive clearance or approval from the FDA or counterpart regulatory agencies in other countries before they can be marketed or sold. The process for obtaining marketing approval or clearance may take a significant period of time and require the expenditure of substantial resources, and these have been increasing due to increased requirements from the FDA for supporting data for submissions. The process may also require changes to our products or result in limitations on the indicated uses of the products. Governmental agencies may also impose new requirements regarding registration, labeling or prohibited materials that may require us to modify or re-register products already on the market or otherwise impact our ability to market our products in those countries. Once clearance or approval has been obtained for a product, there is an obligation to ensure that all applicable FDA and other regulatory requirements continue to be met. Following the introduction of a product, these agencies also periodically review our manufacturing processes and product performance. Our failure to comply with the applicable good manufacturing practices, adverse event reporting, clinical trial and other requirements of these agencies could delay or prevent the production, marketing or sale of our

products and result in fines, delays or suspensions of regulatory clearances, closure of manufacturing sites, seizures or recalls of products and damage to our reputation. More stringent oversight by the FDA and other agencies in recent years has resulted in increased enforcement activity, which increases the compliance risk for us and other companies in our industry.

As a result of the CareFusion acquisition, we are operating under a consent decree with the FDA that was entered into by CareFusion in 2009, that affects our infusion pump business in the United States. We are also currently operating under two warning letters issued by the FDA. For more information regarding the consent decree and warning letters, see "Regulation" under Item 1. Business.

In addition, the European Union ("EU") has adopted the EU Medical Device Regulation (the "EU MDR") and the In Vitro Diagnostic Regulation (the "EU IVDR"), each of which impose stricter requirements for the marketing and sale of medical devices, including in the area of clinical evaluation requirements, quality systems and post-market surveillance. Manufacturers of currently approved medical devices will have until May 2020 to meet the requirements of the EU MDR and until May 2022 to meet the EU IVDR. Complying with the requirements of these regulations will require us to incur significant expenditures. Failure to meet these requirements could adversely impact our business in the EU and other regions that tie their product registrations to the EU requirements.

We are also subject to laws in the U.S. and elsewhere regarding privacy and the protection of personal information. For instance, the EU has also adopted the General Data Protection Regulation ("GDPR"), which will apply to personal data involved in our operations in the EU or products and services that we offer to EU users involving personal data. The GDPR creates a range of new compliance obligations that could require us to change our existing business practices policies, and significantly increases financial penalties for noncompliance.

Defects or quality issues associated with our products could adversely affect the results of our operations.

The design, manufacture and marketing of medical devices involve certain inherent risks. Manufacturing or design defects, component failures, unapproved or improper use of our products, or inadequate disclosure of risks or other information relating to the use of our products can lead to injury or other serious adverse events. These events could lead to recalls or safety alerts relating to our products (either voluntary or as required by the FDA or similar governmental authorities in other countries), and could result, in certain cases, in the removal of a product from the market. A recall could result in significant costs and lost sales and customers, enforcement actions and/or investigations by state and federal governments or other enforcement bodies, as well as negative publicity and damage to our reputation that could reduce future demand for our products. Personal injuries relating to the use of our products can also result in significant product liability claims being brought against us. In some circumstances, such adverse events could also cause delays in regulatory approval of new products or the imposition of post-market approval requirements.

Our operations are dependent in part on patents and other intellectual property assets.

Many of our businesses rely on patent, trademark and other intellectual property assets. These intellectual property assets, in the aggregate, are of material importance to our business. We can lose the protection afforded by these intellectual property assets through patent expirations, legal challenges or governmental action. Patents attained by competitors, particularly as patents on our products expire, may also adversely affect our competitive position. In addition, competitors may seek to invalidate patents on our products or claim that our products infringe upon their intellectual property, which could result in a loss of competitive advantage or the payment of significant legal fees, damage awards and past or future royalties, as well as injunctions against future sales of our products. We also operate in countries that do not protect intellectual property rights to the same extent as in the U.S., which could make it easier for competitors to compete with us in those countries. The loss of a significant portion of our portfolio of intellectual property assets may have an adverse effect on our earnings, financial condition or cash flows.

Natural disasters, war and other events could adversely affect our future revenues and operating income.

Natural disasters (including pandemics), war, terrorism, labor disruptions and international conflicts, and actions taken by the United States and other governments or by our customers or suppliers in response to such events, could cause significant economic disruption and political and social instability in the United States and areas outside of the United States in which we operate. These events could result in decreased demand for our products, adversely affect our manufacturing and distribution capabilities, or increase the costs for or cause interruptions in the supply of materials from our suppliers.

We need to attract and retain key employees to be competitive.

Our ability to compete effectively depends upon our ability to attract and retain executives and other key employees, including people in technical, marketing, sales and research positions. Competition for experienced employees, particularly for persons with specialized skills, can be intense. Our ability to recruit such talent will depend on a number of factors, including compensation and benefits, work location and work environment. If we cannot effectively recruit and retain qualified executives and employees, our business could be adversely affected.

Risks Relating To Our Acquisition of Bard

The integration of the Bard business may be more difficult, costly or time consuming than expected and the anticipated benefits and cost savings of the Bard acquisition may not be realized.

The success of the Bard acquisition, including anticipated benefits and cost savings, will depend, in part, on our ability to successfully combine and integrate our legacy business with the business of Bard. The integration of Bard's business with our existing business is a complex, costly and time-consuming process. It is possible that a number of factors, including, without limitation, the loss of key employees, higher than expected costs, diversion of management attention and resources, the disruption of ongoing businesses or inconsistencies in standards, controls, procedures and policies, could adversely affect our ability to maintain relationships with customers, vendors and employees or to achieve the anticipated benefits and cost savings of the acquisition. If we experience difficulties with the integration process, the anticipated benefits of the Bard acquisition may not be realized fully or at all, or may take longer to realize than expected. These integration matters could have an adverse effect on us for an undetermined period following the acquisition. In addition, the actual cost savings of the Bard acquisition could be less than anticipated.

The future results of the combined company may be adversely impacted if we do not effectively manage our expanded operations.

Following the completion of the Bard acquisition, the size of our business has increased significantly. Our ability to successfully manage this expanded business will depend, in part, upon management's ability to design and implement strategic initiatives that address not only the integration of the two companies, but also the increased scale and scope of the combined business with its associated increased costs and complexity. There can be no assurances that we will be successful or that we will realize the expected operating efficiencies, cost savings and other benefits currently anticipated from the Bard acquisition.

We will incur substantial expenses related to the integration of Bard.

We incurred, and expect to continue to incur, a number of non-recurring costs associated with the Bard integration related to formulating and implementing integration plans, including facilities and systems consolidation costs and employment-related costs. We continue to assess the magnitude of these costs, and additional unanticipated costs may be incurred in the Bard integration. Although we expect that the elimination of duplicative costs, as well as the realization of other efficiencies related to the integration of the businesses, should allow us to offset integration-related costs over time, this net benefit may not be achieved in the near term, or at all.

In connection with the Bard acquisition, we incurred significant additional indebtedness, which could adversely affect us, including by decreasing our business flexibility, and will increase our interest expense.

We have substantially increased our indebtedness in connection with the Bard acquisition through the incurrence of new indebtedness to finance the acquisition and the assumption of Bard's existing indebtedness, in comparison to our indebtedness on a recent historical basis. This could have the effect of, among other things, reducing our flexibility to respond to business challenges and opportunities, and increasing our interest expense.

The amount of cash required to pay interest on our increased indebtedness levels following completion of the Bard acquisition, and thus the demands on our cash resources, are greater than the amount of cash flows required to service our indebtedness prior to the Bard acquisition. The increased levels of indebtedness following completion of the Bard acquisition may also reduce funds available for working capital, capital expenditures, acquisitions, the repayment or refinancing of our indebtedness as it becomes due and other general corporate purposes, and may create competitive disadvantages for us relative to other companies with lower debt levels. In addition, certain of the indebtedness incurred in connection with the Bard acquisition bears interest at variable interest rates. If interest rates increase, variable rate debt will create higher debt service requirements, which could further adversely affect our cash flows. If we do not achieve the expected benefits and cost savings from the Bard acquisition, or if the financial performance as a combined company does not meet current expectations, then our ability to service our indebtedness may be adversely impacted.

In addition, our credit ratings affect the cost and availability of future borrowings and, accordingly, our cost of capital. Our ratings reflect each rating organization's opinion of our financial strength, operating performance and ability to meet our debt obligations. There can be no assurance that we will achieve a particular rating or maintain a particular rating in the future or that we will be able to maintain our current rating. Furthermore, our combined company's credit ratings were lowered following the Bard acquisition, including below "investment grade" by Moody's Investors Service, Inc., which may further increase our future borrowing costs and reduce our access to capital.

Moreover, in the future we may be required to raise substantial additional financing to fund working capital, capital expenditures, the repayment or refinancing of our indebtedness, acquisitions or other general corporate requirements. Our ability to arrange additional financing or refinancing will depend on, among other factors, our financial position and performance, as well as prevailing market conditions and other factors beyond our control. No assurance can be provided that we will be able to obtain additional financing or refinancing on terms acceptable to us or at all.

We may not be able to service all of our indebtedness.

We depend on cash on hand and cash flows from operations to make scheduled debt payments. However, our ability to generate sufficient cash flow from operations of the combined company and to utilize other methods to make scheduled payments will depend on a range of economic, competitive and business factors, many of which are outside of our control. There can be no assurance that these sources will be adequate. If we are unable to service our indebtedness and fund our operations, we will be forced to reduce or delay capital expenditures, seek additional capital, sell assets or refinance our indebtedness. Any such action may not be successful and we may be unable to service our indebtedness and fund our operations, which could have a material adverse effect on our business, financial condition or results of operations.

The agreements that govern the indebtedness incurred in connection with the Bard acquisition impose restrictions that may affect our ability to operate our businesses.

The agreements that govern the indebtedness incurred in connection with the Bard acquisition contain various affirmative and negative covenants that may, subject to certain significant exceptions, restrict the ability of certain of our subsidiaries to incur debt and the ability of us and certain of our subsidiaries to, among other things, have liens on our property, and/or merge or consolidate with any other person or sell or convey certain of our assets to any one person, engage in certain transactions with affiliates and change the nature of our business. In addition, the agreements also require us to comply with certain financial covenants, including financial ratios. Our ability and the ability of our subsidiaries to comply with these provisions may be affected by events beyond our control. Failure to comply with these covenants could result in an event of default, which, if not cured or waived, could accelerate our repayment obligations and could result in a default and acceleration under other

agreements containing cross-default provisions. Under these circumstances, we might not have sufficient funds or other resources to satisfy all of our obligations.

The mandatory convertible preferred stock underlying the depositary shares issued in connection with the financing of the Bard transaction may adversely affect the market price of BD common stock.

The market price of BD common stock is likely to be influenced by the mandatory convertible preferred stock underlying the depositary shares issued in connection with the financing for the Bard transaction. The market price of BD common stock could become more volatile and could be depressed by:

- investors' anticipation of the potential resale in the market of a substantial number of additional shares of BD common stock received upon conversion of the mandatory convertible preferred stock;
- possible sales of BD common stock by investors who view the mandatory convertible preferred stock as a more attractive means of equity participation in BD than owning shares of BD common stock; and
- hedging or arbitrage trading activity that may develop involving the mandatory convertible preferred stock and BD common stock.

Item 1B. *Unresolved Staff Comments.*

None.

Item 2. *Properties.*

BD's executive offices are located in Franklin Lakes, New Jersey. As of October 31, 2018, BD owned or leased 380 facilities throughout the world, comprising approximately 24,658,363 square feet of manufacturing, warehousing, administrative and research facilities. The U.S. facilities, including those in Puerto Rico, comprise approximately 8,619,099 square feet of owned and 4,407,539 square feet of leased space. The international facilities comprise approximately 8,484,223 square feet of owned and 3,147,502 square feet of leased space. Sales offices and distribution centers included in the total square footage are also located throughout the world.

Operations in each of BD's business segments are conducted at both U.S. and international locations. Particularly in the international marketplace, facilities often serve more than one business segment and are used for multiple purposes, such as administrative/sales, manufacturing and/or warehousing/distribution. BD generally seeks to own its manufacturing facilities, although some are leased. The following table summarizes property information by business segment.

Sites	Corporate	BD Life Sciences	BD Medical	BD Interventional	Mixed(a)	Total
Leased	20	21	81	86	83	291
Owned	6	23	31	23	6	89
Total	26	44	112	109	89	380
Square feet	2,281,986	3,958,668	10,946,766	4,651,903	2,819,040	24,658,363

(a) Facilities used by more than one business segment.

BD believes that its facilities are of good construction and in good physical condition, are suitable and adequate for the operations conducted at those facilities, and are, with minor exceptions, fully utilized and operating at normal capacity.

The U.S. facilities are located in Alabama, Arizona, California, Connecticut, Florida, Georgia, Illinois, Indiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Virginia, Washington, D.C., Washington, Wisconsin and Puerto Rico.

The international facilities are as follows:

- *Europe, Middle East, Africa*, which includes facilities in Austria, Belgium, Bosnia and Herzegovina, the Czech Republic, Denmark, England, Finland, France, Germany, Ghana, Greece, Hungary, Ireland, Israel, Italy, Kenya, Luxembourg, Netherlands, Norway, Pakistan, Poland, Portugal, Russia, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Turkey, the United Arab Emirates and Zambia.

- *Greater Asia*, which includes facilities in Australia, Bangladesh, China, India, Indonesia, Japan, Malaysia, New Zealand, the Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam.

- *Latin America*, which includes facilities in Argentina, Brazil, Chile, Colombia, Mexico, Peru and the Dominican Republic.

- *Canada*.

Item 3. ***Legal Proceedings.***

Information with respect to certain legal proceedings is included in Note 5 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data, and is incorporated herein by reference.

Item 4. ***Mine Safety Disclosures.***

Not applicable.

Executive Officers of the Registrant

The following is a list of the executive officers of BD, their ages and all positions and offices held by each of them during the past five years. There is no family relationship between any executive officer or director of BD.

Name	Age	Position
Vincent A. Forlenza.....	65	Chairman since July 2012; Chief Executive Officer since October 2011; and President from January 2009 to April 2017.
Thomas E. Polen	45	Chief Operating Officer since October 2018; President since April 2017; Executive Vice President and President - Medical Segment from October 2014 to April 2017; and Group President from October 2013 to October 2014.
James W. Borzi.....	56	Executive Vice President, Global Operations and Chief Supply Chain Office since October 2017; Senior Vice President, Global Operations from 2015 to October 2017; and Vice President, Global Manufacturing from 2013 to 2015.
Simon D. Campion.....	47	Executive Vice President and President, Interventional Segment since September 2018; Worldwide President, BD Interventional - Surgery from December 2017 to September 2018; President, Davol (now part of our Surgery business), C.R. Bard, Inc. from July 2015 to December 2017; and prior thereto, Vice President and General Manager, Davol.
Roland Goette	56	Executive Vice President and President, EMEA since May 2017; President, Europe from October 2014 to May 2017; and prior thereto, Vice President and General Manager - Medical Surgical Systems, Western Europe.
Patrick K. Kaltenbach .	55	Executive Vice President and President, Life Sciences Segment since May 2018; Senior Vice President and President, Life Sciences and Applied Markets Group, Agilent Technologies, Inc. from November 2014 to April 2018; Vice President and General Manager of Agilent's Life Sciences Products and Solutions organization from January 2014 to November 2014; and prior thereto, Vice President and General Manager of the Life Sciences Products and Solutions organization.
Samrat S. Khichi	51	Executive Vice President and General Counsel since December 2017; Senior Vice President, General Counsel and Corporate Secretary, C.R. Bard, Inc. from July 2014 to December 2017; and prior thereto, Chief Administrative Officer, Senior Vice President, General Counsel and Secretary, Catalent Pharma Solutions, a portfolio company of The Blackstone Group.
Betty D. Larson	42	Executive Vice President, Human Resources, and Chief Human Resources Officer since July 2018; Senior Vice President of Human Resources, Interventional Segment from December 2017 to July 2018; Vice President, Human Resources, C.R. Bard, Inc. from September 2014 to December 2017; and prior thereto, Vice President, Human Resources - Global Medical Products Business, Baxter International.
James Lim	54	Executive Vice President and President, Greater Asia since June 2012.
Alberto Mas.....	57	Executive Vice President and President - Medical Segment since June 2018; Executive Vice President and President - Life Sciences Segment from October 2016 to June 2018; and Worldwide President - Diagnostic Systems from October 2013 to October 2016.
Christopher R. Reidy...	61	Executive Vice President, Chief Financial Officer and Chief Administrative Officer since July 2013.

PART II

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

BD's common stock is listed on the New York Stock Exchange under the symbol "BDX". As of October 31, 2018, there were approximately 14,130 shareholders of record.

Issuer Purchases of Equity Securities

The table below sets forth certain information regarding BD's purchases of its common stock during the fiscal quarter ended September 30, 2018.

Period	Total Number of Shares Purchased(1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet be Purchased Under the Plans or Programs(2)
July 1-31, 2018	1,499	$244.50	—	7,857,742
August 1-31, 2018	535	$247.67	—	7,857,742
September 1-30, 2018	—	—	—	7,857,742
Total	2,034	$245.33	—	7,857,742

(1) Includes shares purchased during the quarter in open market transactions by the trust relating to BD's Deferred Compensation and Retirement Benefit Restoration Plan and 1996 Directors' Deferral Plan.

(2) Represents shares available under the repurchase program authorized by the Board of Directors on September 24, 2013 for 10 million shares, for which there is no expiration date.

Item 6. ***Selected Financial Data.***

FIVE-YEAR SUMMARY OF SELECTED FINANCIAL DATA
Becton, Dickinson and Company

	Years Ended September 30				
	2018	**2017**	**2016**	**2015**	**2014**
	Dollars in millions, except share and per share amounts				
Operations					
Revenues	$ 15,983	$ 12,093	$ 12,483	$ 10,282	$ 8,446
Gross Profit	7,262	5,942	5,991	4,695	4,301
Operating Income	1,497	1,478	1,430	1,074	1,606
Income Before Income Taxes	1,173	976	1,074	739	1,522
Income Tax Provision (Benefit)	862	(124)	97	44	337
Net Income	311	1,100	976	695	1,185
Basic Earnings Per Share	0.62	4.70	4.59	3.43	6.13
Diluted Earnings Per Share	0.60	4.60	4.49	3.35	5.99
Dividends Per Common Share	3.00	2.92	2.64	2.40	2.18
Financial Position					
Total Assets	53,904	37,734	25,586	26,478	12,384
Total Long-Term Debt	18,894	18,667	10,550	11,370	3,768
Total Shareholders' Equity	20,994	12,948	7,633	7,164	5,053
Additional Data					
Average Common and Common Equivalent Shares Outstanding — Assuming Dilution (millions)	264.6	223.6	217.5	207.5	197.7

The results above include the net expense associated with specified items as detailed below. Additional discussion regarding the specified items in fiscal years 2018, 2017 and 2016 are provided in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

	Years Ended September 30				
Millions of dollars, except per share amounts	**2018**	**2017**	**2016**	**2015**	**2014**
Total specified items	$ 2,409	$ 1,466	$ 1,261	$ 1,186	$ 153
After-tax impact of specified items	$ 2,674	$ 971	$ 892	$ 786	$ 101
Impact of specified items on diluted earnings per share	$ (10.11)	$ (4.34)	$ (4.10)	$ (3.79)	$ (0.51)
Impact of dilution from share issuances	$ (0.30)	$ (0.54)	$ —	$ (0.02)	$ —

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

The following commentary should be read in conjunction with the consolidated financial statements and accompanying notes. Within the tables presented throughout this discussion, certain columns may not add due to the use of rounded numbers for disclosure purposes. Percentages and earnings per share amounts presented are calculated from the underlying amounts. References to years throughout this discussion relate to our fiscal years, which end on September 30.

Company Overview

Description of the Company and Business Segments

Becton, Dickinson and Company ("BD") is a global medical technology company engaged in the development, manufacture and sale of a broad range of medical supplies, devices, laboratory equipment and diagnostic products used by healthcare institutions, physicians, life science researchers, clinical laboratories, the pharmaceutical industry and the general public. The Company's organizational structure is based upon three principal business segments, BD Medical ("Medical"), BD Life Sciences ("Life Sciences") and BD Interventional ("Interventional"), as further discussed below.

BD's products are manufactured and sold worldwide. Our products are marketed in the United States and internationally through independent distribution channels and directly to end-users by BD and independent sales representatives. We organize our operations outside the United States as follows: Europe; EMA (which includes the Commonwealth of Independent States, the Middle East and Africa); Greater Asia (which includes Japan and Asia Pacific); Latin America (which includes Mexico, Central America, the Caribbean, and South America); and Canada. We continue to pursue growth opportunities in emerging markets, which include the following geographic regions: Eastern Europe, the Middle East, Africa, Latin America and certain countries within Asia Pacific. We are primarily focused on certain countries whose healthcare systems are expanding.

Strategic Objectives

BD remains focused on delivering sustainable growth and shareholder value, while making appropriate investments for the future. BD management operates the business consistent with the following core strategies:

- To increase revenue growth by focusing on our core products, services and solutions that deliver greater benefits to patients, healthcare workers and researchers;
- To supplement our internal growth through strategic acquisitions;
- To continue investment in research and development for platform extensions and innovative new products;
- To make investments in growing our operations in emerging markets;
- To improve operating effectiveness and balance sheet productivity;
- To drive an efficient capital structure and strong shareholder returns.

Our strategy focuses on four specific areas within healthcare and life sciences:

- Enabling safer, simpler and more effective parenteral drug delivery;
- Improving clinical outcomes through new, more accurate and faster diagnostics;
- Providing tools and technologies to the research community that facilitate the understanding of the cell, cellular diagnostics, cell therapy and immunology;
- Enhancing disease management in diabetes, women's health and cancer, infectious disease and other targeted conditions.

We continue to strive to improve the efficiency of our capital structure and follow these guiding principles:

- To operate the Company consistent with an investment grade credit profile;
- To ensure access to the debt market for strategic opportunities;
- To optimize the cost of capital based on market conditions.

In assessing the outcomes of these strategies as well as BD's financial condition and operating performance, management generally reviews quarterly forecast data, monthly actual results, segment sales and other similar information. We also consider trends related to certain key financial data, including gross profit margin, selling and administrative expense, investment in research and development, return on invested capital, and cash flows.

Acquisition of C.R. Bard, Inc.

On December 29, 2017, BD completed its acquisition of C. R. Bard, Inc. ("Bard") for total consideration transferred, including cash and stock, of approximately $25 billion. The combination created a medical technology company that is uniquely positioned to improve both the treatment of disease for patients and the process of care for health care providers. The operating activities of the acquired businesses were included in our consolidated results of operations beginning on January 1, 2018. BD reports the results associated with the majority of Bard's product offerings within the Interventional segment. Bard's remaining product offerings are reported under the Medical segment. For further discussions regarding the reporting of Bard products within BD's segments and the Bard acquisition, refer to Notes 6 and 9, respectively, to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

Impact of Tax Reform Act

On December 22, 2017, new U.S. tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Act") was enacted. The new tax legislation, which became effective January 1, 2018, reduces the U.S. federal corporate tax rate from 35% to 21%, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and creates new taxes on certain foreign-sourced earnings. Based upon our determinations regarding the tax effects of the Act, we recognized additional tax expense in 2018 of $640 million, which is reflected in our consolidated statement of income within *Income tax provision (benefit)*. Additional disclosures regarding our accounting for the Act are provided in Note 16 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

Summary of Financial Results

Worldwide revenues in 2018 of $15.983 billion increased 32.2% from the prior-year period. The increase reflected an impact of almost 24.5% resulting from the acquisition of Bard. Revenue growth in 2018 also reflected volume growth of over 5.5%, a favorable impact from foreign currency translation of approximately 2.3% and an unfavorable impact of price of approximately 0.3%. Volume growth in 2018 attributable to the Medical and Life Sciences segments was as follows:

- Medical segment volume growth in 2018 was driven by sales growth in all of the segment's units, particularly by growth in the Medication Delivery Solutions and Medication Management Solutions units.
- Life Sciences segment volume growth in 2018 was driven by sales growth in all three of its organizational units, particularly in its Diagnostic Systems unit.

We continue to invest in research and development, geographic expansion, and new product market programs to drive further revenue and profit growth. Our ability to sustain our long-term growth will depend on a number of factors, including our ability to expand our core business (including geographical expansion), develop innovative new products, and continue to improve operating efficiency and organizational effectiveness. While the economic environment for the healthcare industry and healthcare utilization in the United States is generally stable, destabilization in the future could adversely impact our businesses. Additionally, macroeconomic challenges in Europe continue to constrain healthcare utilization, although we currently view the environment as stable. In emerging markets, the Company's growth is dependent primarily on government funding for healthcare systems. In addition, pricing pressure exists globally which could adversely impact our businesses.

Our financial position remains strong, with cash flows from operating activities totaling $2.865 billion in 2018. At September 30, 2018, we had $1.3 billion in cash and equivalents and short-term investments, including

restricted cash. We continued to return value to our shareholders in the form of dividends. During fiscal year 2018, we paid cash dividends of $927 million.

Each reporting period, we face currency exposure that arises from translating the results of our worldwide operations to the U.S. dollar at exchange rates that fluctuate from the beginning of such period. A weaker U.S. dollar in 2018, compared with 2017, resulted in a favorable foreign currency translation impact to our revenue and earnings during 2018. We evaluate our results of operations on both a reported and a foreign currency-neutral basis, which excludes the impact of fluctuations in foreign currency exchange rates. As exchange rates are an important factor in understanding period-to-period comparisons, we believe the presentation of results on a foreign currency-neutral basis in addition to reported results helps improve investors' ability to understand our operating results and evaluate our performance in comparison to prior periods. Foreign currency-neutral ("FXN") information compares results between periods as if exchange rates had remained constant period-over-period. We use results on a foreign currency-neutral basis as one measure to evaluate our performance. We calculate foreign currency-neutral percentages by converting our current-period local currency financial results using the prior-period foreign currency exchange rates and comparing these adjusted amounts to our current-period results. These results should be considered in addition to, not as a substitute for, results reported in accordance with U.S. generally accepted accounting principles ("GAAP"). Results on a foreign currency-neutral basis, as we present them, may not be comparable to similarly titled measures used by other companies and are not measures of performance presented in accordance with U.S. GAAP.

Results of Operations

Medical Segment

The following summarizes Medical revenues by organizational unit:

				2018 vs. 2017			2017 vs. 2016		
(Millions of dollars)	2018	2017	2016	Total Change	Estimated FX Impact	FXN Change	Total Change	Estimated FX Impact	FXN Change
Medication Delivery Solutions (a)	$3,644	$2,812	$2,724	29.6%	1.9%	27.7%	3.2 %	(0.8)%	4.0 %
Medication Management Solutions	2,470	2,295	2,197	7.7%	1.1%	6.6%	4.4 %	(0.5)%	4.9 %
Diabetes Care	1,105	1,056	1,023	4.6%	1.7%	2.9%	3.3 %	(0.3)%	3.6 %
Pharmaceutical Systems	1,397	1,256	1,199	11.2%	4.8%	6.4%	4.8 %	(0.5)%	5.3 %
Respiratory Solutions	—	—	822	NM	NM	NM	NM	NM	NM
Total Medical revenues	$8,616	$7,419	$7,965	16.1%	2.1%	14.0%	(6.8)%	(0.5)%	(6.3)%

"NM" denotes that the percentage is not meaningful.

(a) The presentation of prior-period amounts reflects a reclassification of $685 million and $689 million in 2017 and 2016, respectively, of certain product revenues from the Medical segment to the Interventional segment as further discussed in discussed in Note 6 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

Medical segment growth in 2018 was favorably impacted by the inclusion of revenues associated with certain Bard products within the Medication Delivery Solutions unit, beginning on January 1, 2018. The Medical segment's underlying revenue growth was largely driven by sales of the Medication Delivery Solutions unit's vascular access and vascular care products as well as by the Medication Management Solutions unit's

installations of dispensing and infusion systems. Revenue growth in the Medication Management Solutions unit was partially offset by the unfavorable impact, in the first half of 2018, of a modification to dispensing equipment lease contracts with customers, which took place in April 2017. As a result of the lease modification, substantially all new lease contracts are accounted for as operating leases with revenue recognized over the agreement term, rather than upon the placement of capital. The Medical segment's underlying growth also reflected sales of the Pharmaceutical Systems unit's prefillable products and the Diabetes Care unit's pen needles.

Medical segment revenue growth in 2017 was driven by the Medication Delivery Solutions unit's sales of infusion disposables products, particularly in international markets, and the Pharmaceutical Systems unit's sales of self-injection systems. Revenue growth in 2017 also reflected the Diabetes Care unit's increased sales of pen needles in the United States and emerging markets. International growth in the Diabetes Care unit was impacted by weaker revenues in Europe, primarily in the United Kingdom, due to increasing pressure from government payers as part of austerity measures. Medical segment revenues in 2017 were unfavorably impacted by the divestiture of the Respiratory Solutions business and the modification to dispensing equipment lease contracts in the Medication Management Solutions unit, as discussed above. In 2017, revenues in the Medication Management Solutions unit included $151 million of revenues relating to amended preexisting lease contracts.

Medical segment operating income was as follows:

(Millions of dollars)	**2018**	**2017**	**2016**
Medical segment operating income (a) (b)	$ 2,624	$ 1,907	$ 1,807
Segment operating income as % of Medical revenues	*30.5%*	*25.7%*	*22.7%*

(a) Operating income in 2018 excluded certain general and administrative costs, which were allocated to the segment in 2017 and 2016, due to a change in our management reporting approach, as is further discussed in Note 6 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

(b) The presentation of prior-period amounts reflects reclassifications of $248 million and $245 million in 2017 and 2016, respectively, relating to the movement of certain product offerings from the Medical segment to the Interventional segment as noted above.

The Medical segment's operating income was driven by its performance with respect to gross profit margin and operating expenses as discussed in greater detail below:

- The Medical segment's gross profit margin in 2018 was lower as compared with 2017 primarily due to the expense related to amortization of intangible assets acquired in the Bard transaction and the expense related to the recognition of a fair value step-up adjustment relating to Bard's inventory on the acquisition date. The Medical segment's gross profit margin in 2018 was also unfavorably impacted by charges to write down the value of fixed assets, primarily in the Diabetes Care unit, higher raw material costs and pricing pressures. These unfavorable impacts to the Medical segment's gross margin were partially offset by lower manufacturing costs resulting from continuous improvement projects which enhanced the efficiency of our operations and favorable product mix impact relating to the Bard products reported within the segment. The Medical segment's gross profit margin in 2017 was higher as compared with 2016 primarily due to the divestiture of the Respiratory Solutions business, which had products with relatively lower gross profit margins. Gross profit margin in 2017 also reflected lower manufacturing costs resulting from continuous improvement projects.

- Selling and administrative expense as a percentage of revenues in 2018 was lower compared with 2017 which primarily reflected a reduction in the general and administrative costs allocated to the segment, as noted above. Selling and administrative expense as a percentage of revenues in 2017 was lower compared

with 2016, primarily due to the divestiture of the Respiratory Solutions business, as this business generally had a lower operating margin.

- Research and development expense as a percentage of revenues was higher in 2018 which reflected increased investment in new products and platforms. Research and development expense as a percentage of revenues in 2017 reflected ongoing investment in new products and platforms, but was lower compared with 2016 as expense in 2016 included a one-time payment relating to one of the segment's ongoing projects.

Life Sciences Segment

The following summarizes Life Sciences revenues by organizational unit:

				2018 vs. 2017			2017 vs. 2016		
(Millions of dollars)	**2018**	**2017**	**2016**	**Total Change**	**Estimated FX Impact**	**FXN Change**	**Total Change**	**Estimated FX Impact**	**FXN Change**
Preanalytical Systems	$1,553	$1,471	$1,409	5.5%	1.4%	4.1%	4.4%	(0.8)%	5.2%
Diagnostic Systems	1,536	1,378	1,301	11.5%	1.9%	9.6%	5.9%	(0.5)%	6.4%
Biosciences	1,241	1,139	1,119	9.0%	2.2%	6.8%	1.8%	(0.6)%	2.4%
Total Life Sciences revenues	$4,330	$3,988	$3,829	8.6%	1.8%	6.8%	4.2%	(0.6)%	4.8%

The Life Sciences segment's revenue growth in 2018 was driven by growth across all three of its organizational units. The Diagnostic Systems unit's revenues were primarily driven by sales of core microbiology products as well as continued strength in sales of the unit's *BD MAX*™ molecular platform. Revenue growth in the Diagnostic Systems unit also reflected a more severe influenza season in 2018 compared with 2017. The Life Sciences segment's 2018 revenue growth was also driven by the Biosciences unit's sales of research reagents and recently launched instruments. Growth in the Preanalytical Systems unit reflected global sales of core products.

The Life Sciences segment's 2017 revenues reflected growth in global sales of the Preanalytical Systems unit's core products and growth in sales of the Diagnostics Systems unit's microbiology and molecular platforms, particularly in emerging markets. The segment's 2017 revenue growth was also driven by increased Biosciences unit sales, particularly in developed markets.

Life Sciences segment operating income was as follows:

(Millions of dollars)	**2018**	**2017**	**2016**
Life Sciences segment operating income (a)	$ 1,207	$ 772	$ 793
Segment operating income as % of Life Sciences revenues	*27.9%*	*19.4%*	*20.7%*

(a) Operating income in 2018 excluded certain general and administrative costs, which were allocated to the segment in 2017 and 2016, due to a change in our management reporting approach, as noted above.

The Life Sciences segment's operating income was driven by its performance with respect to gross profit margin and operating expenses as discussed in greater detail below:

- The Life Sciences segment's gross profit margin as a percentage of revenues was higher in fiscal year 2018 primarily due to lower manufacturing costs resulting from continuous improvement projects, which enhanced the efficiency of our operations, and favorable foreign currency translation. These favorable impacts to the Life Sciences segment's gross margin were partially offset by expense related to the Biosciences unit's write-down of certain intangible and other assets, as well as higher raw

material costs. The Life Sciences segment's gross profit margin as a percentage of revenues was lower in fiscal year 2017 primarily due to unfavorable foreign currency translation, higher raw material costs and unfavorable product mix, partially offset by lower manufacturing costs resulting from operations improvement projects.

- Selling and administrative expense as a percentage of Life Sciences revenues in 2018 was lower compared to 2017 primarily due to a reduction in the general and administrative costs allocated to the segment, as noted above. Selling and administrative expense as a percentage of Life Sciences revenues in 2017 was higher compared to 2016 primarily due to slightly higher administrative costs.
- Research and development expense as a percentage of revenues in 2018 was higher compared with 2017 primarily due to write-downs in the Biosciences unit, as noted above. Research and development expense as a percentage of revenues in 2017 was relatively flat compared with 2016.

Interventional Segment

The following summarizes Interventional revenues by organizational unit:

				2018 vs. 2017	2017 vs. 2016
(Millions of dollars)	**2018**	**2017**	**2016**	**Total Change**	**Total Change**
Surgery (a)	$1,192	$ 666	$ 670	NM	NM
Peripheral Intervention (a)	1,045	19	20	NM	NM
Urology and Critical Care	800	—	—	NM	NM
Total Interventional revenues	$3,037	$ 685	$ 689	NM	NM

"NM" denotes that the percentage is not meaningful.

(a) The presentation of prior-period amounts reflects reclassifications of $685 million and $689 million in 2017 and 2016, respectively, of certain product revenues from the Medical segment to the Interventional segment as noted above.

Interventional segment operating income was as follows:

(Millions of dollars)	**2018**	**2017**	**2016**
Interventional segment operating income (a)	$ 306	$ 248	$ 245
Segment operating income as % of Interventional revenues	*10.1%*	*NM*	*NM*

(a) The presentation of prior-period amounts reflects reclassifications of $248 million and $245 million in 2017 and 2016, respectively, relating to the movement of certain product offerings from the Medical segment to the Interventional segment as noted above.

The Interventional segment's operating income was driven by its performance with respect to gross profit margin and operating expenses. The Interventional segment's operating income in 2018 reflected expense related to the recognition of a fair value step-up adjustment relating to Bard's inventory on the acquisition date. The fair value adjustment was a required non-cash adjustment to the value of acquired inventory and was expensed over a four-month period, consistent with an estimate of the period of time to sell the acquired inventory.

Geographic Revenues

BD's worldwide revenues by geography were as follows:

				2018 vs. 2017			2017 vs. 2016		
(Millions of dollars)	2018	2017	2016	Total Change	Estimated FX Impact	FXN Change	Total Change	Estimated FX Impact	FXN Change
United States	$ 8,768	$ 6,504	$ 6,893	34.8%	—	34.8%	(5.6)%	—	(5.6)%
International	7,215	5,589	5,590	29.1%	4.8%	24.3%	— %	(1.2)%	1.2 %
Total revenues	$15,983	$12,093	$12,483	32.2%	2.3%	29.9%	(3.1)%	(0.5)%	(2.6)%

U.S. revenues in 2018 benefited from the inclusion of revenues associated with Bard products in our financial results beginning on January 1, 2018. Underlying 2018 revenue growth in the United States was driven by revenues in the Medical segment's Medication Delivery Solutions and Medication Management Solutions units, as well as by revenues in the Life Sciences segment's Diagnostic Systems unit.

U.S. revenues in 2017 were unfavorably impacted by the Medical segment's divestiture of the Respiratory Solutions business and the modification to dispensing equipment lease contracts with customers in the Medical segment's Medication Management Solutions unit, as previously discussed. These impacts to U.S. revenues in 2017 were partially offset by growth in sales in the Medical segment's Medication Management Solutions and Diabetes Care units, as well as in all of the Life Sciences segment's units.

International revenues in 2018 benefited from the inclusion of revenues associated with Bard products in our financial results. International 2018 revenues also reflected increased sales in the Medical segment's Medication Delivery Solutions, Medication Management Solutions and Pharmaceutical Systems units, as well as growth attributable to sales in all three of the Life Sciences segment's organizational units.

International revenue growth in 2017 were driven by sales in the Medical segment's Medication Delivery Solutions, Medication Management Solutions and Pharmaceutical Systems units, as well as by sales in the Life Sciences segment's Preanalytical Systems and Diagnostic Systems units. International revenue growth in 2017 was partially offset by the impact of the Medical segment's divestiture of the Respiratory Solutions business.

Emerging market revenues were $2.53 billion, $1.95 billion and $1.9 billion in 2018, 2017 and 2016, respectively. Foreign currency translation favorably impacted emerging market revenues in 2018 by an estimated $19 million and unfavorably impacted emerging market revenues in 2017 by an estimated $29 million. Emerging market revenue growth in 2018 benefited from the inclusion of revenues associated with Bard products in our financial results. Underlying growth was particularly driven by sales in China and EMA. Emerging market revenue growth in 2017 was driven by sales in Greater Asia, including China, and Latin America. Emerging market revenues in 2016 related to divested businesses, primarily the Respiratory Solutions business, were approximately $105 million.

Specified Items

Reflected in the financial results for 2018, 2017 and 2016 were the following specified items:

(Millions of dollars)	2018	2017	2016
Integration costs [(a)]	$ 344	$ 237	$ 192
Restructuring costs [(a)]	344	85	526
Transaction costs [(a)]	56	39	10
Financing costs [(b)]	49	131	—
Purchase accounting adjustments [(c)]	1,733	491	527
Losses on debt extinguishment [(d)]	16	73	—
Net impact of gain on sale of investment and asset impairments [(e)]	(151)	—	—
Hurricane recovery costs	17	—	—
Lease contract modification-related charge [(f)]	—	748	—
Litigation-related items [(g)]	—	(337)	—
Pension settlement charges	—	—	6
Total specified items	2,409	1,466	1,261
Less: Impact of tax reform and tax impact of specified items [(h)]	(265)	495	369
After-tax impact of specified items	$ 2,674	$ 971	$ 892

(a) Represents integration, restructuring and transaction costs, recorded in *Acquisitions and other restructurings*, which are further discussed below.

(b) Represents financing impacts associated with the Bard acquisition, which were recorded in *Interest income* and *Interest expense*.

(c) Primarily represents non-cash amortization expense associated with acquisition-related identifiable intangible assets. BD's amortization expense is primarily recorded in *Cost of products sold*. The amount 2018 also included a fair value step-up adjustments of $478 million relating to Bard's inventory on the acquisition date.

(d) Represents losses recognized in *Other income (expense), net* upon our extinguishment of certain long-term senior notes.

(e) Represents the net amount recognized in *Other income (expense), net* related to BD's sale of its non-controlling interest in Vyaire Medical, including a gain of $303 million recognized on the sale as further discussed below, partially offset by $81 million of charges recorded to write down the carrying value of certain intangible and other assets in the Biosciences unit as well as $58 million of charges to write down the value of fixed assets primarily in the Diabetes Care unit.

(f) Represents a non-cash charge in 2017, which was recorded in *Other operating expense*, *net* resulting from a modification to our dispensing equipment lease contracts with customers, as previously discussed.

(g) The amount in 2017 largely represents the reversal of certain reserves related to an appellate court decision recorded related to RTI in *Other operating expense, net*.

(h) The amount in 2018 includes additional tax expense, net, of $640 million relating to new U.S. tax legislation, as discussed above.

Gross Profit Margin

The comparison of gross profit margins in 2018 and 2017 and the comparison of gross profit margins in 2017 and 2016 reflected the following impacts:

	2018	2017
Gross profit margin % prior-year period	49.1 %	48.0 %
Impact of purchase accounting adjustments, asset write-downs and other specified items	(6.9)%	— %
Impact of divestitures	— %	0.8 %
Operating performance	2.8 %	0.7 %
Foreign currency translation	0.4 %	(0.4)%
Gross profit margin % current-year period	45.4 %	49.1 %

Further discussion regarding write-downs of certain intangible and other assets in the Biosciences unit and write-downs of fixed assets in the Diabetes Care unit is provided above. The operating performance impacts in 2018 and 2017 reflected lower manufacturing costs resulting from the continuous operations improvement projects discussed above. Operating performance in 2018 also reflected the favorable impact of Bard on product mix and the unfavorable impacts of higher raw material costs and pricing pressures. Gross profit margin in 2017 was favorably impacted by businesses divestitures, primarily the divestiture of the Respiratory Solutions business which had products with relatively lower gross profit margins.

Operating Expenses

Operating expenses in 2018, 2017 and 2016 were as follows:

				Increase (decrease) in basis points	
(Millions of dollars)	2018	2017	2016	2018 vs. 2017	2017 vs. 2016
Selling and administrative expense	$ 4,015	$ 2,925	$3,005		
% of revenues	*25.1%*	*24.2%*	*24.1%*	*90*	*10*
Research and development expense	$ 1,006	$ 774	$ 828		
% of revenues	*6.3%*	*6.4%*	*6.6%*	*(10)*	*(20)*
Acquisitions and other restructurings	$ 744	$ 354	$ 728		
Other operating expense, net	$ —	$ 410	$ —		

Selling and administrative

The increase in selling and administrative expense as a percentage of revenues in 2018 compared with 2017 was primarily attributable to the inclusion of Bard, which had a higher selling and administrative spending profile, in 2018 results. Selling and administrative expense as a percentage of revenues in 2017 was relatively flat compared with 2016.

Research and development

Research and development expense as a percentage of revenues in 2018 was relatively flat compared with 2017. Spending in 2018, 2017 and 2016 reflected our continued commitment to invest in new products and platforms. Spending in 2018 also included certain write-down charges in the Biosciences unit, as further discussed above. Research and development expense as a percentage of revenues was slightly lower in 2017 compared to expense in 2016, which reflected increased investment in 2016 in high growth opportunities.

Acquisitions and other restructurings

Costs relating to acquisitions and other restructurings in 2018 included restructuring costs incurred due to our acquisition of Bard, and to a lesser extent, restructuring costs related to our fiscal year 2015 acquisition of CareFusion and other portfolio rationalization initiatives. Integration costs incurred in 2018 were attributable to both the Bard and CareFusion acquisitions. Transaction costs were incurred in 2018 and 2017 primarily due to our acquisition of Bard. Substantially all of the integration and restructuring costs in 2017 and 2016 were attributable to the CareFusion acquisition and other portfolio rationalization initiatives. Restructuring costs in 2016 included a $214 million charge recorded to impair capitalized internal-use software assets held for sale as a result of information technology function transformation efforts. For further disclosures regarding the costs relating to acquisitions and other restructurings, refer to Notes 7, 9, 10 and 11 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

Other operating (income) expense, net

Other operating expense in 2017 included the $748 million non-cash charge resulting from the modification to our dispensing equipment lease contracts with customers. Additional disclosures regarding this lease contract modification are provided in Note 17 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data. Other operating income in 2017 included a $337 million reversal of certain reserves related to an appellate court decision which, among other things, reversed an unfavorable antitrust judgment in the RTI case. Additional disclosures regarding this legal matter are provided in Note 5 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

Net Interest Expense

(Millions of dollars)	2018	2017	2016
Interest expense	$ (706)	$ (521)	$ (388)
Interest income	65	76	21
Net interest expense	$ (641)	$ (445)	$ (367)

The increase in interest expense in 2018 compared with 2017 reflected higher levels of debt for the full-year period due to our issuances of senior unsecured U.S. notes during the third quarter of 2017. The increase in interest expense in 2017 also reflected interest costs related to these issuances of senior unsecured U.S. notes, as well as bridge financing commitment fees of $79 million. Additional disclosures regarding our financing arrangements and debt instruments are provided in Note 15 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

The decrease in interest income in 2018 reflected lower cash levels subsequent to the closing of the Bard acquisition in the first quarter of 2018. The increase in interest income in 2017 compared with 2016 primarily reflected higher levels of cash on hand as a result of our third quarter issuances of debt and equity securities in advance of closing our acquisition of Bard.

Income Taxes

The income tax rates in 2018, 2017 and 2016 were as follows:

	2018	2017	2016
Effective income tax rate	73.5%	(12.7)%	9.1%
Impact, in basis points, from specified items	*5,680*	*(2,790)*	*(1,090)*

The increase in the effective income tax rate in 2018 reflected certain effects of new U.S. tax legislation that was enacted in December 2017. As previously discussed above, we recognized additional tax expense in 2018 of $640 million based upon our determinations regarding the effects of the new legislation. The effective income tax rate in 2018 also reflected a less favorable benefit from specified items in the current-year period. The decrease in the effective income tax rate in 2017 largely reflected the more favorable tax impact from specified items recognized in 2017 compared with 2016, as well as the tax benefits recorded upon the settlement of share-based compensation awards in 2017. The share-based compensation-related tax benefits were recognized in connection with BD's adoption of new accounting requirements relating to the income tax effects of share-based compensation awards. Additional disclosures regarding this adoption are provided in Note 2 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

Net Income and Diluted Earnings per Share

Net Income and Diluted Earnings per Share in 2018, 2017 and 2016 were as follows:

	2018	2017	2016
Net income (Millions of dollars)	$ 311	$ 1,100	$ 976
Diluted Earnings per Share	$ 0.60	$ 4.60	$ 4.49
Unfavorable impact-specified items	$ (10.11)	$ (4.34)	$ (4.10)
Favorable (unfavorable) impact-foreign currency translation	$ 0.32	$ (0.23)	$ (0.64)
Dilutive impact from share issuances	$ (0.30)	$ (0.54)	$ —

The dilutive impacts in 2018 and 2017 include the unfavorable impact of BD shares issued through public offerings of equity securities in the third quarter of fiscal year 2017, in anticipation of the Bard acquisition. The dilutive impact in 2018 additionally includes the unfavorable impact of BD shares issued as consideration transferred in the first quarter of fiscal year 2018 for the Bard acquisition as is further discussed in Note 9 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

Financial Instrument Market Risk

We selectively use financial instruments to manage market risk, primarily foreign currency exchange risk and interest rate risk relating to our ongoing business operations. The counterparties to these contracts are highly rated financial institutions. We do not enter into financial instruments for trading or speculative purposes.

Foreign Exchange Risk

BD and its subsidiaries transact business in various foreign currencies throughout Europe, Greater Asia, Canada and Latin America. We face foreign currency exposure from the effect of fluctuating exchange rates on payables and receivables relating to transactions that are denominated in currencies other than our functional currency. These payables and receivables primarily arise from intercompany transactions. We hedge substantially all such exposures, primarily through the use of forward contracts. We also face currency exposure

that arises from translating the results of our worldwide operations, including sales, to the U.S. dollar at exchange rates that have fluctuated from the beginning of a reporting period. From time to time, we may purchase forward contracts and options to hedge certain forecasted transactions that are denominated in foreign currencies in order to partially protect against a reduction in the value of future earnings resulting from adverse foreign exchange rate movements. Gains or losses on derivative instruments are largely offset by the gains or losses on the underlying hedged transactions. We did not enter into contracts to hedge cash flows against foreign currency fluctuations in fiscal year 2018 or 2017.

Derivative financial instruments are recorded on our balance sheet at fair value. For foreign currency derivatives, market risk is determined by calculating the impact on fair value of an assumed change in foreign exchange rates relative to the U.S. dollar. Fair values were estimated based upon observable inputs, specifically spot currency rates and foreign currency prices for similar assets and liabilities.

With respect to the foreign currency derivative instruments outstanding at September 30, 2018 and 2017, the impact that changes in the U.S. dollar would have on pre-tax earnings was estimated as follows:

	Increase (decrease)	
(Millions of dollars)	2018	2017
10% appreciation in U.S. dollar	$ (59)	$ (38)
10% depreciation in U.S. dollar	$ 59	$ 38

These calculations do not reflect the impact of exchange gains or losses on the underlying transactions that would substantially offset the results of the derivative instruments.

Interest Rate Risk

Our primary interest rate risk relates to U.S. dollar borrowings which are partially offset by U.S. dollar cash investments. When managing interest rate exposures, we strive to achieve an appropriate balance between fixed and floating rate instruments. We may enter into interest rate swaps to help maintain this balance and manage debt and interest-bearing investments in tandem, since these items have an offsetting impact on interest rate exposure. For interest rate derivative instruments, fair values are measured based upon the present value of expected future cash flows using market-based observable inputs including credit risk and interest rate yield curves. Market risk for these instruments is determined by calculating the impact to fair value of an assumed change in interest rates across all maturities.

The impact that changes in interest rates would have on interest rate derivatives outstanding at September 30, 2018 and 2017, as well as the effect that changes in interest rates would have on our earnings or cash flows over a one-year period, based upon our overall interest rate exposure, were estimated as follows:

	Increase (decrease) to fair value of interest rate derivatives outstanding		Increase (decrease) to earnings or cash flows	
(Millions of dollars)	2018	2017	2018	2017
10% increase in interest rates	$ (22)	NM	$ (7)	NM
10% decrease in interest rates	$ 23	NM	$ 7	NM

"NM" denotes that the impact was not meaningful due to immateriality.

Liquidity and Capital Resources

The following table summarizes our consolidated statement of cash flows in 2018, 2017 and 2016:

(Millions of dollars)	2018	2017	2016
Net cash provided by (used for)			
Operating activities	$ 2,865	$ 2,550	$ 2,559
Investing activities	$ (15,829)	$ (883)	$ (669)
Financing activities	$ (58)	$ 10,977	$ (1,761)

Net Cash Flows from Operating Activities

The fiscal year 2018, 2017 and 2016 changes in net cash provided by operating activities was primarily attributable to net income, as adjusted for depreciation and amortization and other non-cash items. The fiscal year 2018 change in operating assets and liabilities was a net source of cash and primarily reflected higher levels of accounts payable and accrued expenses, primarily due to higher income taxes payable as a result of the new U.S. tax legislation discussed above, as well as lower levels of inventory, partially offset by higher levels of trade receivables. The change in cash flows from operating activities in 2018 also reflected a change to deferred tax asset and liability balances which were remeasured under the recently enacted tax legislation, which is further discussed in Note 16 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data. The change in cash flows from operating activities in 2018 additionally reflected a $303 million gain on the sale of our remaining interest in the Vyaire Medical venture, as well as discretionary cash contributions of $287 million to fund our pension obligation. The fiscal year 2017 change in operating assets and liabilities was a net use of cash and primarily reflected higher levels of prepaid expenses, trade receivables and inventory, partially offset by higher levels of accounts payable and accrued expenses. Net cash provided by operating activities in 2017 reflected an adjustment for the non-cash charge resulting from the modification to our dispensing equipment lease contracts with customers, as previously discussed. As noted above, both 2018 and 2017 reflected losses recorded upon our extinguishment of certain long-term notes which are included within *Other, net*. The previously discussed non-cash charge recorded to impair capitalized internal-use software assets held for sale is included within *Other, net* in 2016. Net cash provided by operating activities in 2016 was reduced by changes in the pension obligation resulting primarily from a discretionary cash contribution of $100 million.

Net Cash Flows from Investing Activities

Capital expenditures

Our investments in capital expenditures are focused on projects that enhance our cost structure and manufacturing capabilities, and support our strategy of geographic expansion with select investments in growing markets. Capital expenditures of $895 million, $727 million, $693 million in 2018, 2017 and 2016, respectively, primarily related to manufacturing capacity expansions. Details of spending by segment are contained in Note 6 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

Acquisitions of Businesses

Cash outflows for acquisitions in 2018 primarily related to our acquisition of Bard. Cash outflows for acquisitions in 2017 included payments for acquisitions which were immaterial both individually and in the aggregate. For further discussion, refer to Note 9 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

Divestitures of Businesses

Cash inflows relating to business divestitures in 2018 and 2017 were $534 million and $165 million, respectively. For further discussion, refer to Note 10 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data. Net cash flows from investing activities in 2016 included $158 million of proceeds from the sales of non-core assets.

Net Cash Flows from Financing Activities

Net cash from financing activities in 2018, 2017 and 2016 included the following significant cash flows:

(Millions of dollars)	2018	2017	2016
Cash inflow (outflow)			
Change in credit facility borrowings	$ —	$ (200)	$ (500)
Proceeds from debt and term loans	$ 5,086	$11,462	$ —
Payments of debt and term loans	$(3,996)	$(3,980)	$ (752)
Proceeds from issuances of equity securities	$ —	$ 4,827	$ —
Share repurchases under accelerated share repurchase agreement	$ —	$ (220)	$ —
Dividends paid	$ (927)	$ (677)	$ (562)

Additional disclosures regarding the equity and debt-related financing activities detailed above are provided in Notes 3 and 15 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

Debt-Related Activities

Certain measures relating to our total debt were as follows:

	2018	2017	2016
Total debt (Millions of dollars)	$ 21,496	$ 18,870	$ 11,551
Short-term debt as a percentage of total debt	12.1%	1.1%	8.7%
Weighted average cost of total debt	3.2%	3.3%	3.6%
Total debt as a percentage of total capital (a)	47.8%	57.5%	57.2%

(a) Represents shareholders' equity, net non-current deferred income tax liabilities, and debt.

The increase in short-term debt as a percentage of total debt at September 30, 2018 was primarily driven by the reclassification of certain notes from long-term to short-term. The decrease in short-term debt as a percentage of total debt at September 30, 2017 was largely driven by our issuance of $9.675 billion of senior unsecured U.S. notes during the third quarter of fiscal year 2017. Additional disclosures regarding our debt instruments are provided in Note 15 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

Cash and Short-term Investments

At September 30, 2018, total worldwide cash and short-term investments were $1.253 billion, including restricted cash, which was primarily held in jurisdictions outside of the United States.

Financing Facilities

In May 2017, we entered into a three-year $2.25 billion senior unsecured term loan facility. We used the $2.25 billion of proceeds drawn from this facility in December 2017 to fund a portion of the cash consideration

for the Bard acquisition, as well as the fees and expenses incurred in connection with the acquisition. In September 2018, we entered into a 364-day $750 million senior unsecured term loan facility. We used $230 million of proceeds drawn from this facility in September 2018 to repay all borrowings outstanding under the three-year term loan facility discussed above. Borrowings outstanding under the new, 364-day term loan facility were $710 million at September 30, 2018.

Also in May 2017, we entered into a five-year senior unsecured revolving credit facility which became effective upon the closing of the Bard acquisition and which provides borrowing of up to $2.25 billion. This facility will expire in December 2022 and replaced the $1.5 billion syndicated credit facility we previously had in place with an expiration date of January 2022. We will be able to issue up to $100 million in letters of credit under this new revolving credit facility and it also includes a provision that enables BD, subject to additional commitments made by the lenders, to access up to an additional $500 million in financing through the facility for a maximum aggregate commitment of $2.75 billion. We used proceeds from this facility to redeem or repurchase certain of Bard's outstanding senior unsecured notes that were assumed upon the closing of the acquisition and we will also use proceeds from this facility to fund general corporate needs. There were no borrowings outstanding under the revolving credit facility at September 30, 2018.

The agreements for both the new 364-day term loan and revolving credit facility contained the following financial covenants. We were in compliance with these covenants as of September 30, 2018.

- We are required to maintain an interest expense coverage ratio of not less than 4-to-1 as of the last day of each fiscal quarter.
- We are required to have a leverage coverage ratio, as applicable depending upon commencement and maturity of the facility, of no more than:
    - 6-to-1 from the closing date of the Bard acquisition until and including the first fiscal quarter-end thereafter;
    - 5.75-to-1 for the subsequent four fiscal quarters thereafter;
    - 5.25-to-1 for the subsequent four fiscal quarters thereafter;
    - 4.5-to-1 for the subsequent four fiscal quarters thereafter;
    - 4-to-1 for the subsequent four fiscal quarters thereafter;
    - 3.75-to-1 thereafter.

We also have informal lines of credit outside the United States. The Company had no commercial paper borrowings outstanding as of September 30, 2018. We may, from time to time, sell certain trade receivable assets to third parties as we manage working capital over the normal course of our business activities.

Access to Capital and Credit Ratings

Our corporate credit ratings with the rating agencies Standard & Poor's Ratings Services ("S&P"), Moody's Investor Service (Moody's) and Fitch Ratings ("Fitch") were as follows at September 30, 2018:

	S&P	Moody's	Fitch
Ratings:			
Senior Unsecured Debt	BBB	Ba1	BBB-
Commercial Paper	A-2	NP	
Outlook	Stable	Stable	Stable

Upon our closing the Bard acquisition in the first quarter of fiscal year 2018, S&P lowered our corporate credit rating from the previous rating of BBB+. Also upon the acquisition's closing, Moody's downgraded our corporate credit and commercial paper ratings from the previous ratings of Baa2 and P-2, respectively. The rating assigned to our corporate debt by Fitch was unchanged by the closing of the acquisition.

Lower corporate debt ratings and further downgrades of our corporate credit ratings or other credit ratings may increase our cost of borrowing. We believe that given our debt ratings, our financial management policies, our ability to generate cash flow and the non-cyclical, geographically diversified nature of our businesses, we

would have access to additional short-term and long-term capital should the need arise. A rating reflects only the view of a rating agency and is not a recommendation to buy, sell or hold securities. Ratings can be revised upward or downward at any time by a rating agency if such rating agency decides that circumstances warrant such a change.

Contractual Obligations

In the normal course of business, we enter into contracts and commitments that obligate us to make payments in the future. The table below sets forth BD's significant contractual obligations and related scheduled payments as of September 30, 2018:

	Total	2019	2020 to 2021	2022 to 2023	2024 and Thereafter
			(Millions of dollars)		
Short-term debt	$ 2,644	$ 2,644	$ —	$ —	$ —
Long-term debt (a)	26,163	677	5,075	5,478	14,933
Operating leases	511	107	171	110	124
Purchase obligations (b)	1,046	863	155	28	—
Unrecognized tax benefits (c)	—	—	—	—	—
Total (d)	$ 30,365	$ 4,291	$ 5,401	$ 5,617	$ 15,057

(a) Long-term debt obligations include expected principal and interest obligations.
(b) Purchase obligations are for purchases made in the normal course of business to meet operational and capital requirements.
(c) Unrecognized tax benefits at September 30, 2018 of $543 million were all long-term in nature. Due to the uncertainty related to the timing of the reversal of these tax positions, the related liability has been excluded from the table.
(d) Required funding obligations for 2019 relating to pension and other postretirement benefit plans are not expected to be material.

Critical Accounting Policies

The following discussion supplements the descriptions of our accounting policies contained in Note 1 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data. The preparation of the consolidated financial statements requires management to use estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, as well as the disclosure of contingent assets and liabilities at the date of the consolidated financial statements. Some of those judgments can be subjective and complex and, consequently, actual results could differ from those estimates. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. For any given estimate or assumption made by management, it is possible that other people applying reasonable judgment to the same facts and circumstances could develop different estimates. Actual results that differ from management's estimates could have an unfavorable effect on our consolidated financial statements. Management believes the following critical accounting policies reflect the more significant judgments and estimates used in the preparation of the consolidated financial statements:

Revenue Recognition

While our revenue is generally the result of product sales, some of our sales transactions qualify as multiple-element arrangements which require us to identify separate units of accounting within the arrangement and allocate the transaction consideration across these separate accounting units. For arrangements that include software and non-software elements, the transaction consideration is allocated to the software elements as a group as well as to the individual non-software elements that have been separately identified. The identification

of accounting units and the allocation of total transaction consideration for multiple-element arrangements may be subjective and requires a degree of management judgment. Management's judgments relative to multiple-element arrangements may affect the timing of revenue recognition.

Transaction consideration for separately identified non-software units of accounting within an arrangement is recognized upon the completion of each deliverable based on its relative selling price. When applying the relative selling price method, the selling price of each deliverable is determined based upon the following hierarchy of evidence: vendor-specific objective evidence, which is generally based upon historical prices in stand-alone transactions; third-party evidence, which is generally based on market data on sales of similar products and services, if available; and management's best estimate of selling price. Management's best estimate of selling price is generally based upon the following considerations: stand-alone sales prices, established price lists, costs to produce, profit margins for similar products, market conditions, and customer stratification.

The revenue allocated to equipment or instruments in multiple-element arrangements is recognized upon transfer of title and risk of loss to the customer. The revenue allocated to extended warranty contracts and software maintenance contracts is deferred and recognized as these deliverables are performed under the arrangement. The majority of deferred revenue relating to extended warranty contracts is generally recognized within a few years whereas deferred revenue relating to software maintenance contracts is generally recognized over a longer period.

Accounting for Sales-Type Leases

In April 2017, in conjunction with the implementation of a new go-to-market business model for our dispensing business within our Medication Management Solutions unit, we amended new and existing leases to provide a limited return option. Prior to the amendment these leases were accounted for as sales-type leases in accordance with Accounting Standards Codification 840, Leases, as the typical non-cancellable lease term of 5 years exceeded 75% of the equipment's estimated useful life and the present value of the minimum lease payments exceeded 90% of the equipment's fair value. As sales-type leases, we recognized revenue upon installation of equipment at a customer site based on the present value of the minimum lease payments. As a result of the contract amendment, the amended lease term was shortened and as a result, the majority of leases no longer met the criteria for recognition as sales-type leases. Accordingly, the leases were classified as operating leases as of the modification date and revenue is generally recognized ratably over the lease term.

Accounting for Software Products

We sell and lease products with embedded software and as such, we must evaluate these products to determine if industry-specific revenue recognition requirements apply to these sales transactions. This evaluation process is often complex and subject to significant judgment. If software is considered not essential to the non-software elements of a product but is considered more than incidental to a product as a whole, the product's software elements must be separated from its non-software elements under the requirements relating to multiple-element arrangements. The product's software elements must be accounted for under software industry-specific revenue recognition requirements and the application of these requirements may significantly affect the timing and amount of revenue recognized.

While we have determined that the software embedded in the following product groupings is more than incidental to the products as a whole, the non-software elements (i.e., hardware) and software elements work together to deliver the essential functionality of these products as a whole. As such, the accounting for these product offerings does not fall within the scope of software industry-specific accounting requirements:

- Infusion products (when sold with safety software, patient identification products and certain diagnostic equipment) within our Medication Management Solutions unit;
- Dispensing products within our Medication Management Solutions unit;
- Research and clinical instruments within our Biosciences unit.

Our standalone software application sales and any related post-contract support related to these sales are accounted for under the software industry-specific revenue recognition requirements.

Impairment of Assets

Goodwill and in-process research and development assets are subject to impairment reviews at least annually, or whenever indicators of impairment arise. Intangible assets with finite lives, including developed technology, and other long-lived assets, are periodically reviewed for impairment when impairment indicators are present.

We assess goodwill for impairment at the reporting unit level, which is defined as an operating segment or one level below an operating segment, referred to as a component. Our reporting units generally represent one level below reporting segments. Potential impairment of goodwill is generally identified by comparing the fair value of a reporting unit with its carrying value. Our annual goodwill impairment test performed on July 1, 2018 did not result in any impairment charges, as the fair value of each reporting unit exceeded its carrying value.

We generally use the income approach to derive the fair value for impairment assessments. This approach calculates fair value by estimating future cash flows attributable to the assets and then discounting these cash flows to a present value using a risk-adjusted discount rate. We selected this method because we believe the income approach most appropriately measures our income producing assets. This approach requires significant management judgment with respect to future volume, revenue and expense growth rates, changes in working capital use, appropriate discount rates and other assumptions and estimates. The estimates and assumptions used are consistent with BD's business plans. The use of alternative estimates and assumptions could increase or decrease the estimated fair value of the asset, and potentially result in different impacts to BD's results of operations. Actual results may differ from management's estimates.

Income Taxes

BD maintains valuation allowances where it is more likely than not that all or a portion of a deferred tax asset will not be realized. Changes in valuation allowances are included in our tax provision in the period of change. In determining whether a valuation allowance is warranted, management evaluates factors such as prior earnings history, expected future earnings, carry back and carry forward periods, and tax strategies that could potentially enhance the likelihood of realization of a deferred tax asset.

BD conducts business and files tax returns in numerous countries and currently has tax audits in progress in a number of tax jurisdictions. In evaluating the exposure associated with various tax filing positions, we record accruals for uncertain tax positions based on the technical support for the positions, our past audit experience with similar situations, and the potential interest and penalties related to the matters. BD's effective tax rate in any given period could be impacted if, upon resolution with taxing authorities, we prevailed in positions for which reserves have been established, or we were required to pay amounts in excess of established reserves.

The U.S. Tax Cuts and Job Act (the "Act") was enacted into law on December 22, 2017. This law reduces the U.S. statutory corporate tax rate from 35% to 21%; requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred; and creates new taxes on certain foreign-sourced earnings. BD has a measurement period of up to one year after the enactment date of the Act to finalize the recognition of the related tax impacts. The final impact of the Act may differ from the provisional amounts recognized in fiscal year 2018, possibly materially, due to, among other things, developing interpretations of the Act or any updates or changes to estimates we have utilized to calculate the impacts.

We have historically asserted indefinite reinvestment of the earnings of certain non-U.S. subsidiaries outside the United States. The Act eliminated certain material tax effects on the repatriation of cash to the United States. Future repatriation of cash and other property held by our foreign subsidiaries will generally not be subject to U.S. federal income tax. As a result, after reevaluation of the permanent reinvestment assertion, we are no longer permanently reinvested with respect to its historic unremitted foreign earnings as of September 30, 2018. Additional disclosures regarding our accounting for income taxes are provided in Note 16 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

Contingencies

We are involved, both as a plaintiff and a defendant, in various legal proceedings that arise in the ordinary course of business, including, without limitation, product liability, antitrust and environmental matters, as further discussed in Note 5 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data. We assess the likelihood of any adverse judgments or outcomes to these matters as well as potential ranges of probable losses. We establish accruals to the extent probable future losses are estimable (in the case of environmental matters, without considering possible third-party recoveries). A determination of the amount of accruals, if any, for these contingencies is made after careful analysis of each individual issue and, when appropriate, is developed after consultation with outside counsel. The accruals may change in the future due to new developments in each matter or changes in our strategy in dealing with these matters. We record expected recoveries from product liability insurance carriers or other parties when those recoveries are probable and collectible.

Given the uncertain nature of litigation generally, we are not able in all cases to estimate the amount or range of loss that could result from an unfavorable outcome of the litigation to which we are a party. In view of these uncertainties, we could incur charges in excess of any currently established accruals and, to the extent available, liability insurance. In the opinion of management, any such future charges, individually or in the aggregate, could have a material adverse effect on BD's consolidated results of operations and consolidated net cash flows.

Benefit Plans

We have significant net pension and other postretirement and postemployment benefit costs that are measured using actuarial valuations. These benefit costs include assumptions for the discount rate. Pension benefit costs also include an assumption for the expected return on plan assets. These assumptions have a significant effect on the amounts reported. In addition to the analysis below, see Note 8 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data for additional discussion.

The discount rate is selected each year based on investment grade bonds and other factors as of the measurement date (September 30). Specifically for the U.S. pension plan, we will use a discount rate of 4.26% for 2019, which was based on an actuarially-determined, company-specific yield curve to measure liabilities as of the measurement date. To calculate the pension expense in 2019, we will apply the individual spot rates along the yield curve that correspond with the timing of each future cash outflow for benefit payments in order to calculate interest cost and service cost. Additional disclosures regarding the method to be used in calculating the interest cost and service cost components of pension expense for 2019 are provided in Note 8 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data. The expected long-term rate of return on plan assets assumption, although reviewed each year, changes less frequently due to the long-term nature of the assumption. This assumption does not impact the measurement of assets or liabilities as of the measurement date; rather, it is used only in the calculation of pension expense. To determine the expected long-term rate of return on pension plan assets, we consider many factors, including our historical assumptions compared with actual results; benchmark data; expected returns on various plan asset classes, as well as current and expected asset allocations. We will use a long-term expected rate of return on plan assets assumption of 7.25% for the U.S. pension plan in 2019. We believe our discount rate and expected long-term rate of return on plan assets assumptions are appropriate based upon the above factors.

Sensitivity to changes in key assumptions for our U.S. pension and other postretirement and postemployment plans are as follows:

- Discount rate — A change of plus (minus) 25 basis points, with other assumptions held constant, would have an estimated $6 million favorable (unfavorable) impact on the total U.S. net pension and other postretirement and postemployment benefit plan costs. This estimate assumes no change in the shape or steepness of the company-specific yield curve used to plot the individual spot rates that will be applied to the future cash outflows for future benefit payments in order to calculate interest and service cost.

- Expected return on plan assets — A change of plus (minus) 25 basis points, with other assumptions held constant, would have an estimated $5 million favorable (unfavorable) impact on U.S. pension plan costs.

Share-Based Compensation

Compensation cost relating to share-based payment transactions is recognized in net income using a fair value measurement method. All share-based payments to employees, including grants of employee stock options, are recognized in the statement of operations as compensation expense (based on their fair values) over the vesting period of the awards. We determine the fair value of certain share-based awards using a lattice-based binomial option valuation model that incorporates certain assumptions, such as the risk-free interest rate, expected volatility, expected dividend yield and expected life of the options. See Note 7 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data for additional discussion.

Cautionary Statement Regarding Forward-Looking Statements

BD and its representatives may from time to time make certain forward-looking statements in publicly released materials, both written and oral, including statements contained in filings with the Securities and Exchange Commission, press releases, and our reports to shareholders. Forward-looking statements may be identified by the use of words such as "plan," "expect," "believe," "intend," "will,", "may", "anticipate," "estimate" and other words of similar meaning in conjunction with, among other things, discussions of future operations and financial performance (including volume growth, sales and earnings per share growth, and cash flows) and statements regarding our strategy for growth, future product development, regulatory approvals, competitive position and expenditures. All statements that address our future operating performance or events or developments that we expect or anticipate will occur in the future are forward-looking statements.

Forward-looking statements are, and will be, based on management's then-current views and assumptions regarding future events, developments and operating performance, and speak only as of their dates. Investors should realize that if underlying assumptions prove inaccurate, or risks or uncertainties materialize, actual results could vary materially from our expectations and projections. Investors are therefore cautioned not to place undue reliance on any forward-looking statements. Furthermore, we undertake no obligation to update or revise any forward-looking statements after the date they are made, whether as a result of new information, future events and developments or otherwise, except as required by applicable law or regulations.

The following are some important factors that could cause our actual results to differ from our expectations in any forward-looking statements. For further discussion of certain of these factors, see Item 1A. Risk Factors in this report.

- Weakness in the global economy and financial markets, which could increase the cost of operating our business, weaken demand for our products and services, negatively impact the prices we can charge for our products and services, or impair our ability to produce our products.
- Competitive factors that could adversely affect our operations, including new product introductions and technologies (for example, new forms of drug delivery) by our current or future competitors, consolidation or strategic alliances among healthcare companies, distributors and/or payers of healthcare to improve their competitive position or develop new models for the delivery of healthcare, increased pricing pressure due to the impact of low-cost manufacturers, patents attained by competitors (particularly as patents on our products expire), and new entrants into our markets.
- Risks relating to our acquisition of Bard, including our ability to successfully combine and integrate the Bard operations in order to obtain the anticipated benefits and costs savings from the transaction, and the significant additional indebtedness we incurred in connection with the financing of the acquisition and the impact this increased indebtedness may have on our ability to operate the combined company.
- The impact resulting from the recent U.S. tax reform, commonly referred to as the Tax Cuts and Job Act (the "Act"), which, among other things, reduces the U.S. federal corporate tax rate, imposes a one-time

tax on earnings of certain foreign subsidiaries that were previously tax deferred, and imposes a new minimum tax on foreign earnings. While BD has previously recognized a provisional expense based on what it believes is a reasonable estimate of the income tax effects of the Act, this expense could change as BD refines its analysis.

- The adverse financial impact resulting from unfavorable changes in foreign currency exchange rates.
- Regional, national and foreign economic factors, including inflation, deflation, and fluctuations in interest rates, and their potential effect on our operating performance.
- Our ability to achieve our projected level or mix of product sales, as our earnings forecasts are based on projected sales volumes and pricing of many product types, some of which are more profitable than others.
- Changes in reimbursement practices of third-party payers or adverse decisions relating to our products by such payers, which could reduce demand for our products or the price we can charge for such products.
- The impact of the medical device excise tax under the Patient Protection and Affordable Care Act in the United States. While this tax has been suspended through December 31, 2019, it is uncertain whether the suspension will be extended beyond that date.
- Healthcare reform in the U.S. or in other countries in which we do business that may involve changes in government pricing and reimbursement policies or other cost containment reforms.
- Changes in the domestic and foreign healthcare industry or in medical practices that result in a reduction in procedures using our products or increased pricing pressures, including the continued consolidation among healthcare providers and trends toward managed care and healthcare cost containment.
- The impact of changes in U.S. federal laws and policy that could affect fiscal and tax policies, healthcare, and international trade, including import and export regulation and international trade agreements. Recently, the U.S., China and other countries have imposed tariffs on certain products imported into their respective countries. Additional tariffs or other trade barriers imposed by the U.S., China or other countries could adversely impact our supply chain costs or otherwise adversely impact our results of operations.
- Fluctuations in the cost and availability of oil-based resins and other raw materials, as well as certain components, used in our products, the ability to maintain favorable supplier arrangements and relationships (particularly with respect to sole-source suppliers), and the potential adverse effects of any disruption in the availability of such items.
- Security breaches of our information technology systems or our products, which could impair our ability to conduct business, result in the loss of BD trade secrets or otherwise compromise sensitive information of BD or its customers, suppliers and other business partners, or of customers' patients, or result in product efficacy or safety concerns for certain of our products, and result in actions by regulatory bodies or civil litigation.
- Difficulties inherent in product development, including the potential inability to successfully continue technological innovation, successfully complete clinical trials, obtain regulatory approvals in the United States and abroad, obtain intellectual property protection for our products, obtain coverage and adequate reimbursement for new products, or gain and maintain market approval of products, as well as the possibility of infringement claims by competitors with respect to patents or other intellectual property rights, all of which can preclude or delay commercialization of a product. Delays in obtaining necessary approvals or clearances from United States Food and Drug Administration ("FDA") or other regulatory agencies or changes in the regulatory process may also delay product launches and increase development costs.

- The impact of business combinations or divestitures, including any volatility in earnings relating to acquisition-related costs, and our ability to successfully integrate any business we may acquire.
- Our ability to penetrate or expand our operations in emerging markets, which depends on local economic and political conditions, and how well we are able to make necessary infrastructure enhancements to production facilities and distribution networks. Our international operations also increase our compliance risks, including risks under the Foreign Corrupt Practices Act and other anti-corruption laws, as well as regulatory and privacy laws.
- Conditions in international markets, including social and political conditions, civil unrest, terrorist activity, governmental changes, trade barriers, restrictions on the ability to transfer capital across borders, difficulties in protecting and enforcing our intellectual property rights and governmental expropriation of assets. This includes the possible impact of the United Kingdom's exit from the European Union, which has created uncertainties affecting our business operations in the United Kingdom and the EU.
- Deficit reduction efforts or other actions that reduce the availability of government funding for healthcare and research, which could weaken demand for our products and result in additional pricing pressures, as well as create potential collection risks associated with such sales.
- Fluctuations in university or U.S. and international governmental funding and policies for life sciences research.
- Fluctuations in the demand for products we sell to pharmaceutical companies that are used to manufacture, or are sold with, the products of such companies, as a result of funding constraints, consolidation or otherwise.
- The effects of events that adversely impact our ability to manufacture our products (particularly where production of a product line is concentrated in one or more plants) or our ability to source materials or components from suppliers (including sole-source suppliers) that are needed for such manufacturing.
- Pending and potential future litigation or other proceedings asserting, and/or subpoenas seeking information with respect to, alleged violations of law (including in connection with federal and/or state healthcare programs (such as Medicare or Medicaid) and/or sales and marketing practices (such as investigative subpoenas and the civil investigative demands received by BD and Bard)), antitrust claims, product liability (which may involve lawsuits seeking class action status or seeking to establish multi-district litigation proceedings, including claims relating to our hernia repair implant products, surgical continence products for women and vena cava filter products), claims with respect to environmental matters, and patent infringement, and the availability or collectability of insurance relating to any such claims.
- New or changing laws and regulations affecting our domestic and foreign operations, or changes in enforcement practices, including laws relating to trade, monetary and fiscal policies, taxation (including tax reforms that could adversely impact multinational corporations), sales practices, environmental protection, price controls, and licensing and regulatory requirements for new products and products in the postmarketing phase. In particular, the U.S. and other countries may impose new requirements regarding registration, labeling or prohibited materials that may require us to re-register products already on the market or otherwise impact our ability to market our products. Environmental laws, particularly with respect to the emission of greenhouse gases, are also becoming more stringent throughout the world, which may increase our costs of operations or necessitate changes in our manufacturing plants or processes or those of our suppliers, or result in liability to BD.
- Product efficacy or safety concerns regarding our products resulting in product holds or recalls, regulatory action on the part of the FDA or foreign counterparts (including restrictions on future product clearances and civil penalties), declining sales and product liability claims, and damage to our reputation. As a result of the CareFusion acquisition, we are operating under a consent decree with the FDA relating to our U.S. infusion pump business. The consent decree authorizes the FDA, in the event

of any violations in the future, to order us to cease manufacturing and distributing products, recall products or take other actions, and we may be required to pay significant monetary damages if we fail to comply with any provision of the consent decree.

- The effect of adverse media exposure or other publicity regarding BD's business or operations, including the effect on BD's reputation or demand for its products.
- The effect of market fluctuations on the value of assets in BD's pension plans and on actuarial interest rate and asset return assumptions, which could require BD to make additional contributions to the plans or increase our pension plan expense.
- Our ability to obtain the anticipated benefits of restructuring programs, if any, that we may undertake.
- Issuance of new or revised accounting standards by the Financial Accounting Standards Board or the Securities and Exchange Commission.

The foregoing list sets forth many, but not all, of the factors that could impact our ability to achieve results described in any forward-looking statements. Investors should understand that it is not possible to predict or identify all such factors and should not consider this list to be a complete statement of all potential risks and uncertainties.

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

The information required by this item is included in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, and in Notes 1, 13 and 14 to the consolidated financial statements contained in Item 8, Financial Statements and Supplementary Data, and is incorporated herein by reference.

Item 8. ***Financial Statements and Supplementary Data.***

Reports of Management

Management's Responsibilities

The following financial statements have been prepared by management in conformity with U.S. generally accepted accounting principles and include, where required, amounts based on the best estimates and judgments of management. The integrity and objectivity of data in the financial statements and elsewhere in this Annual Report are the responsibility of management.

In fulfilling its responsibilities for the integrity of the data presented and to safeguard the Company's assets, management employs a system of internal accounting controls designed to provide reasonable assurance, at appropriate cost, that the Company's assets are protected and that transactions are appropriately authorized, recorded and summarized. This system of control is supported by the selection of qualified personnel, by organizational assignments that provide appropriate delegation of authority and division of responsibilities, and by the dissemination of written policies and procedures. This control structure is further reinforced by a program of internal audits, including a policy that requires responsive action by management.

The Board of Directors monitors the internal control system, including internal accounting and financial reporting controls, through its Audit Committee, which consists of eight independent Directors. The Audit Committee meets periodically with the independent registered public accounting firm, the internal auditors and management to review the work of each and to satisfy itself that they are properly discharging their responsibilities. The independent registered public accounting firm and the internal auditors have full and free access to the Audit Committee and meet with its members, with and without management present, to discuss the scope and results of their audits including internal control, auditing and financial reporting matters.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) under the Securities Act of 1934. Management conducted an assessment of the effectiveness of internal control over financial reporting based on the criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework).

On December 29, 2017, the Company completed the acquisition of C.R. Bard, Inc. ("Bard"). While the Company has extended its oversight and monitoring processes that support its internal control over financial reporting, as well as its disclosure controls and procedures, the Company continues to integrate the acquired operations of Bard. As such, the Company has excluded Bard from its evaluation of internal control over financial reporting. This exclusion is in accordance with the U.S. Securities and Exchange Commission's general guidance that a recently acquired business may be omitted from the assessment scope for up to one year from the date of acquisition. Bard is a wholly-owned subsidiary with total assets that represented approximately 5% of the Company's consolidated total assets at September 30, 2018 and total revenues that represented approximately 19% of the Company's consolidated revenues for fiscal year 2018.

Based on the Company's assessment of the effectiveness of internal control over financial reporting and the criteria noted above, management concluded that internal control over financial reporting was effective as of September 30, 2018.

The financial statements and internal control over financial reporting have been audited by Ernst & Young LLP, an independent registered public accounting firm. Ernst & Young's reports with respect to fairness of the presentation of the financial statements, and the effectiveness of internal control over financial reporting, are included herein.

/s/ Vincent A. Forlenza	/s/ Christopher Reidy	/s/ Charles Bodner
Vincent A. Forlenza	Christopher Reidy	Charles Bodner
Chairman and Chief Executive Officer	*Executive Vice President, Chief Financial Officer and Chief Administrative Officer*	*Senior Vice President, Corporate Finance and Chief Accounting Officer*

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of
Becton, Dickinson and Company

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Becton, Dickinson and Company (the Company) as of September 30, 2018 and 2017, the related consolidated statements of income, comprehensive income and cash flows for each of the three years in the period ended September 30, 2018, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at September 30, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended September 30, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of September 30, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated November 21, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

/s/ ERNST & YOUNG LLP

We have served as the Company's auditor since 1959.
New York, New York
November 21, 2018

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of
Becton, Dickinson and Company

Opinion on Internal Control over Financial Reporting

We have audited Becton, Dickinson and Company's internal control over financial reporting as of September 30, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Becton, Dickinson and Company (the Company) maintained, in all material respects, effective internal control over financial reporting as of September 30, 2018, based on the COSO criteria.

As indicated in the accompanying Management's Report on Internal Control over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of C.R. Bard, Inc., which is included in the 2018 consolidated financial statements of the Company and constituted 5% of total assets as of September 30, 2018 and 19% of net sales for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of C.R. Bard, Inc.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2018 consolidated balance sheets of the Company as of September 30, 2018 and 2017, the related consolidated statements of comprehensive income and cash flows for each of the three years in the period ended September 30, 2018, and the related notes and our report dated November 21, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ ERNST & YOUNG LLP

New York, New York
November 21, 2018

Consolidated Statements of Income

Becton, Dickinson and Company
Years Ended September 30

Millions of dollars, except per share amounts	2018	2017	2016
Revenues	$ 15,983	$ 12,093	$ 12,483
Cost of products sold	8,721	6,151	6,492
Selling and administrative expense	4,015	2,925	3,005
Research and development expense	1,006	774	828
Acquisitions and other restructurings	744	354	728
Other operating expense, net	—	410	—
Total Operating Costs and Expenses	14,487	10,615	11,053
Operating Income	1,497	1,478	1,430
Interest expense	(706)	(521)	(388)
Interest income	65	76	21
Other income (expense), net	318	(57)	11
Income Before Income Taxes	1,173	976	1,074
Income tax provision (benefit)	862	(124)	97
Net Income	311	1,100	976
Preferred stock dividends	(152)	(70)	—
Net income applicable to common shareholders	$ 159	$ 1,030	$ 976
Basic Earnings per Share	$ 0.62	$ 4.70	$ 4.59
Diluted Earnings per Share	$ 0.60	$ 4.60	$ 4.49

Consolidated Statements of Comprehensive Income

Becton, Dickinson and Company
Years Ended September 30

Millions of dollars	2018	2017	2016
Net Income	$ 311	$ 1,100	$ 976
Other Comprehensive (Loss) Income, Net of Tax			
Foreign currency translation adjustments	(161)	11	(50)
Defined benefit pension and postretirement plans	(26)	179	(141)
Cash flow hedges	1	17	1
Other Comprehensive (Loss) Income, Net of Tax	(186)	206	(191)
Comprehensive Income	$ 125	$ 1,306	$ 786

Consolidated Balance Sheets

Becton, Dickinson and Company
September 30

Millions of dollars, except per share amounts and numbers of shares	2018	2017
Assets		
Current Assets		
Cash and equivalents	$ 1,140	$ 14,179
Restricted cash	96	—
Short-term investments	17	21
Trade receivables, net	2,319	1,744
Inventories	2,451	1,818
Assets held for sale	137	—
Prepaid expenses and other	1,251	871
Total Current Assets	7,411	18,633
Property, Plant and Equipment, Net	5,375	4,638
Goodwill	23,600	7,563
Developed Technology, Net	12,184	2,478
Customer Relationships, Net	3,723	2,830
Other Intangibles, Net	534	585
Other Assets	1,078	1,007
Total Assets	$ 53,904	$ 37,734
Liabilities and Shareholders' Equity		
Current Liabilities		
Short-term debt	$ 2,601	$ 203
Accounts payable	1,106	797
Accrued expenses	2,255	1,393
Salaries, wages and related items	910	773
Income taxes	343	176
Total Current Liabilities	7,216	3,342
Long-Term Debt	18,894	18,667
Long-Term Employee Benefit Obligations	1,056	1,168
Deferred Income Taxes and Other	5,743	1,609
Commitments and Contingencies (See Note 5)		
Shareholders' Equity		
Preferred stock	2	2
Common stock — $1 par value: authorized — 640,000,000 shares; issued — 346,687,160 shares in 2018 and 2017.	347	347
Capital in excess of par value	16,179	9,619
Retained earnings	12,596	13,111
Deferred compensation	22	19
Common stock in treasury — at cost — 78,462,971 shares in 2018 and 118,744,758 shares in 2017.	(6,243)	(8,427)
Accumulated other comprehensive loss	(1,909)	(1,723)
Total Shareholders' Equity	20,994	12,948
Total Liabilities and Shareholders' Equity	$ 53,904	$ 37,734

Consolidated Statements of Cash Flows

Becton, Dickinson and Company
Years Ended September 30

Millions of dollars	2018	2017	2016
Operating Activities			
Net income	$ 311	$ 1,100	$ 976
Adjustments to net income to derive net cash provided by operating activities:			
Depreciation and amortization	1,978	1,088	1,114
Share-based compensation	322	174	196
Deferred income taxes	(240)	(236)	(426)
Change in operating assets and liabilities:			
Trade receivables, net	(170)	(93)	(128)
Inventories	246	(46)	69
Prepaid expenses and other	(46)	(366)	90
Accounts payable, income taxes and other liabilities	867	134	368
Pension obligation	(263)	84	(32)
Excess tax benefits from payments under share-based compensation plans	78	77	—
Lease contract modification-related charge	—	748	—
Gain on sale of Vyaire interest	(303)	—	—
Other, net	85	(114)	332
Net Cash Provided by Operating Activities	2,865	2,550	2,559
Investing Activities			
Capital expenditures	(895)	(727)	(693)
Proceeds from (purchases of) investments, net	11	13	(1)
Acquisitions of businesses, net of cash acquired	(15,281)	(174)	—
Proceeds from divestitures, net	534	165	158
Other, net	(198)	(161)	(133)
Net Cash Used for Investing Activities	(15,829)	(883)	(669)
Financing Activities			
Change in credit facility borrowings	—	(200)	(500)
Proceeds from long-term debt and term loans	5,086	11,462	—
Payments of debt and term loans	(3,996)	(3,980)	(752)
Proceeds from issuance of equity securities	—	4,827	—
Repurchase of common stock	—	(220)	—
Excess tax benefit from payments under share-based compensation plans	—	—	86
Dividends paid	(927)	(677)	(562)
Other, net	(220)	(234)	(32)
Net Cash (Used for) Provided by Financing Activities	(58)	10,977	(1,761)
Effect of exchange rate changes on cash and equivalents	(17)	(6)	(12)
Net (Decrease) Increase in Cash and Equivalents	(13,039)	12,638	117
Opening Cash and Equivalents	14,179	1,541	1,424
Closing Cash and Equivalents	$ 1,140	$ 14,179	$ 1,541
Non-Cash Investing Activities			
Fair value of shares issued as acquisition consideration (See Note 9)	$ 8,004	$ —	$ —
Fair value of equity awards issued as acquisition consideration (See Note 9)	$ 613	$ —	$ —

Note 1 — Summary of Significant Accounting Policies

Basis of Presentation

The accompanying Consolidated Financial Statements and Notes to Consolidated Financial Statements of Becton, Dickinson and Company (the "Company") have been prepared in accordance with U.S. generally accepted accounting principles. Within the financial statements and tables presented, certain columns and rows may not add due to the use of rounded numbers for disclosure purposes. Percentages and earnings per share amounts presented are calculated from the underlying amounts. Our fiscal year ends on September 30.

Principles of Consolidation

The consolidated financial statements include the Company's accounts and those of its majority-owned subsidiaries after the elimination of intercompany transactions. The Company has no material interests in variable interest entities.

Cash Equivalents

Cash equivalents consist of all highly liquid investments with a maturity of three months or less at time of purchase.

Restricted Cash

Restricted cash consists of cash restricted from withdrawal and usage and largely represents funds that are restricted for certain product liability matters assumed in the acquisition of C.R. Bard, Inc. ("Bard") which is further discussed in Note 9.

Short-Term Investments

Short-term investments consist of time deposits with maturities greater than three months and less than one year when purchased.

Trade Receivables

The Company grants credit to customers in the normal course of business and the resulting trade receivables are stated at their net realizable value. The allowance for doubtful accounts represents the Company's estimate of probable credit losses relating to trade receivables and is determined based on historical experience and other specific account data. Amounts are written off against the allowances for doubtful accounts when the Company determines that a customer account is uncollectible.

Inventories

Inventories are stated at the lower of first-in, first-out cost or market.

Property, Plant and Equipment

Property, plant and equipment are stated at cost, less accumulated depreciation and amortization. Depreciation and amortization are principally provided on the straight-line basis over estimated useful lives, which range from 20 to 45 years for buildings, four to 13 years for machinery and equipment and one to 20 years for leasehold improvements. Depreciation and amortization expense was $600 million, $406 million and $452 million in fiscal years 2018, 2017 and 2016, respectively.

Goodwill and Other Intangible Assets

The Company's unamortized intangible assets include goodwill and in-process research and development assets which arise from acquisitions. The Company currently reviews all indefinite-lived assets, including goodwill, for impairment generally using quantitative models. Goodwill is reviewed at least annually for impairment at the reporting unit level, which is defined as an operating segment or one level below an operating segment, referred to as a component. The Company's reporting units generally represent one level below reporting segments. Potential impairment of goodwill is generally identified by comparing the fair value of a reporting unit, estimated using an income approach, with its carrying value. The annual impairment review performed on July 1, 2018 indicated that all identified reporting units' fair values exceeded their respective carrying values. The review for impairment of in-process research and development assets is performed by comparing the fair value of the technology or project assets, estimated using an income approach, with their carrying value. In-process research and development assets are considered indefinite-lived assets and are reviewed at least annually for impairment until projects are completed or abandoned.

Amortized intangible assets include developed technology assets which arise from acquisitions. These assets represent acquired intellectual property that is already technologically feasible upon the acquisition date or acquired in-process research and development assets that are completed subsequent to acquisition. Developed technology assets are generally amortized over periods ranging from 15 to 20 years, using the straight-line method. Customer relationship assets are generally amortized over periods ranging from 10 to 15 years, using the straight-line method. Other intangibles with finite useful lives, which include patents, are amortized over periods principally ranging from one to 40 years, using the straight-line method. Finite-lived intangible assets, including developed technology assets, are periodically reviewed when impairment indicators are present to assess recoverability from future operations using undiscounted cash flows. The carrying values of these finite-lived assets are compared to the undiscounted cash flows they are expected to generate and an impairment loss is recognized in operating results to the extent any finite-lived intangible asset's carrying value exceeds its calculated fair value.

Foreign Currency Translation

Generally, foreign subsidiaries' functional currency is the local currency of operations and the net assets of foreign operations are translated into U.S. dollars using current exchange rates. The U.S. dollar results that arise from such translation, as well as exchange gains and losses on intercompany balances of a long-term investment nature, are included in the foreign currency translation adjustments in *Accumulated other comprehensive income (loss)*.

Revenue Recognition

Revenue from product sales is typically recognized when all of the following criteria have been met: persuasive evidence of an arrangement exists; delivery has occurred or services have been rendered; product price is fixed or determinable; collection of the resulting receivable is reasonably assured. Certain sales arrangements contain multiple deliverables, including equipment and service deliverables, which requires the Company to determine the separate units of account. If the deliverable meets the criteria of a separate unit of accounting, the arrangement consideration is allocated to each element based upon its relative selling price. In determining the best evidence of selling price of a unit of account the Company utilizes vendor-specific objective evidence ("VSOE"), which is the price the Company charges when the deliverable is sold separately. When VSOE is not available, management uses relevant third-party evidence ("TPE") of selling price, if available. When neither VSOE nor TPE of selling price exists, management uses its best estimate of selling price.

Revenue allocated to certain equipment deliverables is recognized upon customer acceptance, which occurs after the transfer of title and risk of loss to the customer and the completion of installation or training services. When related services are considered inconsequential, delivery is deemed to occur upon the transfer of title and risk of loss, at which time revenue and the costs associated with services are recognized.

For equipment lease revenue, transactions are evaluated and classified as either operating leases or sales-type leases. Generally, the Company's lease arrangements with customers are accounted for as operating leases and therefore, revenue is recognized at the contracted rate over the rental period, as defined within the customer agreement.

For products sold and leased with embedded software, if software is considered not essential to the non-software elements of a product but is considered more than incidental to a product as a whole, the product's software elements must be separated from its non-software elements under the requirements relating to multiple-element arrangements and accounted for under software industry-specific revenue recognition requirements. However, if it is determined that the embedded software is more than incidental to the product as a whole but the non-software elements and software elements work together to deliver the essential functionality of the products as a whole, then the accounting for such product does not fall within the scope of software industry-specific accounting requirements.

The Company's domestic businesses sell products primarily to distributors that resell the products to end-user customers. Rebates are provided to distributors that sell to end-user customers at prices determined under a contract between the Company and the end-user customer. Provisions for rebates, as well as sales discounts and returns, are based upon estimates and are accounted for as a reduction of revenues when revenue is recognized.

Shipping and Handling Costs

Shipping and handling costs are included in *Selling and administrative expense*. Shipping expense was $479 million, $365 million and $401 million in 2018, 2017 and 2016, respectively.

Derivative Financial Instruments

All derivatives are recorded in the balance sheet at fair value and changes in fair value are recognized currently in earnings unless specific hedge accounting criteria are met. Any deferred gains or losses associated with derivative instruments are recognized in income in the period in which the underlying hedged transaction is recognized. Additional disclosures regarding the Company's accounting for derivative instruments are provided in Note 13.

Income Taxes

The Company has historically asserted indefinite reinvestment of the earnings of certain non-U.S. subsidiaries outside the United States. New U.S. tax legislation, which is further discussed in Note 16, eliminated certain material tax effects on the repatriation of cash to the United States. Future repatriation of cash and other property held by the Company's foreign subsidiaries will generally not be subject to U.S. federal income tax. As a result, after reevaluation of the permanent reinvestment assertion, the Company is no longer permanently reinvested with respect to its historic unremitted foreign earnings as of September 30, 2018.

The Company conducts business and files tax returns in numerous countries and currently has tax audits in progress in a number of tax jurisdictions. In evaluating the exposure associated with various tax filing positions, the Company records accruals for uncertain tax positions, based on the technical support for the positions, past audit experience with similar situations, and the potential interest and penalties related to the matters.

The Company maintains valuation allowances where it is more likely than not that all or a portion of a deferred tax asset will not be realized. Changes in valuation allowances are included in the tax provision in the period of change. In determining whether a valuation allowance is warranted, management evaluates factors such as prior earnings history, expected future earnings, carryback and carryforward periods and tax strategies that could potentially enhance the likelihood of the realization of a deferred tax asset. Additional disclosures regarding the Company's accounting for income taxes are provided in Note 16.

Earnings per Share

Basic earnings per share are computed by dividing income available to common stockholders by the weighted average number of common shares outstanding. Diluted earnings per share reflect the potential

dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock. In computing diluted earnings per share, only potential common shares that are dilutive (i.e., those that reduce earnings per share or increase loss per share) are included in the calculation.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions. These estimates or assumptions affect reported assets, liabilities, revenues and expenses as reflected in the consolidated financial statements. Actual results could differ from these estimates.

Note 2 — Accounting Changes

New Accounting Principle Adopted

In the second quarter of its fiscal year 2018, the Company prospectively adopted an accounting standard update issued by the Financial Accounting Standards Board ("FASB") relating to the stranded income tax effects on items within *Accumulated other comprehensive income (loss)* resulting from the enactment of new U.S. tax legislation, which legislation is further discussed in Note 16. Additional disclosures regarding this accounting standard adoption are provided in Note 3.

On October 1, 2016, the Company prospectively adopted amended requirements issued by the FASB relating to the timing of recognition and classification of share-based compensation award-related income tax effects. Upon adoption of the requirements in 2017, the Company has recorded tax benefits relating to share-based compensation awards within *Income tax (benefit) provision* on its consolidated statement of income. These tax benefits had been previously recorded within *Capital in excess of par value* on the Company's consolidated balance sheet. Also upon adoption of the amended guidance in 2017, the Company has classified excess tax benefits on its consolidated statement of cash flows within *Net Cash Provided by Operating Activities*, rather than *Net Cash Provided by (Used for) Financing Activities*.

New Accounting Principles Not Yet Adopted

In March 2017, the FASB issued an accounting standard update which requires all components of net periodic pension and postretirement benefit costs to be disaggregated from the service cost component and to be presented on the income statement outside a subtotal of income from operations, if one is presented. The Company's adoption of the new requirements on October 1, 2018 is not expected to have a material impact on its consolidated financial statements.

In February 2016, the FASB issued a new lease accounting standard which requires lessees to recognize lease assets and lease liabilities on the balance sheet. The new standard also requires expanded disclosures regarding leasing arrangements. The Company will adopt the standard on October 1, 2019 and has commenced its initial assessment of the impact on its consolidated financial statements.

In May 2014, the FASB issued a new revenue recognition standard. Under this standard, revenue is recognized upon the transfer of goods or services to customers and the amount of revenue recognized reflects the consideration to which a reporting entity expects to be entitled in exchange for those goods or services. The Company adopted the standard on October 1, 2018 using the modified retrospective method. The Company assessed the impact that this new revenue recognition standard will have on its consolidated financial statements based upon a review of contracts that were not completed as of October 1, 2018. The Company is currently finalizing the changes to its processes, systems and controls which are necessary to support recognition and disclosure under the new revenue recognition standard. The Company does not expect its adoption of the new standard to have a material impact on its consolidated financial statements.

Note 3 — Shareholders' Equity

Changes in certain components of shareholders' equity were as follows:

(Millions of dollars)	Common Stock Issued at Par Value	Capital in Excess of Par Value	Retained Earnings	Deferred Compensation	Treasury Stock	
					Shares (in thousands)	Amount
Balance at September 30, 2015	$ 333	$ 4,475	$ 12,314	$ 20	(121,967)	$ (8,239)
Net income	—	—	976	—	—	—
Cash dividends:						
Common ($2.64 per share)	—	—	(562)	—	—	—
Common stock issued for:						
Share-based compensation and other plans, net	—	27	(1)	2	2,607	26
Share-based compensation	—	191	—	—	—	—
Common stock held in trusts, net (a)	—	—	—	—	(11)	—
Balance at September 30, 2016	$ 333	$ 4,693	$ 12,727	$ 22	(119,371)	$ (8,212)
Net income	—	—	1,100	—	—	—
Cash dividends:						
Common ($2.92 per share)	—	—	(645)	—	—	—
Preferred	—	—	(70)	—	—	—
Common stock issued for:						
Public equity offerings (b)	14	4,810	—	—	—	—
Share-based compensation and other plans, net	—	(65)	(1)	(3)	1,908	6
Share-based compensation	—	180	—	—	—	—
Common stock held in trusts, net (a)	—	—	—	—	7	—
Repurchase of common stock (c)	—	—	—	—	(1,289)	(220)
Balance at September 30, 2017	$ 347	$ 9,619	$ 13,111	$ 19	(118,745)	$ (8,427)
Net income	—	—	311	—	—	—
Cash dividends:						
Common ($3.00 per share)	—	—	(775)	—	—	—
Preferred	—	—	(152)	—	—	—
Common stock issued for:						
Acquisition (see Note 9)	—	6,478	—	—	37,306	2,121
Share-based compensation and other plans, net	—	(246)	(2)	3	2,982	62
Share-based compensation	—	328	—	—	—	—
Common stock held in trusts, net (a)	—	—	—	—	(6)	—
Effect of change in accounting principle (see Note 2 and further discussion below)	—	—	103	—	—	—
Balance at September 30, 2018	$ 347	$ 16,179	$ 12,596	$ 22	(78,463)	$ (6,243)

(a) Common stock held in trusts represents rabbi trusts in connection with deferred compensation under the Company's employee salary and bonus deferral plan and directors' deferral plan.

(b) In May 2017 and in connection with the Company's acquisition of Bard, which is further discussed in Note 9, the Company completed registered public offerings of equity securities including 14.025 million shares of the Company's common stock and 2.475 million shares of the Company's mandatory convertible preferred stock (ownership is held in the form of depositary shares, each representing a 1/20th interest in a share of preferred stock) for total net proceeds of $4.8 billion. If and when declared, dividends on the mandatory convertible preferred stock are payable on a cumulative basis at an annual rate of 6.125% on the liquidation preference of $1,000 per preferred share ($50 per depositary share). The shares of preferred stock are convertible to a minimum of 11.7 million and up to a maximum of 14.0 million shares of Company common stock at an exchange ratio that is based on the market price of the Company's common stock at the date of conversion, and no later than the mandatory conversion date of May 1, 2020.

(c) Using proceeds received from the divestiture of the Respiratory Solutions business in the first quarter of fiscal year 2017, the Company repurchased shares of its common stock under an accelerated share repurchase agreement.

The components and changes of *Accumulated other comprehensive income (loss)* were as follows:

(Millions of dollars)	Total	Foreign Currency Translation	Benefit Plans	Cash Flow Hedges
Balance at September 30, 2015	$ (1,738)	$ (961)	$ (741)	$ (36)
Other comprehensive loss before reclassifications, net of taxes	(251)	(50)	(190)	(11)
Amounts reclassified into income, net of taxes	60	—	48	12
Balance at September 30, 2016	$ (1,929)	$ (1,011)	$ (883)	$ (35)
Other comprehensive income before reclassifications, net of taxes	140	11	121	8
Amounts reclassified into income, net of taxes	66	—	58	8
Balance at September 30, 2017	$ (1,723)	$ (1,001)	$ (703)	$ (18)
Other comprehensive (loss) income before reclassifications, net of taxes	(142)	(161)	19	—
Amounts reclassified into income, net of taxes	57	—	52	5
Tax effects reclassified to retained earnings	(103)	—	(99)	(4)
Balance at September 30, 2018	$ (1,909)	$ (1,162)	$ (729)	$ (17)

The amount of foreign currency translation recognized in other comprehensive income during the years ended September 30, 2018 and 2017 included net gains (losses) relating to net investment hedges, as further discussed in Note 13. The amount recognized in other comprehensive income during the year ended September 30, 2017 relating to cash flow hedges represented a net gain on forward starting interest rate swaps, which is further discussed in Note 13.

During the second quarter of 2018, as permitted under U.S. GAAP guidance, the Company reclassified stranded income tax effects on items within *Accumulated other comprehensive income (loss)* resulting from the enactment of new U.S. tax legislation, which legislation is further discussed in Note 16, to *Retained earnings*. The reclassified tax effects related to prior service credits and net actuarial losses relating to benefit plans, as well as to terminated cash flow hedges. The tax effects relating to these items are generally recognized as such amounts are amortized into earnings.

The tax impacts for amounts recognized in other comprehensive income before reclassifications were as follows:

(Millions of dollars)	2018	2017	2016
Benefit Plans			
Income tax (provision) benefit for net gains (losses) recorded in other comprehensive income	$ (19)	$ (60)	$ 79

The tax impacts for cash flow hedges recognized in other comprehensive income before reclassifications in 2017 and 2016 were immaterial to the Company's consolidated financial results. Reclassifications out of *Accumulated other comprehensive income (loss)* and the related tax impacts relating to benefit plans and cash flow hedges in 2018, 2017 and 2016 were also immaterial to the Company's consolidated financial results.

Note 4 — Earnings per Share

The weighted average common shares used in the computations of basic and diluted earnings per share (shares in thousands) for the years ended September 30 were as follows:

	2018	2017	2016
Average common shares outstanding	258,354	218,943	212,702
Dilutive share equivalents from share-based plans (a) (b)	6,267	4,645	4,834
Average common and common equivalent shares outstanding — assuming dilution	264,621	223,588	217,536

(a) For the years ended September 30, 2018 and 2017, dilutive share equivalents associated with mandatory convertible preferred stock of 12 million and 5 million, respectively, were excluded from the diluted shares outstanding calculation because the result would have been antidilutive. The issuance of the convertible preferred stock is further discussed in Note 3. For the years ended September 30, 2018, 2017 and 2016, there were no options to purchase shares of common stock which were excluded from the diluted earnings per share calculation.

(b) The adjustment to calculate diluted share equivalents from share-based plans in 2016 included excess tax benefits relating to share-based compensation awards. Upon the Company's adoption, as discussed in Note 2, of new accounting requirements relating to share-based compensation award-related income tax effects, the adjustments in 2018 and 2017 excluded these excess tax benefits.

Note 5 — Commitments and Contingencies

Commitments

Rental expense for all operating leases amounted to $149 million in 2018, $110 million in 2017 and $112 million in 2016. Future minimum rental commitments on non-cancelable leases are as follows: 2019 — $107 million; 2020 — $94 million; 2021 — $76 million; 2022 — $62 million; 2023 — $48 million and an aggregate of $124 million thereafter.

As of September 30, 2018, the Company has certain future purchase commitments aggregating to approximately $1.046 billion, which will be expended over the next several years.

Contingencies

Given the uncertain nature of litigation generally, the Company is not able, in all cases, to estimate the amount or range of loss that could result from an unfavorable outcome of the litigation to which the Company is a party. In accordance with U.S. generally accepted accounting principles, the Company establishes accruals to the extent probable future losses are estimable (in the case of environmental matters, without considering possible third-party recoveries). With respect to putative class action lawsuits in the United States and certain of the Canadian lawsuits described below relating to product liability matters, the Company is unable to estimate a range of reasonably possible losses for the following reasons: (i) all or certain of the proceedings are in early stages; (ii) the Company has not received and reviewed complete information regarding all or certain of the plaintiffs and their medical conditions; and/or (iii) there are significant factual issues to be resolved. In addition, there is uncertainty as to the likelihood of a class being certified or the ultimate size of the class. With respect to the investigative subpoena issued by the Department of Defense Inspector General and the Department of Health and Human Services and the civil investigative demand served by the Department of Justice, as discussed below, the Company is unable to estimate a range of reasonably possible losses for the following reasons: (i) all or certain of the proceedings are in early stages; and/or (ii) there are significant factual and legal issues to be resolved.

In view of the uncertainties discussed below, the Company could incur charges in excess of any currently established accruals and, to the extent available, liability insurance. In the opinion of management, any such future charges, individually or in the aggregate, could have a material adverse effect on the Company's consolidated results of operations and consolidated cash flows.

Product Liability Matters

As is further discussed in Note 9, the Company completed its acquisition of Bard on December 29, 2017 and the following matters include Bard-related legal proceedings and claims that the Company assumed on the acquisition date ("Bard-related Product Liability Matters"). The Company believes that certain settlements and judgments, as well as some legal defense costs, relating to product liability matters are or may be covered in whole or in part under its product liability insurance policies with a limited number of insurance carriers, or, in some circumstances, indemnification obligations to the Company from other parties, which if disputed, the Company intends to vigorously contest. Amounts recovered under the Company's product liability insurance policies or indemnification arrangements may be less than the stated coverage limits or less than otherwise expected and may not be adequate to cover damages and/or costs relating to claims. In addition, there is no guarantee that insurers or other parties will pay claims or that coverage or indemnity will be otherwise available.

Hernia Product Claims

As of September 30, 2018, the Company is defending approximately 3,154 product liability claims involving Bard's line of hernia repair devices (collectively, the "Hernia Product Claims"). The majority of those claims are currently pending in a coordinated proceeding in Rhode Island State Court, but claims are also pending in other state and/or federal court jurisdictions. In addition, those claims include multiple putative class actions in Canada. Generally, the Hernia Product Claims seek damages for personal injury allegedly resulting from use of the products. From time to time, the Company engages in resolution discussions with plaintiffs' law firms regarding certain of the Hernia Product Claims, but the Company also intends to vigorously defend Hernia Product Claims that do not settle, including through litigation. Trials are scheduled throughout 2019 in various state and/or federal courts. The Company expects additional trials of Hernia Product Claims to take place over the next 12 months. In August 2018, a new hernia multi-district litigation ("MDL") was ordered to be established in the Southern District of Ohio. The Company cannot give any assurances that the resolution of the Hernia Product Claims that have not settled, including asserted and unasserted claims and the putative class action lawsuits, will not have a material adverse effect on the Company's business, results of operations, financial condition and/or liquidity.

Women's Health Product Claims

As of September 30, 2018, the Company is defending approximately 1,322 product liability claims involving Bard's line of pelvic mesh devices. The majority of those claims are currently pending in a federal MDL in the United States District Court for the Southern District of West Virginia, but claims are also pending in other state and/or federal court jurisdictions, including a coordinated proceeding in New Jersey State Court. In addition, those claims include putative class actions filed in the United States. Not included in the figures above are approximately 1,037 filed and unfiled claims that have been asserted or threatened against Bard but lack sufficient information to determine whether a Bard pelvic mesh device is actually at issue. The claims identified above also include products manufactured by both Bard and two subsidiaries of Medtronic plc (as successor in interest to Covidien plc) ("Medtronic"), each a supplier of Bard. Medtronic has an obligation to defend and indemnify Bard with respect to any product defect liability relating to products its subsidiaries had manufactured. As described below, in July 2015 the Company reached an agreement with Medtronic (which was amended in June 2017) regarding certain aspects of Medtronic's indemnification obligation. The foregoing lawsuits, unfiled claims, putative class actions, and other claims, together with claims that have settled or are the subject of agreements or agreements in principle to settle, are referred to collectively as the "Women's Health Product Claims." The Women's Health Product Claims generally seek damages for personal injury allegedly resulting from use of the products.

As of September 30, 2018, the Company has reached agreements or agreements in principle with various plaintiffs' law firms to settle their respective inventories of cases totaling approximately 15,021 of the Women's Health Product Claims. The Company believes that these Women's Health Product Claims are not the subject of Medtronic's indemnification obligation. These settlement agreements and agreements in principle include unfiled and previously unknown claims held by various plaintiffs' law firms, which are not included in the approximate number of lawsuits set forth in the first paragraph of this section. Each agreement is subject to certain conditions, including requirements for participation in the proposed settlements by a certain minimum number of plaintiffs. The Company continues to engage in discussions with other plaintiffs' law firms regarding potential resolution of unsettled Women's Health Product Claims, which may include additional inventory settlements.

Starting in 2014 in the MDL, the court entered certain pre-trial orders requiring trial work up and remand of a significant number of Women's Health Product Claims, including an order entered in the MDL on January 30, 2018, that requires the work up and remand of all remaining unsettled cases (the "WHP Pre-Trial Orders"). The WHP Pre-Trial Orders may result in material additional costs or trial verdicts in future periods in defending Women's Health Product Claims. Trials are anticipated in 2018 and throughout 2019 in state courts. A trial in the New Jersey coordinated proceeding began in March 2018, and in April 2018 a jury entered a verdict against the Company in the total amount of $68 million ($33 million compensatory; $35 million punitive). The Company is in the process of challenging that verdict. The Company expects additional trials of Women's Health Product Claims to take place over the next 12 months.

In July 2015, as part of the agreement with Medtronic noted above, Medtronic agreed to take responsibility for pursuing settlement of certain of the Women's Health Product Claims that relate to products distributed by Bard under supply agreements with Medtronic, and Bard has paid Medtronic $121 million towards these potential settlements. In June 2017, Bard amended the agreement with Medtronic to transfer responsibility for settlement of additional Women's Health Product Claims to Medtronic on terms similar to the July 2015 agreement, including with respect to the obligation to make payments to Medtronic towards these potential settlements. Bard also may, in its sole discretion, transfer responsibility for settlement of additional Women's Health Product Claims to Medtronic on similar terms. The agreements do not resolve the dispute between Bard and Medtronic with respect to Women's Health Product Claims that do not settle, if any.

During the course of engaging in settlement discussions with plaintiffs' law firms, the Company has learned, and may in future periods learn, additional information regarding these and other unfiled claims, or other lawsuits, which could materially impact the Company's estimate of the number of claims or lawsuits against the Company.

Filter Product Claims

As of September 30, 2018, the Company is defending approximately 4,515 product liability claims involving Bard's line of inferior vena cava filters (collectively, the "Filter Product Claims"). The majority of those claims are currently pending in an MDL in the United States District Court for the District of Arizona, but claims are also pending in other state and/or federal court jurisdictions, including a coordinated proceeding in Arizona State Court. In addition, those claims include putative class actions filed in the United States and Canada. The Filter Product Claims generally seek damages for personal injury allegedly resulting from use of the products. The Company has limited information regarding the nature and quantity of certain of the Filter Product Claims. The Company continues to receive claims and lawsuits and may in future periods learn additional information regarding other unfiled or unknown claims, or other lawsuits, which could materially impact the Company's estimate of the number of claims or lawsuits against the Company. Trials are scheduled throughout 2018 in the MDL and state courts. On March 30, 2018, a jury in the first MDL trial found the Company liable for negligent failure to warn and entered a verdict in favor of plaintiffs. The jury found the Company was not liable for (a) strict liability design defect; (b) strict liability failure to warn; and (c) negligent design. The Company has appealed that verdict. On June 1, 2018, a jury in the second MDL trial unanimously found in favor of the Company on all claims. On August 17, 2018, the Court entered summary judgment in favor of the Company on all claims in the third MDL trial. On October 5, 2018, a jury in the fourth MDL trial unanimously found in favor of the Company on all claims. The Company expects additional trials of Filter Product Claims may take place over the next 12 months.

In most product liability litigations (like those described above), plaintiffs allege a wide variety of claims, ranging from allegations of serious injury caused by the products to efforts to obtain compensation notwithstanding the absence of any injury. In many of these cases, the Company has not yet received and reviewed complete information regarding the plaintiffs and their medical conditions and, consequently, is unable to fully evaluate the claims. The Company expects that it will receive and review additional information regarding any remaining unsettled product liability matters.

In January 2017, the Company reached an agreement to resolve litigation filed in the Southern District of New York by its insurance carriers in connection with Women's Health Product Claims and Filter Product Claims. The agreement requires the insurance carriers to reimburse the Company for certain future costs incurred in connection with Filter Product Claims up to an agreed amount. For certain product liability claims or lawsuits, the Company does not maintain or has limited remaining insurance coverage.

Other Legal Matters

In June 2007, Retractable Technologies, Inc. ("RTI") filed a complaint against the Company under the caption Retractable Technologies, Inc. vs. Becton Dickinson and Company (Civil Action No. 2:07-cv-250, U.S. District Court, Eastern District of Texas) alleging that the BD Integra™ syringes infringe patents licensed exclusively to RTI. Included in its complaint, RTI also alleged that the Company engaged in false advertising with respect to certain of the Company's safety-engineered products in violation of the Lanham Act; acted to exclude RTI from various product markets and to maintain its market share through, among other things, exclusionary contracts in violation of state and federal antitrust laws; and engaged in unfair competition. In January 2008, the Court severed the patent and non-patent claims into separate cases. BD paid a $5 million award following an adverse infringement verdict at the district court and the Company's unsuccessful appeal.

On September 19, 2013, a jury returned a verdict against BD with respect to RTI's Lanham Act claim and claim for attempted monopolization based on deception in the safety syringe market. The jury awarded RTI $113.5 million for its attempted monopolization claim (which would be trebled under the antitrust statute). Upon issuance of a Court of Appeals decision reversing the attempted monopolization claim, the Company recorded a $337 million reversal of reserves associated with the initial judgment, in *Other operating (income) expense, net*, in the first quarter of fiscal year 2017. The Court of Appeals affirmed the judgment for Lanham Act liability, and remanded the case to the district court to consider whether and if so how much profit should be disgorged by BD on that claim. The Court of Appeals also vacated and remanded the injunction ordered by the district court. On January 31, 2017, RTI filed a petition for a writ of certiorari with the U.S. Supreme Court.

On March 20, 2017, the U.S. Supreme Court denied certiorari, and the district court thereafter heard RTI's request for disgorgement. On August 17, 2017, the district court entered judgment in favor of BD and ruled that RTI is not entitled to any award of money damages. RTI has appealed this ruling to the Fifth Circuit Court of Appeals. Oral argument on the appeal occurred on October 3, 2018.

Since early 2013, Bard has received subpoenas or Civil Investigative Demands from a number of State Attorneys General seeking information related to the sales and marketing of certain of the Company's products that are the subject of the Hernia Product Claims and the Women's Health Product Claims. The Company is cooperating with these requests. Although the Company has had, and continues to have, discussions with the State Attorneys General with respect to overall potential resolution of this matter, there can be no assurance that a resolution will be reached or what the terms of any such resolution may be.

In November 2015, the Department of Defense Inspector General issued an investigative subpoena to Bard. The Department of Health and Human Services is also participating in this investigation. The subpoena seeks documents related to the Company's sales and marketing of certain filter products, drug coated balloon catheters, and peripheral arterial disease detection products. In July 2017, a separate civil investigative demand was served by the Department of Justice seeking documents and information relating to an investigation into possible violations of the False Claims Act in connection with the sales and marketing of FloChec® and QuantaFlo™ devices. The Company is cooperating with these requests. Since it is not feasible to predict the outcome of these matters, the Company cannot give any assurances that the resolution of these matters will not have a material adverse effect on the Company's business, results of operations, financial condition and/or liquidity.

The Company is a potentially responsible party to a number of federal administrative proceedings in the United States brought under the Comprehensive Environment Response, Compensation and Liability Act, also known as "Superfund," and similar state laws. The affected sites are in varying stages of development. In some instances, the remedy has been completed, while in others, environmental studies are underway or commencing. For several sites, there are other potentially responsible parties that may be jointly or severally liable to pay all or part of cleanup costs. While it is not feasible to predict the outcome of these proceedings, based upon the Company's experience, current information and applicable law, the Company does not expect these proceedings to have a material adverse effect on its financial condition and/or liquidity. However, one or more of the proceedings could be material to the Company's business and/or results of operations.

The Company is also involved both as a plaintiff and a defendant in other legal proceedings and claims that arise in the ordinary course of business. The Company believes that it has meritorious defenses to these suits pending against the Company and is engaged in a vigorous defense of each of these matters.

Litigation Reserves

Accruals for the Bard product liability claims which are specifically discussed above, as well as the related legal defense costs, amounted to approximately $2.0 billion at September 30, 2018. Such amounts include provisional estimates which have been recorded with respect to the acquired liabilities. These amounts may be adjusted upon the availability of new or additional information regarding facts or circumstances which existed at the acquisition date. As of September 30, 2018, the Company has $94 million in Bard-related qualified settlement funds ("QSFs"), subject to certain settlement conditions, for certain product liability matters. Payments to QSFs are recorded as a component of *Restricted cash*.

The Company's expected recoveries related to Bard-related product liability claims and related legal defense costs were approximately $343 million at September 30, 2018. A substantial amount of these expected recoveries at September 30, 2018 relate to the Company's agreements with Medtronic related to certain Women's Health Product Claims. The terms of the Company's agreements with Medtronic are substantially consistent with the assumptions underlying, and the manner in which, the Company has recorded expected recoveries related to the indemnification obligation. The expected recoveries at September 30, 2018 related to the indemnification obligation are not in dispute with respect to claims that Medtronic settles pursuant to the agreements. As described above, the agreements do not resolve the dispute between the Company and Medtronic with respect to Women's Health Product Claims that do not settle, if any, and the Company also may, in its sole discretion, transfer responsibility for settlement of additional Women's Health Product Claims to Medtronic on similar terms.

Note 6 — Segment Data

Beginning in the second quarter of fiscal year 2018, the Company's organizational structure was based upon three principal business segments: BD Medical ("Medical"), BD Life Sciences ("Life Sciences") and BD Interventional ("Interventional"). As is further discussed in Note 9, the Company completed its acquisition of Bard on December 29, 2017. Beginning in the second quarter of fiscal year 2018, the Interventional segment included the majority of Bard's product offerings and certain product offerings, as further detailed below, which were previously reported in the Medical segment. Certain of Bard's product offerings were included under the Company's Medical segment, specifically within the new Medication Delivery Solutions unit, which was formerly the Medical segment's Medication and Procedural Solutions unit. The Company's three principal business segments are strategic businesses that are managed separately because each one develops, manufactures and markets distinct products and services.

BD Medical

BD Medical produces a broad array of medical technologies and devices that are used to help improve healthcare delivery in a wide range of settings. The primary customers served by BD Medical are hospitals and clinics; physicians' office practices; consumers and retail pharmacies; governmental and nonprofit public health agencies; pharmaceutical companies; and healthcare workers. BD Medical consists of the following organizational units:

Organizational Unit	Principal Product Lines
Medication Delivery Solutions	Peripheral IV catheters (conventional, safety), advanced peripheral catheters (guidewire assisted peripherally inserted venous catheters, midline catheters, port access), centeral lines (peripherally inserted centeral catheters), acute dialysis catheters; vascular access technology (ultrasonic imaging); vascular care (lock solutions, prefilled flush syringes, disinfecting caps); vascular preparation (skin antiseptics, dressings, securement); needle-free IV connectors and extensions sets, IV fluids; closed-system drug transfer devices, hazardous drug detection; conventional and safety hypodermic syringes and needles, anesthesia needles (spinal, epidural) and trays; enteral syringes, sharps disposal systems.
Medication Management Solutions	Intravenous medication safety and infusion therapy delivery systems, including infusion pumps and dedicated disposables; medication compounding workflow systems; automated medication dispensing; automated supply management systems; medication inventory optimization and tracking systems; and analytics related to all the above products.
Diabetes Care	Syringes, pen needles and other products related to the injection or infusion of insulin and other drugs used in the treatment of diabetes.
Pharmaceutical Systems	Prefillable drug delivery systems - prefillable syringes, safety, shielding and self-injection systems - provided to pharmaceutical companies for use as containers for injectable pharmaceutical products, which are then placed on the market as drug/device combinations.

BD Life Sciences

BD Life Sciences provides products for the safe collection and transport of diagnostics specimens, and instruments and reagent systems to detect a broad range of infectious diseases, healthcare-associated infections ("HAIs") and cancers. In addition, BD Life Sciences produces research and clinical tools that facilitate the study of cells, and the components of cells, to gain a better understanding of normal and disease processes. That information is used to aid the discovery and development of new drugs and vaccines, and to improve the diagnosis and management of diseases. The primary customers served by BD Life Sciences are hospitals, laboratories and clinics; blood banks; healthcare workers; public health agencies; physicians' office practices; academic and government institutions; and pharmaceutical and biotechnology companies. BD Life Sciences consists of the following organizational units:

Organizational Unit	Principal Product Lines
Preanalytical Systems	Integrated systems for specimen collection; safety-engineered blood collection products and systems.
Diagnostic Systems	Automated blood culturing and tuberculosis culturing systems; molecular testing systems for infectious diseases and women's health; microorganism identification and drug susceptibility systems; liquid-based cytology systems for cervical cancer screening; rapid diagnostic assays; microbiology laboratory automation; and plated media.
Biosciences	Fluorescence-activated cell sorters and analyzers; monoclonal antibodies and kits for performing cell analysis; reagent systems for life science research; bench-side solutions for high-throughput targeted single-cell gene expression and RNA-Seq analysis; molecular indexing and next-generation sequencing sample preparation for genomics research; and clinical oncology, immunological (HIV) and transplantation diagnostic/ monitoring reagents and analyzers.

BD Interventional

BD Interventional provides vascular, urology, oncology and surgical specialty products that are, with the exception of the V. Muller surgical and laparoscopic instrumentation products, intended to be used once and then discarded or are either temporarily or permanently implanted. The primary customers served by BD Interventional are hospitals, individual healthcare professionals, extended care facilities, alternate site facilities and directly to patients via the segment's Homecare business. The Interventional segment consists of the following organizational units:

Organizational Unit	Principal Product Lines
Surgery	Hernia and soft tissue repair, biological grafts, bioresorbable grafts, biosurgery, and other surgical products; BD ChloraPrep™ surgical infection prevention products, thoracic and abdominal drainage products and V. Mueller™ surgical & laparoscopic instrumentation products, which are products previously included within the former Medication and Procedural Solutions unit of BD Medical.
Peripheral Intervention	Percutaneous transluminal angioplasty ("PTA") balloon catheters, peripheral vascular stents, self-expanding and balloon-expandable stent grafts, vascular grafts, drug coated balloons, ports, biopsy, chronic dialysis, feeding, IVC filters, endovascular fistula creation devices and drainage products.
Urology and Critical Care	Urological drainage products, intermittent catheters, urinary and fecal management devices, kidney stone management devices, and Targeted Temperature Management.

Additional Segment Information

Distribution of products is primarily through independent distribution channels, and directly to end-users by BD and independent sales representatives. No customer accounted for 10% or more of revenues in any of the three years presented.

Segment disclosures are on a performance basis consistent with internal management reporting. The Company evaluates performance of its business segments and allocates resources to them primarily based upon operating income, which represents revenues reduced by product costs and operating expenses. Segment operating income represents revenues reduced by product costs and operating expenses. Beginning with its first quarter fiscal year 2018, the Company changed its management reporting approach so that certain general and administrative costs, which were previously allocated to the segments, are now excluded from the segments' operating expenses. The Medical and Life Sciences segments' operating income for the year ended September 30, 2017 included allocated general corporate costs of $166 million and $113 million, respectively. The Medical and Life Sciences segments' operating income for the year ended September 30, 2016 included allocated general corporate costs of $175 million and $95 million, respectively. No such allocations were made in the year ended September 30, 2018.

As more fully discussed in Note 10, the Company sold a 50.1% controlling financial interest in its Respiratory Solutions business, a component of the Medical segment, in October 2016. This transaction did not meet the criteria established for reporting discontinued operations and as such, results for the year ended September 30, 2016 included $822 million of revenues which did not occur in 2018 and 2017.

(Millions of dollars)	2018	2017	2016
Revenues (a)			
Medical (b)	$ 8,616	$ 7,419	$ 7,965
Life Sciences	4,330	3,988	3,829
Interventional (b)	3,037	685	689
Total Revenues	$ 15,983	$ 12,093	$ 12,483
Income Before Income Taxes			
Medical (b) (c) (d)	$ 2,624	$ 1,907	$ 1,807
Life Sciences (e)	1,207	772	793
Interventional (b) (c)	306	248	245
Total Segment Operating Income	4,137	2,927	2,845
Acquisitions and other restructurings	(744)	(354)	(728)
Net interest expense	(641)	(445)	(367)
Other unallocated items (f)	(1,578)	(1,152)	(676)
Total Income Before Income Taxes	$ 1,173	$ 976	$ 1,074
Assets			
Medical (b)	$ 23,493	$ 15,552	$ 16,370
Life Sciences	4,225	4,056	3,848
Interventional (b)	23,219	2,780	2,784
Total Segment Assets	50,938	22,388	23,002
Corporate and All Other (g)	2,966	15,347	2,584
Total Assets	$ 53,904	$ 37,734	$ 25,586
Capital Expenditures			
Medical (b)	$ 560	$ 486	$ 464
Life Sciences	255	212	200
Interventional (b)	65	16	18
Corporate and All Other	14	13	12
Total Capital Expenditures	$ 895	$ 727	$ 693
Depreciation and Amortization			
Medical (b)	$ 1,028	$ 773	$ 801
Life Sciences	275	254	254
Interventional (b)	658	52	56
Corporate and All Other	17	10	3
Total Depreciation and Amortization	$ 1,978	$ 1,088	$ 1,114

(a) The Company has no material intersegment revenues.

(b) Prior-year amounts have been reclassified to reflect the movement of certain product offerings previously reported in the Medical segment and which are now reported in the Interventional segment, as further discussed above. Accordingly, all amounts presented in 2017 and 2016 for the Interventional segment are associated with these products.

(c) The amounts in 2018 included expense related to the recognition of a $478 million fair value step-up adjustment related to Bard's inventory on the acquisition date. The step-up adjustments recognized by the Medical and Interventional segments in 2018 were $60 million and $418 million, respectively.

(d) The amount in 2018 included $58 million of charges to write down the value of fixed assets primarily in the Diabetes Care unit.

(e) The amount in 2018 included $81 million of charges recorded to write down the carrying value of certain intangible and other assets in the Biosciences unit.

(f) The amounts in 2018, 2017 and 2016 comprised of foreign exchange, corporate expenses, and share-based compensation expense. Results in 2018 were impacted by the Company's change in its management reporting approach, as further discussed above. Results in 2017 included a $748 million non-cash charge resulting from a modification to the Company's dispensing equipment lease contracts with customers, as well as the reversal of certain litigation reserves as further discussed in Note 5.

(g) Includes cash and investments and corporate assets.

Geographic Information

The countries in which the Company has local revenue-generating operations have been combined into the following geographic areas: the United States (including Puerto Rico); Europe; Greater Asia (which includes Japan and Asia Pacific); and Other, which is comprised of Latin America, Canada, and EMA (which includes the Commonwealth of Independent States, Middle East and Africa).

Revenues to unaffiliated customers are generally based upon the source of the product shipment. Long-lived assets, which include net property, plant and equipment, are based upon physical location.

(Millions of dollars)	2018	2017	2016
Revenues			
United States	$ 8,768	$ 6,504	$ 6,893
Europe	3,298	2,588	2,674
Greater Asia	2,460	1,744	1,692
Other	1,457	1,257	1,225
	$ 15,983	$ 12,093	$ 12,483
Long-Lived Assets			
United States	$ 38,982	$ 13,151	$ 14,075
Europe	5,640	4,421	3,747
Greater Asia	851	578	586
Other	645	584	483
Corporate	375	366	329
	$ 46,494	$ 19,101	$ 19,220

Note 7 — Share-Based Compensation

The Company grants share-based awards under the 2004 Employee and Director Equity-Based Compensation Plan ("2004 Plan"), which provides long-term incentive compensation to employees and directors consisting of: stock appreciation rights ("SARs"), performance-based restricted stock units, time-vested restricted stock units and other stock awards.

The fair value of share-based payments is recognized as compensation expense in net income. The amounts and location of compensation cost relating to share-based payments included in the consolidated statements of income is as follows:

(Millions of dollars)	2018	2017	2016
Cost of products sold	$ 36	$ 30	$ 29
Selling and administrative expense	136	113	106
Research and development expense	29	24	22
Acquisitions and other restructurings	130	10	39
	$ 332	$ 177	$ 196
Tax benefit associated with share-based compensation costs recognized	$ 79	$ 61	$ 69

Upon the Company's acquisition of Bard in 2018, certain pre-acquisition equity awards of Bard were converted into either BD SARs or BD restricted stock awards, as applicable. These awards have substantially the same terms and conditions as the converted Bard awards immediately prior to the acquisition date. The compensation expense of $126 million associated with these replacement awards was recorded in *Acquisitions and other restructurings.*

Stock Appreciation Rights

SARs represent the right to receive, upon exercise, shares of common stock having a value equal to the difference between the market price of common stock on the date of exercise and the exercise price on the date of grant. SARs vest over a four-year period and have a ten-year term. The fair value was estimated on the date of grant using a lattice-based binomial option valuation model that uses the following weighted-average assumptions:

	2018	2017	2016
Risk-free interest rate	2.32%	2.33%	2.17%
Expected volatility	19.0%	20.0%	19.0%
Expected dividend yield	1.33%	1.71%	1.76%
Expected life	7.4 years	7.5 years	7.6 years
Fair value derived	$46.10	$33.81	$27.69

Expected volatility is based upon historical volatility for the Company’s common stock and other factors. The expected life of SARs granted is derived from the output of the lattice-based model, using assumed exercise rates based on historical exercise and termination patterns, and represents the period of time that SARs granted are expected to be outstanding. The risk-free interest rate used is based upon the published U.S. Treasury yield curve in effect at the time of grant for instruments with a similar life. The dividend yield is based upon the most recently declared quarterly dividend as of the grant date. The Company issued 1.4 million shares during 2018 to satisfy the SARs exercised.

A summary of SARs outstanding as of September 30, 2018 and changes during the year then ended is as follows:

	SARs (in thousands)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (Millions of dollars)
Balance at October 1	6,466	$ 117.94		
Granted	4,295	123.97		
Exercised	(2,511)	98.67		
Forfeited, canceled or expired	(264)	163.69		
Balance at September 30	7,986	$ 125.73	5.88	$ 1,080
Vested and expected to vest at September 30	7,732	$ 124.10	5.81	$ 1,059
Exercisable at September 30	5,450	$ 102.66	4.90	$ 863

A summary of SARs exercised 2018, 2017 and 2016 is as follows:

(Millions of dollars)	2018	2017	2016
Total intrinsic value of SARs exercised	$ 333	$ 148	$ 148
Tax benefit realized from SAR exercises	$ 90	$ 53	$ 52
Total fair value of SARs vested	$ 107	$ 30	$ 24

Stock Options

The Company has not granted stock options since 2005. Certain pre-acquisition equity awards of CareFusion were converted on March 17, 2015 into BD stock options with accelerated vesting terms and there were 166 thousand of these awards outstanding at September 30, 2018. Amounts recognized or realized in 2018, 2017 and 2016 relative to stock option exercises, including cash received, the tax benefit realized and the total intrinsic value, were immaterial to the Company's consolidated financial results.

Performance-Based and Time-Vested Restricted Stock Units

Performance-based restricted stock units cliff vest three years after the date of grant. These units are tied to the Company's performance against pre-established targets over a three-year performance period. The performance measures for fiscal years 2018, 2017 and 2016 were relative total shareholder return (measures the Company's stock performance during the performance period against that of peer companies) and average annual return on invested capital. Under the Company's long-term incentive program, the actual payout under these awards may vary from zero to 200% of an employee's target payout, based on the Company's actual performance over the three-year performance period. The fair value is based on the market price of the Company's stock on the date of grant. Compensation cost initially recognized assumes that the target payout level will be achieved and is adjusted for subsequent changes in the expected outcome of performance-related conditions. For units for which the performance conditions are modified after the date of grant, any incremental increase in the fair value of the modified units, over the original units, is recorded as compensation expense on the date of the modification for vested units, or over the remaining performance period for units not yet vested.

Time-vested restricted stock unit awards granted after January 2015 vest on a graded basis over a three-year period. Time-vested restricted stock units granted before January 2015 cliff vest three years after the date of grant, except for certain key executives of the Company, including the executive officers, for which such units generally vest one year following the employee's retirement. The related share-based compensation expense is recorded over the requisite service period, which is the vesting period or is based on retirement eligibility. The fair value of all time-vested restricted stock units is based on the market value of the Company's stock on the date of grant.

A summary of restricted stock units outstanding as of September 30, 2018 and changes during the year then ended is as follows:

	Performance-Based			Time-Vested	
	Stock Units (in thousands)		Weighted Average Grant Date Fair Value	Stock Units (in thousands)	Weighted Average Grant Date Fair Value
Balance at October 1	1,080		$ 161.64	2,136	$ 142.06
Granted	338		251.75	2,903	216.06
Distributed	(119)		156.65	(1,368)	167.86
Forfeited or canceled	(267)		173.67	(906)	178.87
Balance at September 30	1,032	(a)	$ 190.57	2,765	$ 194.92
Expected to vest at September 30	548	(b)	$ 192.35	2,585	$ 193.90

(a) Based on 200% of target payout.

(b) Net of expected forfeited units and units in excess of the expected performance payout of 64 thousand and 420 thousand shares, respectively.

The weighted average grant date fair value of restricted stock units granted during the years 2018, 2017 and 2016 are as follows:

	Performance-Based			Time-Vested		
	2018	2017	2016	2018	2017	2016
Weighted average grant date fair value of units granted	$251.75	$174.92	$153.73	$216.06	$165.96	$145.57

The total fair value of stock units vested during 2018, 2017 and 2016 was as follows:

	Performance-Based			Time-Vested		
(Millions of dollars)	2018	2017	2016	2018	2017	2016
Total fair value of units vested	$ 31	$ 32	$ 22	$ 362	$ 139	$ 114

At September 30, 2018, the weighted average remaining vesting term of performance-based and time vested restricted stock units is 0.79 and 1.05 year, respectively.

Unrecognized Compensation Expense and Other Stock Plans

The amount of unrecognized compensation expense for all non-vested share-based awards as of September 30, 2018, is approximately $307 million, which is expected to be recognized over a weighted-average remaining life of approximately 2.04 years. At September 30, 2018, 7.1 million shares were authorized for future grants under the 2004 Plan. The Company has a policy of satisfying share-based payments through either open market purchases or shares held in treasury. At September 30, 2018, the Company has sufficient shares held in treasury to satisfy these payments.

As of September 30, 2018, 135 thousand shares were held in trust relative to a Director's Deferral plan, which provides a means to defer director compensation, from time to time, on a deferred stock or cash basis. Also as of September 30, 2018, 338 thousand shares were issuable under a Deferred Compensation Plan that allows certain highly-compensated employees, including executive officers, to defer salary, annual incentive awards and certain equity-based compensation.

Note 8 — Benefit Plans

The Company has defined benefit pension plans covering certain employees in the United States and certain international locations. Postretirement healthcare and life insurance benefits provided to qualifying domestic retirees as well as other postretirement benefit plans in international countries are not material. The measurement date used for the Company's employee benefit plans is September 30.

Effective January 1, 2018, the legacy U.S. pension plan was frozen to limit the participation of employees who are hired or re-hired by the Company, or who transfer employment to the Company, on or after January 1, 2018.

Net pension cost for the years ended September 30 included the following components:

	Pension Plans		
(Millions of dollars)	**2018**	**2017**	**2016**
Service cost	$ 136	$ 110	$ 81
Interest cost	90	61	72
Expected return on plan assets	(154)	(112)	(109)
Amortization of prior service credit	(13)	(14)	(15)
Amortization of loss	78	92	77
Settlements	2	—	7
Net pension cost	$ 137	$ 138	$ 113
Net pension cost included in the preceding table that is attributable to international plans	$ 34	$ 43	$ 35

The amounts provided above for amortization of prior service credit and amortization of loss represent the reclassifications of prior service credits and net actuarial losses that were recognized in *Accumulated other comprehensive income (loss)* in prior periods. The settlement losses recorded in 2018 and 2016 primarily included lump sum benefit payments associated with the Company's U.S. supplemental pension plan. The Company recognizes pension settlements when payments from the supplemental plan exceed the sum of service and interest cost components of net periodic pension cost associated with this plan for the fiscal year.

The change in benefit obligation, change in fair value of pension plan assets, funded status and amounts recognized in the Consolidated Balance Sheets for these plans were as follows:

	Pension Plans	
(Millions of dollars)	2018	2017
Change in benefit obligation:		
Beginning obligation	$ 2,647	$ 2,719
Service cost	136	110
Interest cost	90	61
Plan amendments	—	(1)
Benefits paid	(162)	(123)
Impact of acquisitions (divestitures)	758	(19)
Actuarial gain	(82)	(134)
Settlements	(122)	(1)
Other, includes translation	(19)	36
Benefit obligation at September 30	$ 3,246	$ 2,647
Change in fair value of plan assets:		
Beginning fair value	$ 1,932	$ 1,855
Actual return on plan assets	70	134
Employer contribution	400	54
Benefits paid	(162)	(123)
Impact of acquisitions (divestitures)	539	(13)
Settlements	(122)	(1)
Other, includes translation	(15)	26
Plan assets at September 30	$ 2,642	$ 1,932
Funded Status at September 30:		
Unfunded benefit obligation	$ (604)	$ (715)
Amounts recognized in the Consolidated Balance Sheets at September 30:		
Other	$ 15	$ 9
Salaries, wages and related items	(15)	(17)
Long-term Employee Benefit Obligations	(604)	(707)
Net amount recognized	$ (604)	$ (715)
Amounts recognized in Accumulated other comprehensive income (loss) before income taxes at September 30:		
Prior service credit	$ 60	$ 74
Net actuarial loss	(982)	(1,065)
Net amount recognized	$ (921)	$ (991)

International pension plan assets at fair value included in the preceding table were $821 million and $678 million at September 30, 2018 and 2017, respectively. The international pension plan projected benefit obligations were $1.064 billion and $917 million at September 30, 2018 and 2017, respectively.

The benefit obligation associated with postretirement healthcare and life insurance plans provided to qualifying domestic retirees, which was largely recorded to *Long-Term Employee Benefit Obligations,* was $148 million and $165 million at September 30, 2018 and 2017, respectively.

Pension plans with accumulated benefit obligations in excess of plan assets and plans with projected benefit obligations in excess of plan assets consist of the following at September 30:

	Accumulated Benefit Obligation Exceeds the Fair Value of Plan Assets		Projected Benefit Obligation Exceeds the Fair Value of Plan Assets	
(Millions of dollars)	**2018**	**2017**	**2018**	**2017**
Projected benefit obligation	$ 2,618	$ 2,551	$ 3,121	$ 2,613
Accumulated benefit obligation	$ 2,533	$ 2,470		
Fair value of plan assets	$ 2,012	$ 1,833	$ 2,502	$ 1,889

The estimated net actuarial loss and prior service credit for pension benefits that will be amortized from *Accumulated other comprehensive income (loss)* into net pension costs over the next fiscal year are expected to be $79 million and $14 million, respectively. The net actuarial loss for other postretirement benefits that will be amortized from *Accumulated other comprehensive income (loss)* into net other postretirement costs over the next fiscal year is immaterial. The estimated prior service credit that will be amortized from *Accumulated other comprehensive income (loss)* into net other postretirement costs over the next fiscal year is expected to be $5 million.

The weighted average assumptions used in determining pension plan information were as follows:

	2018	2017	2016
Net Cost			
Discount rate:			
U.S. plans (a)	3.71%	3.42%	4.15%
International plans	2.30	1.70	2.84
Expected return on plan assets:			
U.S. plans	7.20	7.25	7.50
International plans	4.95	4.65	5.02
Rate of compensation increase:			
U.S. plans	4.51	4.25	4.25
International plans	2.31	2.33	2.33
Benefit Obligation			
Discount rate:			
U.S. plans	4.26	3.72	3.42
International plans	2.30	2.25	1.70
Rate of compensation increase:			
U.S. plans	4.29	4.51	4.25
International plans	2.36	2.30	2.33

(a) The Company calculated the service and interest components utilizing an approach that discounts the individual expected cash flows using the applicable spot rates derived from the yield curve over the projected cash flow period.

Expected Rate of Return on Plan Assets

The expected rate of return on plan assets is based upon expectations of long-term average rates of return to be achieved by the underlying investment portfolios. In establishing this assumption, the Company considers many factors, including historical assumptions compared with actual results; benchmark data; expected returns on various plan asset classes, as well as current and expected asset allocations.

Expected Funding

The Company's funding policy for its defined benefit pension plans is to contribute amounts sufficient to meet legal funding requirements, plus any additional amounts that may be appropriate considering the funded status of the plans, tax consequences, the cash flow generated by the Company and other factors. The Company made discretionary contributions of $287 million to its U.S. pension plans in 2018. The Company also made a discretionary contribution of $200 million to its BD U.S. pension in October 2018. The Company does not anticipate any significant required contributions to its pension plans in 2019.

Expected benefit payments are as follows:

(Millions of dollars)	Pension Plans	Other Postretirement Benefits
2019	$ 213	$ 14
2020	202	14
2021	208	13
2022	209	13
2023	214	12
2024-2028	1,096	54

Investments

The Company's primary objective is to achieve returns sufficient to meet future benefit obligations. It seeks to generate above market returns by investing in more volatile asset classes such as equities while at the same time controlling risk through diversification in non-correlated asset classes and through allocations to more stable asset classes like fixed income.

U.S. Plans

The Company's U.S. pension plans comprise 69% of total benefit plan investments, based on September 30, 2018 market values and have a target asset mix of 40% fixed income, 28% diversifying investments and 32% equities. This mix was established based on an analysis of projected benefit payments and estimates of long-term returns, volatilities and correlations for various asset classes. The asset allocations to diversifying investments include high-yield bonds, hedge funds, real estate, infrastructure, commodities, leveraged loans and emerging markets bonds.

The actual portfolio investment mix may, from time to time, deviate from the established target mix due to various factors such as normal market fluctuations, the reliance on estimates in connection with the determination of allocations and normal portfolio activity such as additions and withdrawals. Rebalancing of the asset portfolio on a quarterly basis is required to address any allocations that deviate from the established target allocations in excess of defined allowable ranges. The target allocations are subject to periodic review, including a review of the asset portfolio's performance, by the named fiduciary of the plans. Any tactical deviations from the established asset mix require the approval of the named fiduciary.

The U.S. plans may enter into both exchange traded and non-exchange traded derivative transactions in order to manage interest rate exposure, volatility, term structure of interest rates, and sector and currency exposures within the fixed income portfolios. The Company has established minimum credit quality standards for counterparties in such transactions.

The following table provides the fair value measurements of U.S. plan assets, as well as the measurement techniques and inputs utilized to measure fair value of these assets, at September 30, 2018 and 2017. The categorization of fund investments is based upon the categorization of these funds' underlying assets.

(Millions of dollars)	Total U.S. Plan Asset Balances		Investments Measured at Net Asset Value (a)		Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)		Significant Unobservable Inputs (Level 3)	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Fixed Income:										
Mortgage and asset-backed securities	$ 28	$ 155	$ —	$ —	$ —	$ —	$ 28	$ 155	$ —	$ —
Corporate bonds	484	232	—	—	101	89	383	144	—	—
Government and agency-U.S.	257	107	—	—	199	83	57	25	—	—
Government and agency-Foreign	122	98	8	12	85	63	28	22	—	—
Equity securities	536	369	360	307	176	62	—	—	—	—
Cash and cash equivalents	39	40	—	—	39	40	—	—	—	—
Other	356	252	356	217	—	34	—	—	—	—
Fair value of plan assets	$1,821	$1,254	$ 724	$ 537	$ 600	$ 371	$ 497	$ 346	$ —	$ —

(a) As per applicable disclosure requirements, certain investments that were measured at net asset value per share or its equivalent have not been categorized within the fair value hierarchy. Values of such assets are based on the corroborated net asset value provided by the fund administrator.

Fixed Income Securities

U.S. pension plan assets categorized above as fixed income securities include fund investments comprised of mortgage-backed, corporate, government and agency and asset-backed instruments. Mortgage-backed securities consist of residential mortgage pass-through certificates. Investments in corporate bonds are diversified across industry and sector and consist of investment-grade, as well as high-yield debt instruments. U.S. government investments consist of obligations of the U.S. Treasury, other U.S. government agencies, state governments and local municipalities. Assets categorized as foreign government and agency debt securities included investments in developed and emerging markets.

The values of fixed income investments classified within Level 1 are based on the closing price reported on the major market on which the investments are traded. A portion of the fixed income instruments classified within Level 2 are valued based upon estimated prices from independent vendors' pricing models and these prices are derived from market observable sources including: benchmark yields, reported trades, broker/dealer quotes, issuer spreads, benchmark securities, bids, offers and other market-related data.

Equity Securities

U.S. pension plan assets categorized as equity securities consist of fund investments in publicly-traded U.S. and non-U.S. equity securities. In order to achieve appropriate diversification, these portfolios are invested across market sectors, investment styles, capitalization weights and geographic regions. The values of equity securities classified within Level 1 are based on the closing price reported on the major market on which the investments are traded.

Cash and Cash Equivalents

A portion of the U.S. plans' assets consists of investments in cash and cash equivalents, primarily to accommodate liquidity requirements relating to trade settlement and benefit payment activity, and the values of these assets are based upon quoted market prices.

Other Securities

Other U.S. pension plan assets include fund investments comprised of underlying assets of real estate, infrastructure, commodities and hedge funds. The values of such instruments classified within Level 1 are based on the closing price reported on the major market on which the investments are traded.

International Plans

International plan assets comprise 31% of the Company's total benefit plan assets, based on market value at September 30, 2018. Such plans have local independent fiduciary committees, with responsibility for development and oversight of investment policy, including asset allocation decisions. In making such decisions, consideration is given to local regulations, investment practices and funding rules.

The following table provides the fair value measurements of international plan assets, as well as the measurement techniques and inputs utilized to measure fair value of these assets, at September 30, 2018 and 2017.

(Millions of dollars)	Total International Plan Asset Balances		Investments Measured at Net Asset Value (a)		Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)		Significant Unobservable Inputs (Level 3)	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Fixed Income:										
Corporate bonds	$ 28	$ 14	$ —	$ —	$ 14	$ —	$ 14	$ 13	$ —	$ —
Government and agency-U.S.	6	5	—	—	3	1	3	3	—	—
Government and agency-Foreign	150	127	—	—	104	83	46	45	—	—
Other fixed income	96	64	—	—	63	57	33	7	—	—
Equity securities	314	256	15	13	299	242	—	—	—	—
Cash and cash equivalents	9	28	—	—	9	28	—	—	—	—
Real estate	30	26	—	—	—	—	30	26	—	—
Insurance contracts	114	98	—	—	—	—	—	—	114	98
Other	74	62	—	—	55	47	20	15	—	—
Fair value of plan assets	$ 821	$ 678	$ 15	$ 13	$ 546	$ 459	$ 146	$ 108	$ 114	$ 98

(a) As per applicable disclosure requirements, certain investments that were measured at net asset value per share or its equivalent have not been categorized within the fair value hierarchy. Values of such assets are based on the corroborated net asset value provided by the fund administrator.

Fixed Income Securities

Fixed income investments held by international pension plans include corporate, U.S. government and non-U.S. government securities. The values of fixed income securities classified within Level 1 are based on the closing price reported on the major market on which the investments are traded. Values of investments classified within Level 2 are based upon estimated prices from independent vendors' pricing models and these prices are derived from market observable sources.

Equity Securities

Equity securities included in the international plan assets consist of publicly-traded U.S. and non-U.S. equity securities. The values of equity securities classified within Level 1 are based on the closing price reported on the major market on which the investments are traded.

Other Securities

The international plans hold a portion of assets in cash and cash equivalents, in order to accommodate liquidity requirements and the values are based upon quoted market prices. Real estate investments consist of investments in funds holding an interest in real properties and the corresponding values represent the estimated fair value based on the fair value of the underlying investment value or cost, adjusted for any accumulated earnings or losses. The values of insurance contracts approximately represent cash surrender value. Other investments include fund investments for which values are based upon either quoted market prices or market observable sources.

The following table summarizes the changes, for the years ended September 30, 2018 and 2017, in the fair value of international pension assets measured using Level 3 inputs:

(Millions of dollars)	Insurance Contracts
Balance at September 30, 2016	$ 102
Actual return on plan assets:	
Relating to assets held at September 30, 2016	1
Purchases, sales and settlements, net	(11)
Transfers in from other categories	1
Exchange rate changes	4
Balance at September 30, 2017	$ 98
Actual return on plan assets:	
Relating to assets held at September 30, 2017	2
Purchases, sales and settlements, net	15
Transfers in from other categories	1
Exchange rate changes	(2)
Balance at September 30, 2018	$ 114

Defined Contribution Plans

The Company has voluntary defined contribution plans covering eligible employees in the United States which provide for a Company match as well as a Company contribution for Bard associates and for associates hired or rehired after December 31, 2017. The cost of these plans was $89 million in 2018, $67 million in 2017 and $61 million in 2016. The 2018 increase in the cost associated with these plans is attributable to the Company's acquisition of Bard.

Note 9 – Acquisitions

Bard

On December 29, 2017, the Company completed its acquisition of Bard, to create a medical technology company which is uniquely positioned to improve both the treatment of disease for patients and the process of care for health care providers. Under the terms of the transaction, Bard common shareholders received approximately $222.93 in cash and 0.5077 shares of BD stock per Bard share. The Company financed the cash portion of total consideration transferred with available cash, which included net proceeds raised in the third quarter of fiscal year 2017 through registered public offerings of equity securities and debt transactions of approximately $4.8 billion and $9.6 billion, respectively. The operating activities of Bard from the acquisition date through December 31, 2017 were not material to the Company's consolidated results of operations. As such, Bard's operating results were included in the Company's consolidated results of operations beginning on January 1, 2018.

The acquisition-date fair value of consideration transferred consisted of the components below. The fair value of the shares and equity awards issued as consideration was recognized as a $6.5 billion increase to *Capital in excess of par value* and a $2.1 billion decrease to *Common stock in treasury.*

(Millions of dollars)		
Cash consideration	$	16,400
Non-cash consideration-fair value of shares issued		8,004
Non-cash consideration-fair value of equity awards issued		613
Total consideration transferred	$	25,017

The acquisition-date fair value of the Company's ordinary shares issued to Bard shareholders was calculated per the following (shares in millions):

(Millions of dollars, except per share data)		
Total Bard shares outstanding		73.359
Conversion factor		0.5077
Conversion of Bard shares outstanding		37.243
Conversion of pre-acquisition equity awards		0.104
Total number of the Company's share issued		37.347
Closing price of the Company's stock	$	214.32
Fair value of the Company's issued shares	$	8,004

Allocation of Consideration Transferred to Net Assets Acquired

As discussed in Note 6, the majority of Bard's product offerings are reported, beginning with the second quarter of fiscal year 2018, under the Interventional segment and Bard's remaining product offerings are reported under the Company's Medical segment. The acquisition was accounted for under the acquisition method of accounting for business combinations. The Company is in the process of finalizing the allocation of the purchase price to the individual assets acquired and liabilities assumed.

The preliminary allocations of the purchase price below provide a reasonable basis for estimating the fair values of assets acquired and liabilities assumed. These provisional estimates will be adjusted upon the availability of further information regarding events or circumstances which existed at the acquisition date and such adjustments may be significant. The assets acquired and liabilities assumed in this acquisition, as recorded in the Company's consolidated balance sheet at September 30, 2018, were largely allocated to the Company's new Interventional segment.

(Millions of dollars)		
Cash and equivalents	$	1,480
Trade receivables		472
Inventories		974
Property, plant and equipment		553
Developed technology		10,469
Customer relationships		1,146
Other assets		624
Total identifiable assets acquired		15,718
Payables, accrued expenses and other liabilities		1,276
Short term and long-term debt		1,692
Product liability and other legal reserves		2,029
Deferred tax liabilities		1,713
Total liabilities assumed		6,711
Net identifiable assets acquired		9,007
Goodwill		16,009
Net assets acquired	$	25,017

Identifiable Intangible Assets Acquired

The developed technology assets acquired represented Bard’s developed technologies in the fields of vascular, urology, oncology, and surgical specialties. The technologies’ fair values were determined based on the present value of projected cash flows utilizing an income approach with a risk-adjusted discount rate of 8%. The technologies will be amortized over an estimated weighted-average amortization period of 14 years, which is the weighted average period over which the technologies are expected to generate substantial cash flows.

The customer relationships assets acquired represented Bard’s relationships with its customers. The fair value of these customer relationships was determined based on the present value of projected cash flows utilizing an income approach with a risk-adjusted discount rate of 8%. The estimated weighted-average amortization period of the customer relationships was determined to be 13 years and this period corresponds with the weighted average of lives determined for the product technology which underlies the customer contracts.

Goodwill

Goodwill typically results through expected synergies from combining operations of the acquiree and the acquirer, as well as from intangible assets that do not qualify for separate recognition. The goodwill recognized as a result of this acquisition includes, among other things, the value of combining the Company's leadership in

medication management and infection prevention with an expanded offering of solutions across the care continuum. Additionally, Bard's strong product portfolio and innovation pipeline are expected to increase the Company's opportunities in fast-growing clinical areas. Revenue synergies are also expected to result from enhanced growth opportunities for the combined company in non-U.S. markets. No portion of goodwill from this acquisition was deductible for tax purposes.

Amounts Related to Bard's Legal Proceedings and Claims

Accruals for Bard-related product liability and other legal matters represented approximately $2.0 billion of the liabilities assumed. Cash and equivalents include a restricted cash balance acquired which largely represents funds that are restricted for certain product liability matters assumed. Additional disclosures regarding Bard's legal proceedings and claims are provided in Note 5.

The Tax Cuts and Job Act Transition Tax

The net assets acquired included approximately $175 million of transition tax payable based on the Company's best estimate of its transition tax liability under new U.S. tax legislation which is further discussed in Note 16.

Transaction Costs

Transaction costs related to this acquisition incurred during the years ended September 30, 2018 and 2017 were approximately $56 million and $25 million, respectively. These transaction costs were recorded as *Acquisitions and other restructurings* and consisted of legal, advisory and other costs. See Note 11 for discussion regarding restructuring costs incurred relative to the Bard acquisition in 2018.

Unaudited Pro Forma Information

As noted above, Bard's operating activities from the acquisition date through December 31, 2017 were not material and the Company included Bard in its consolidated results of operations beginning on January 1, 2018. *Revenues* in 2018 were $3 billion. *Net Income* in 2018 included loss attributable to Bard of $(107) million. The following table provides the pro forma results for the fiscal years 2018 and 2017 as if Bard had been acquired as of October 1, 2016.

(Millions of dollars, except per share data)

	2018	2017
Revenues	$ 16,947	$ 15,781
Net Income	$ 390	$ 1,145
Diluted Earnings per Share	$ 0.90	$ 3.60

The pro forma results above include the impact of the following adjustments, as necessary: additional amortization and depreciation expense relating to assets acquired; interest and other financing costs relating to the acquisition transaction; and the elimination of one-time or nonrecurring items. The one-time or nonrecurring items eliminated for the year ended September 30, 2018 were primarily comprised of fair value step-up adjustments of $478 million recorded relative to Bard's inventory on the acquisition date, the transaction costs discussed above, as well as certain Bard-related restructuring costs disclosed in Note 11. In addition, amounts previously reported by Bard as revenues related to a royalty income stream have been reclassified to *Other income (expense), net* to conform to the Company's reporting classification.

The pro forma results do not include any anticipated cost savings or other effects of the planned integration of Bard. Accordingly, the pro forma results above are not necessarily indicative of the results that would have been if the acquisition had occurred on the dates indicated, nor are the pro forma results indicative of results which may occur in the future.

Other Transactions

During the fourth quarter of fiscal year 2018, the Company acquired TVA Medical, Inc., a company that develops minimally invasive vascular access solutions for patients with chronic kidney disease requiring hemodialysis. This acquisition did not materially impact the Company's consolidated financial results.

The Company has completed various other acquisitions during fiscal year 2018 which were not material individually or in the aggregate.

Upon the Company's acquisition of CareFusion, it acquired a 40% ownership interest in Caesarea Medical Electronics ("CME"), an Israeli-based global infusion pump systems manufacturer. The Company previously accounted for this interest as an equity investment. On April 3, 2017, the Company acquired the remaining 60% ownership interest in CME. This acquisition did not materially impact the Company's consolidated financial results.

Note 10 — Divestiture

Advanced Bioprocessing

The Company completed the sale of its Advanced Bioprocessing business in October 2018 per a definitive agreement that was signed in September 2018. Assets held for sale on the consolidated balance sheet at September 30, 2018, subject to this agreement, were approximately $137 million. Liabilities held for sale under the agreement were immaterial. The Company estimates that its gross cash proceeds received will be approximately $475 million, subject to post-closing adjustments. The historical financial results for the Advanced Bioprocessing business, which included approximately $106 million, $103 million and $95 million of revenues for the years ended September 30, 2018, 2017 and 2016, respectively, have not been classified as a discontinued operation.

Respiratory Solutions and Vyaire Medical

On October 3, 2016, the Company sold a 50.1% controlling financial interest in its Respiratory Solutions business, a component of the Medical segment, to form a venture, Vyaire Medical. The Company retained a 49.9% non-controlling interest in the new standalone entity. The Company agreed to various contract manufacturing and certain logistical and transition services agreements with the new entity for a period of up to two years after the sale. The Company accounted for its remaining interest in the new entity as an equity method investment and recorded its share of the new entity's earnings or losses on a one-quarter lag to *Other income (expense), net*.

In April 2018, the Company completed the sale of its remaining interest in Vyaire Medical. The Company received gross cash proceeds of approximately $435 million and recognized a pre-tax gain on the sale of approximately $303 million, which was recognized in *Other income (expense), net*.

Note 11 — Business Restructuring Charges

In connection with the Company's acquisition of Bard, the 2015 acquisition of CareFusion and other portfolio rationalization initiatives, the Company incurred restructuring costs which were recorded as *Acquisitions and other restructurings*. Additional disclosures regarding these restructuring activities and the related costs are provided in Notes 7, 9 and 10. Restructuring liability activity in 2018, 2017 and 2016 was as follows:

	Employee Termination		Other		Total	
(Millions of dollars)	Bard	CareFusion/ Other Initiatives (a)	Bard (b)	CareFusion/ Other Initiatives (c)	Bard	CareFusion /Other Initiatives
Balance at September 30, 2015	$ —	$ 62	$ —	$ —	$ —	$ 62
Charged to expense	—	81	—	445	—	526
Cash payments	—	(76)	—	(72)	—	(148)
Non-cash settlements	—	—	—	(39)	—	(39)
Other adjustments	—	—	—	(332)	—	(332)
Balance at September 30, 2016	$ —	$ 67	$ —	$ 2	$ —	$ 69
Charged to expense	—	27	—	58	—	85
Cash payments	—	(45)	—	(12)	—	(57)
Non-cash settlements	—	—	—	(9)	—	(9)
Other adjustments	—	—	—	(33)	—	(33)
Balance at September 30, 2017	$ —	$ 49	$ —	$ 6	$ —	$ 55
Charged to expense	136	30	156	22	292	52
Cash payments	(103)	(56)	(3)	(23)	(106)	(79)
Non-cash settlements	—	—	(153)	(1)	(153)	(1)
Other adjustments	—	—	—	—	—	—
Balance at September 30, 2018	$ 33	$ 23	$ —	$ 4	$ 33	$ 27

(a) Expenses in fiscal year 2016 included $40 million relating to the CareFusion acquisition as well as $13 million for employee termination costs resulting from the Company's transition of certain elements of its information technology function to an outsourced model as further disclosed below.

(b) Expenses in 2018 represented the cost associated with the conversion of certain pre-acquisition equity awards of Bard to BD equity awards as well as costs relating to Bard’s pension plan, partially offset by a gain on the sale of the Company's soft tissue core needle biopsy product line which was recorded in the second quarter of fiscal year 2018.

(c) Expenses in 2016 included $214 million non-cash charge to recognize the impairment of capitalized internal-use software assets held for sale upon the Company’s decision to transition certain business information systems assets to a third party. Expenses in 2016 also included non-cash impairment charges of $81 million, after-tax, relating to the Company's disposition of certain non-core businesses, including the Company's sale of a majority interest in its Respiratory Solutions business during the first quarter of fiscal year 2017, which is further discussed in Note 10.

Note 12 — Intangible Assets

Intangible assets at September 30 consisted of:

(Millions of dollars)	2018 Gross Carrying Amount	2018 Accumulated Amortization	2017 Gross Carrying Amount	2017 Accumulated Amortization
Amortized intangible assets				
Developed technology	$ 13,966	$ 1,782	$ 3,508	$ 1,029
Customer relationships	4,584	861	3,393	564
Product rights	121	58	131	54
Trademarks	407	84	408	65
Patents and other	397	288	370	274
Amortized intangible assets	$ 19,475	$ 3,073	$ 7,811	$ 1,986
Unamortized intangible assets				
Acquired in-process research and development	$ 37		$ 67	
Trademarks	2		2	
Unamortized intangible assets	$ 39		$ 69	

Additional disclosures regarding the increases to the developed technology assets and customer relationships as a result of the Bard acquisition are provided in Note 9. Intangible amortization expense was $1.255 billion, $0.533 billion and $0.552 billion in 2018, 2017 and 2016, respectively. The estimated aggregate amortization expense for the fiscal years ending September 30, 2019 to 2023 are as follows: 2019 — $1.472 billion; 2020 — $1.350 billion; 2021 — $1.347 billion; 2022 — $1.338 billion; 2023 — $1.333 billion.

The following is a reconciliation of goodwill by business segment:

(Millions of dollars)	Medical	Life Sciences	Interventional	Total
Goodwill as of September 30, 2016	$ 6,688	$ 731	$ —	$ 7,419
Acquisitions (a)	119	24	—	143
Divestiture (b)	(25)	—	—	(25)
Purchase accounting adjustments	4	—	—	4
Currency translation	16	6	—	22
Goodwill as of September 30, 2017	$ 6,802	$ 761	$ —	$ 7,563
Acquisitions (c)	3,923	76	11,218	15,217
Divestiture (b)	—	(59)	(57)	(116)
Reallocation of goodwill for change in segment and reporting unit composition (d)	(877)	—	877	—
Purchase accounting adjustments (e)	228	(2)	732	959
Currency translation	(22)	(2)	—	(24)
Goodwill as of September 30, 2018	$ 10,054	$ 775	$ 12,771	$ 23,600

(a) Represents goodwill recognized relative to certain acquisitions which were not material individually or in the aggregate.

(b) Represents goodwill derecognized upon the Company's sale of certain businesses, as further discussed in Note 10.

(c) Represents goodwill primarily recognized upon the Company's acquisition of Bard in fiscal year 2018, which is further discussed in Note 9. Also includes goodwill recognized relative to certain acquisitions which were not material individually or in the aggregate.

(d) Represents the reassignment of goodwill, determined based upon a relative fair value allocation approach, associated with the movement of certain product offerings which were previously reported in the Medical segment and which are now reported in the Interventional segment as further discussed in Note 6.

(e) The purchase accounting adjustments increasing goodwill were primarily driven by the valuation of Bard developed technology assets, the associated deferred tax liability changes, increases to legal reserves and the alignment of the combined organization's accounting policies with respect to accrued liabilities and other accounts.

Note 13 — Derivative Instruments and Hedging Activities

The Company uses derivative instruments to mitigate certain exposures. The Company does not enter into derivative financial instruments for trading or speculative purposes. The effects these derivative instruments and hedged items have on financial position, financial performance, and cash flows are provided below.

Foreign Currency Risks and Related Strategies

The Company has foreign currency exposures throughout Europe, Greater Asia, Canada and Latin America. Transactional currency exposures that arise from entering into transactions, generally on an intercompany basis, in non-hyperinflationary countries that are denominated in currencies other than the functional currency are mitigated primarily through the use of forward contracts and currency options. Hedges of the transactional foreign exchange exposures resulting primarily from intercompany payables and receivables are undesignated hedges. As such, the gains or losses on these instruments are recognized immediately in income. These gains and losses are largely offset by gains and losses on the underlying hedged items, as well as the hedging costs associated with the derivative instruments. The net amounts recognized in *Other income (expense), net*, during the years ending September 30, 2018, 2017 and 2016 were immaterial to the Company's consolidated financial results.

The total notional amounts of the Company’s outstanding foreign exchange contracts as of September 30, 2018 and 2017 were $3.1 billion and $2.5 billion, respectively.

In order to mitigate foreign currency exposure relating to its investments in certain foreign subsidiaries, the Company has designated $2.7 billion of Euro-denominated debt and $324 million of British Pound-denominated debt as net investment hedges. Accordingly, net gains or losses relating to this debt, which are attributable to changes in the foreign currencies to U.S. dollar spot exchange rates, are recorded as accumulated foreign currency translation in *Other comprehensive income (loss)*. The Company has recorded net gains (losses) relating to these net investment hedges of $81 million and $(159) million to *Accumulated other comprehensive income (loss)* as of September 30, 2018 and 2017, respectively. Additional disclosures regarding the Company's issuances of the Euro-denominated debt and British Pound-denominated in fiscal year 2018 are provided in Note 15.

Interest Rate Risks and Related Strategies

The Company’s primary interest rate exposure results from changes in U.S. dollar interest rates. The Company’s policy is to manage interest cost using a mix of fixed and variable rate debt. The Company periodically uses interest rate swaps to manage such exposures. Under these interest rate swaps, the Company exchanges, at specified intervals, the difference between fixed and floating interest amounts calculated by reference to an agreed-upon notional principal amount. These swaps are designated as either fair value or cash flow hedges.

For interest rate swaps designated as fair value hedges (i.e., hedges against the exposure to changes in the fair value of an asset or a liability or an identified portion thereof that is attributable to a particular risk),

changes in the fair value of the interest rate swaps offset changes in the fair value of the fixed rate debt due to changes in market interest rates.

Changes in the fair value of the interest rate swaps designated as cash flow hedges (i.e., hedging the exposure to variability in expected future cash flows that is attributable to a particular risk) are offset by amounts recorded in *Other comprehensive income (loss)*. If interest rate derivatives designated as cash flow hedges are terminated, the balance in *Accumulated other comprehensive income (loss)* attributable to those derivatives is reclassified into earnings over the remaining life of the hedged debt. The net realized loss related to terminated interest rate swaps expected to be reclassified and recorded in *Interest expense* within the next 12 months is $6 million, net of tax.

The total notional amount of the Company's outstanding interest rate swaps designated as fair value hedges was $1.2 billion and $375 million at September 30, 2018 and 2017, respectively. The outstanding swaps represent fixed-to-floating interest rate swap agreements the Company entered into to convert the interest payments on certain long-term notes from the fixed rate to a floating interest rate based on LIBOR. Changes in the fair value of the interest rate swaps offset changes in the fair value of the fixed rate debt. The amounts recorded during the years ended September 30, 2018 and 2017 for changes in the fair value of these hedges were immaterial to the Company's consolidated financial results.

Other Risk Exposures

The Company purchases resins, which are oil-based components used in the manufacture of certain products. Significant increases in world oil prices that lead to increases in resin purchase costs could impact future operating results. From time to time, the Company has managed price risks associated with these commodity purchases through commodity derivative forward contracts. The Company had no outstanding commodity derivative forward contracts at September 30, 2018 and 2017.

Financial Statement Effects

Effects on Consolidated Balance Sheets

The fair values of derivative instruments outstanding at September 30, 2018 and 2017 were not material to the Company's consolidated balance sheets.

Effects on Consolidated Statements of Income

The amounts recognized from other comprehensive income relating to cash flow hedges during 2018, 2017 and 2016 were not material to the Company's consolidated financial results.

Note 14 — Financial Instruments and Fair Value Measurements

The Company's institutional money market accounts permit daily redemption and the fair values of these investments are based upon the quoted prices in active markets provided by the holding financial institutions, which are considered Level 1 inputs in the fair value hierarchy. The fair values of these accounts were $228 million and $2.026 billion at September 30, 2018 and 2017, respectively. The Company's remaining cash and equivalents, excluding restricted cash, were $913 million and $12.153 billion at September 30, 2018 and 2017, respectively. Short-term investments are held to their maturities and are carried at cost, which approximates fair value. The cash equivalents consist of liquid investments with a maturity of three months or less and the short-term investments consist of instruments with maturities greater than three months and less than one year.

Long-term debt is recorded at amortized cost. The fair value of long-term debt is measured based upon quoted prices in active markets for similar instruments, which are considered Level 2 inputs in the fair value hierarchy. The fair value of long-term debt was $18.8 billion and $19.2 billion at September 30, 2018 and 2017, respectively. The fair value of the current portion of long-term debt was $1.893 billion and $206 million at September 30, 2018 and 2017, respectively.

All other instruments measured by the Company at fair value, including derivatives and contingent consideration liabilities, are immaterial to the Company's consolidated balance sheets.

Nonrecurring Fair Value Measurements

In fiscal year 2018, the Company recorded charges of $58 million to write down the value of fixed assets, primarily in the Diabetes Care unit, as well as charges of $81 million to write down the carrying value of certain intangible and other assets in the Biosciences unit. In fiscal year 2016, the Company recorded a charge to *Acquisitions and other restructurings* of $214 million to impair capitalized internal-use software assets held for sale as a result of the Company's transition of certain elements of its information technology infrastructure to an outsourced model. Also in fiscal year 2016, the Company recorded losses of $81 million on the held for sale assets of certain non-core businesses. The amounts recognized in 2018 and 2016 were recorded to adjust the carrying amount of assets to the assets' fair values, which were estimated, based upon a market participant's perspective, using either Level 2 inputs, including quoted prices for similar assets, or Level 3 inputs, including values estimated using the income approach.

Concentration of Credit Risk

The Company maintains cash deposits in excess of government-provided insurance limits. Such cash deposits are exposed to loss in the event of nonperformance by financial institutions. Substantially all of the Company's trade receivables are due from public and private entities involved in the healthcare industry. Due to the large size and diversity of the Company's customer base, concentrations of credit risk with respect to trade receivables are limited. The Company does not normally require collateral. The Company is exposed to credit loss in the event of nonperformance by financial institutions with which it conducts business. However, this loss is limited to the amounts, if any, by which the obligations of the counterparty to the financial instrument contract exceed the obligations of the Company. The Company also minimizes exposure to credit risk by dealing with a diversified group of major financial institutions.

The Company continually evaluates its accounts receivables for potential collection risks particularly those resulting from sales to government-owned or government-supported healthcare facilities in certain countries as payment may be dependent upon the financial stability and creditworthiness of those countries' national economies. The Company continually evaluates all governmental receivables for potential collection risks associated with the availability of government funding and reimbursement practices. The Company believes the current reserves related to all governmental receivables are adequate and that this concentration of credit risk will not have a material adverse impact on its financial position or liquidity.

Note 15 — Debt

Short-term debt

Short-term debt at September 30 consisted of:

(Millions of dollars)		2018	2017
Current portion of long-term debt			
2.133% Notes due June 6, 2019		724	—
0.368% Notes due June 6, 2019	(a)	1,157	—
4.900% Notes due April 15, 2018		—	200
Term Loan Facility due September 5, 2019	(b)	710	—
Other		10	3
Total short-term debt		$ 2,601	$ 203

(a) Includes notes issued during fiscal year 2018, as further discussed below.

(b) Term loan facility entered into during the fourth quarter of fiscal year 2018, as further discussed below.

The weighted average interest rates for short-term debt were 1.58% and 4.90% at September 30, 2018 and 2017, respectively.

Long-term debt

Long-Term Debt at September 30 consisted of:

(Millions of dollars)		2018	2017
2.133% Notes due June 6, 2019		$ —	$ 723
0.368% Notes due June 6, 2019		—	823
2.675% Notes due December 15, 2019		1,123	1,121
2.404% Notes due June 5, 2020		998	996
3.250% Notes due November 12, 2020		699	698
Floating Rate Notes due December 29, 2020	(a)	996	—
3.125% Notes due November 8, 2021		990	1,003
2.894% Notes due June 6, 2022		1,793	1,791
Floating Rate Notes due June 6, 2022		498	497
1.000% Notes due December 15, 2022		576	586
3.300% Notes due March 1, 2023		296	296
1.401% Notes due May 24, 2023	(a)	346	—
3.875% Notes due May 15, 2024		182	182
3.363% Notes due June 6, 2024		1,738	1,736
3.734% Notes due December 15, 2024		1,368	1,367
3.020% Notes due May 24, 2025	(a)	324	—
6.700% Notes due December 1, 2026	(b)	177	—
1.900% Notes due December 15, 2026		575	585
3.700% Notes due June 6, 2027		2,383	2,381
7.000% Debentures due August 1, 2027		156	166
6.700% Debentures due August 1, 2028		154	164
6.000% Notes due May 15, 2039		246	246
5.000% Notes due November 12, 2040		296	296
4.875% Notes due May 15, 2044		331	331
4.685% Notes due December 15, 2044		1,159	1,189
4.669% Notes due June 6, 2047		1,484	1,484
Other long-term debt		8	3
Total Long-Term Debt		$ 18,894	$ 18,667

(a) Includes notes issued during fiscal year 2018, as further discussed below.
(b) Includes notes assumed in connection with the Company's acquisition of Bard, as further discussed below.

The aggregate annual maturities of debt including interest during the fiscal years ending September 30, 2019 to 2023 are as follows: 2019 — $3.3 billion; 2020 — $2.8 billion; 2021 — $2.3 billion; 2022 — $3.8 billion; 2023 — $1.7 billion.

Other current credit facilities

In connection with the Company's agreement to acquire Bard, the Company entered into a three-year senior unsecured term loan facility of $2.25 billion during the third quarter of fiscal year 2017. During the first quarter of fiscal year 2018, the proceeds from this facility were used to fund a portion of the cash consideration for the Bard acquisition, as well as the fees and expenses incurred in connection with the acquisition. In September 2018, the Company entered into a 364-day $750 million senior unsecured term loan facility. The Company used $230 million of proceeds drawn from this facility in September 2018 to repay all borrowings

outstanding under the three-year term loan facility discussed above. Borrowings outstanding under the new, 364-day term loan facility were $710 million at September 30, 2018. The Company also entered into a five-year senior unsecured revolving credit facility in the third quarter of fiscal year 2017 which became effective upon the closing of the Bard acquisition and which provides borrowing of up to $2.25 billion. This facility will expire in December 2022 and replaced the $1.5 billion syndicated credit facility the Company previously had in place for general corporate purposes. Under the new revolving facility, the Company will be able to issue up to $100 million in letters of credit under this new revolving credit facility and it also includes a provision that enables the Company, subject to additional commitments made by the lenders, to access up to an additional $500 million in financing through the facility for a maximum aggregate commitment of $2.75 billion. There were no borrowings outstanding under the revolving credit facility at September 30, 2018. In addition, the Company has informal lines of credit outside of the United States.

Exchange of Bard Notes

Also in connection with the Company's acquisition of Bard, the Company exchanged certain outstanding notes issued by Bard for a like-amount of new notes issued by the Company. The exchange offers, which were conditioned upon the closing of the Bard acquisition, expired on December 29, 2017. The aggregate principal amounts of Bard notes which were validly tendered for notes issued by the Company are provided below.

(Millions of dollars)

Interest Rate and Maturity	Aggregate Principal Amount	Principal Amount Accepted for Exchange
4.400% Notes due January 15, 2021	$ 500	$ 432
3.000% Notes due May 15, 2026	500	470
6.700% Notes due December 1, 2026	150	137
Total	$ 1,150	$ 1,039

This exchange transaction was accounted for as a modification of the assumed debt instruments. Following the exchange of the notes, the aggregate principal amount of Bard notes that remained outstanding after settlement of the exchange transaction was $111 million.

2018 Debt-Related Transactions

In January 2018, the Company commenced an offer to repurchase any and all of the outstanding 3.000% Notes due May 15, 2026 that were issued as a result of the exchange transaction discussed above. Under the terms of the repurchase offer, holders were entitled to receive cash equal to 101% of the principal amount of notes validly tendered, plus accrued and unpaid interest, if any, to the date of purchase. The offer to repurchase the 3.000% Notes expired on March 1, 2018 and a total of $461 million aggregate principal amount of notes were validly tendered at a market price of $465 million. Based upon the carrying value of $452 million, the Company recorded a loss relating to this debt extinguishment in the second quarter of fiscal year 2018 of $13 million as *Other income (expense), net*, on its consolidated statements of income.

During the second quarter of fiscal year 2018, the Company issued Euro-denominated debt consisting of 300 million Euros ($370 million) of 0.368% notes due June 6, 2019 under an indenture pursuant to which the Company previously issued, in the third quarter of fiscal year 2017, 0.368% notes due June 6, 2019. Also in the second quarter of fiscal year 2018, the Company issued $1 billion of floating rate senior unsecured U.S. notes due December 29, 2020. The Company used the net proceeds from these long-term debt offerings to repay portions of the balances outstanding on its term loan and revolving credit facilities, which are discussed above, as well as accrued interest, related premiums, fees and expenses related to these repaid amounts.

In June 2018, the Company redeemed all of the 4.400% Notes due January 15, 2021 and 3.000% Notes due May 15, 2026 which were issued by Bard and that remained outstanding after the exchange offer discussed further above. Also in June 2018, the Company redeemed all of the 4.400% Notes due January 15, 2021 which were issued by the Company upon the exchange offer, as well as all of the 3.000% Notes due May 15, 2026

issued by the Company which remained outstanding after the repurchase offer also discussed above. The total aggregate principal amount of notes redeemed was $539 million. Based upon the $556 million carrying value of these notes and the $559 million the Company paid to redeem the aggregate principal amount of the notes, the Company recorded a loss on these debt extinguishment transactions in the third quarter of fiscal year 2018 of $3 million as *Other income (expense), net*, on its consolidated statements of income.

During the third quarter of fiscal year 2018, the Company issued Euro-denominated debt consisting of 300 million Euros ($354 million) of 1.401% notes due May 24, 2023. Also in the third quarter of fiscal year 2018, the Company issued British Pound-denominated debt of 250 million British Pounds ($337.5 million) of 3.02% notes due May 24, 2025. The Company used the net proceeds from these long-term debt offerings to redeem certain notes in the third quarter, as further discussed above, and to repay a portion of the balance outstanding on its term loan, as well as accrued interest, related premiums, fees and expenses related to this repaid amount.

2017 Debt-Related Transactions

In December 2016, the Company issued euro-denominated debt consisting of 500 million Euros of 1.000% notes and 500 million Euros of 1.900% notes. The Company used the net proceeds from this long-term debt offering, together with other sources of liquidity, to fund the Company's repurchase of certain of its senior notes outstanding. Under this cash tender offer, the Company repurchased all or a portion of the aggregate principal amounts of certain of its long-term notes outstanding, totaling $1.689 billion, at an aggregate market price of $1.764 billion. The carrying value of these long-term notes was $1.727 billion, and the Company recognized a loss on this debt extinguishment of $42 million, which was recorded in December 2016 as *Other income (expense), net*, on the Company’s consolidated statements of income.

During the third quarter of 2017 and in connection with the Company's acquisition of Bard, as previously discussed in Note 9, the Company issued senior unsecured U.S. notes with an aggregate principal amount of $9.675 billion. Also during the third quarter of 2017, the Company issued Euro-denominated debt consisting of 700 million Euros of 0.368% Notes due June 6, 2019.

Also in 2017, the Company redeemed all or a portion of the aggregate principal amounts of certain of its long-term senior notes outstanding, totaling $1.717 billion, at an aggregate market price of $1.776 billion. The carrying value of these long-term notes was $1.745 billion and the Company recognized a loss on this debt extinguishment of $31 million, which was recorded in June 2017 as *Other income (expense), net*, on the Company’s consolidated statements of income.

Capitalized interest

The Company capitalizes interest costs as a component of the cost of construction in progress. A summary of interest costs and payments for the years ended September 30 is as follows:

(Millions of dollars)	2018	2017	2016
Charged to operations	$ 706	$ 521	$ 388
Capitalized	42	32	30
Total interest costs	$ 748	$ 553	$ 418
Interest paid, net of amounts capitalized	$ 674	$ 435	$ 392

Note 16 — Income Taxes

New U.S. Tax Legislation

New U.S. tax legislation, which is commonly referred to as the Tax Cuts and Job Act (the "Act") and which was enacted on December 22, 2017, reduces the U.S. federal corporate tax rate from 35% to 21%, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and creates new taxes on certain foreign-sourced earnings. Under U.S. generally accepted accounting principles, companies must account for the effects of changes in income tax rates and laws

in the period in which the legislation is enacted. However, the U.S. Securities and Exchange Commission (the "SEC") has provided guidance which allows companies to report financial results including provisional amounts that have been recorded for the income tax effects of the Act based upon a reasonable estimate of those effects. The SEC expects that accounting for the Act should be completed by companies by no later than one year from the enactment date of the Act.

As of September 30, 2018, the Company has not completed its accounting for the tax effects of enactment of the Act; however, the Company has made what it believes is a reasonable estimate of the effects on the remeasurement of U.S. deferred tax balances, the one-time transition tax, and the taxes accrued relating to the change in permanent reinvestment assertion for unremitted earnings of its foreign subsidiaries. As a result of these estimates, the Company recognized a provisional expense in the amount of $640 million, which is reflected in the Company's consolidated statement of income within *Income tax provision*. The Company also recorded a charge, which is further discussed below, relating to historic unremitted foreign earnings as of September 30, 2018.

The Company will continue to gather information and perform additional analysis on these estimates, including, but not limited to, the amount of earnings and profits subject to the transition tax, the calculation of foreign tax credits, the local tax treatment of future distributions of unremitted earnings and the remeasurement of U.S. deferred taxes. Any measurement period adjustments will be reported as a component of *Income tax provision* in the reporting period the amounts are determined. The final accounting will be completed no later than one year from the enactment of the Act.

The Company is currently in the process of evaluating the new Global Intangible Low-Taxed Income's ("GILTI") provisions and has not yet elected an accounting policy regarding whether to record deferred taxes related to GILTI. Therefore, the Company has not made any adjustments related to the GILTI tax in its financial statements. Under the SEC guidance noted above, the Company will continue to analyze and assess the effects of the GILTI provisions of the Act.

Provisional Amounts

The Company believes that all provisional amounts reflected in its financial statements are based on the best estimates that can be made at this time. The Company will continue to analyze all impacts of the Act and will update provisional amounts as required.

Deferred tax assets and liabilities

The Company remeasured certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future, which is generally 21%. However, the Company is still analyzing certain aspects of the Act and refining its calculations, which could potentially affect the measurement of these balances or potentially give rise to new deferred tax amounts. The Company recorded a provisional tax benefit of $182 million related to the re-measurement of the Company's deferred tax balances.

Foreign tax effects

The one-time transition tax is based on the Company's total post-1986 earnings and profits ("E&P") that the Company previously deferred from U.S. income taxes. The Company recorded a provisional amount for its one-time transition tax liability for all of its foreign subsidiaries, resulting in an increase in income tax expense of $822 million. However, the Company has not yet completed its calculation of the total post-1986 E&P for these foreign subsidiaries. Further, the transition tax is based in part on the amount of those earnings held in cash and other specified assets. This amount may change when the Company finalizes the calculation of post-1986 foreign E&P previously deferred from U.S. federal taxation and finalizes the amounts held in cash or other specified assets. As discussed in Note 9, the Company completed its acquisition of Bard on December 29, 2017. The net assets acquired included approximately $175 million of transition tax payable based on the Company's best estimate of its transition tax liability. The combined company's transition tax liability, 8% of which is payable per year over the next five years with the balance payable over the following three years, is approximately $1 billion. The anticipated payment of this tax is expected to begin on January 15, 2019.

The Company has historically asserted indefinite reinvestment of the earnings of certain non-U.S. subsidiaries outside the United States. The Act eliminated certain material tax effects on the repatriation of cash to the United States. Future repatriation of cash and other property held by our foreign subsidiaries will generally not be subject to U.S. federal income tax. As a result, after reevaluation of the permanent reinvestment assertion, the Company is no longer permanently reinvested with respect to its historic unremitted foreign earnings as of September 30, 2018. As a result of the change in the assertion, during fiscal 2018, the Company recorded a charge of $134 million to *Income tax provision* related to historic unremitted foreign earnings as of September 30, 2018.

Provision for Income Taxes

The provision for income taxes the years ended September 30 consisted of:

(Millions of dollars)	2018	2017	2016
Current:			
Federal	$ 665	$ (230)	$ 312
State and local, including Puerto Rico	73	(20)	17
Foreign	387	200	286
	$ 1,124	$ (50)	$ 616
Deferred:			
Domestic	$ (201)	$ (64)	$ (441)
Foreign	(61)	(10)	(78)
	(262)	(74)	(519)
Income tax provision (benefit)	$ 862	$ (124)	$ 97

The components of *Income Before Income Taxes* for the years ended September 30 consisted of:

(Millions of dollars)	2018	2017	2016
Domestic, including Puerto Rico	$ (135)	$ (386)	$ (232)
Foreign	1,308	1,362	1,306
Income Before Income Taxes	$ 1,173	$ 976	$ 1,074

Unrecognized Tax Benefits

The table below summarizes the gross amounts of unrecognized tax benefits without regard to reduction in tax liabilities or additions to deferred tax assets and liabilities if such unrecognized tax benefits were settled. The Company believes it is reasonably possible that certain audits will close within the next twelve months but no significant increases or decreases in the amount of the unrecognized tax benefits are expected to result.

(Millions of dollars)	2018	2017	2016
Balance at October 1	$ 349	$ 469	$ 593
Increase due to acquisitions	140	—	—
Increase due to current year tax positions	43	41	81
Increase due to prior year tax positions	43	19	10
Decreases due to prior year tax positions	—	(30)	(3)
Decrease due to settlements with tax authorities	(29)	(145)	(147)
Decrease due to lapse of statute of limitations	(3)	(5)	(65)
Balance at September 30	$ 543	$ 349	$ 469

Upon the Company's acquisition of CareFusion in 2015, the Company became a party to a tax matters agreement with Cardinal Health resulting from Cardinal Health's spin-off of CareFusion in fiscal year 2010. Under the tax matters agreement, the Company is obligated to indemnify Cardinal Health for certain tax

exposures and transaction taxes prior to CareFusion's spin-off from Cardinal Health. The indemnification payable is approximately $140 million at September 30, 2018 and is included in *Deferred Income Taxes and Other* on the consolidated balance sheet.

At September 30, 2018, 2017 and 2016, there are $632 million, $415 million and $478 million of unrecognized tax benefits that if recognized, would affect the effective tax rate. During the fiscal years ended September 30, 2018, 2017 and 2016, the Company reported interest and penalties associated with unrecognized tax benefits of $20 million, $57 million and $(38) million on the consolidated statements of income as a component of *Income tax provision*. The Company conducts business and files tax returns in numerous countries and currently has tax audits in progress in a number of tax jurisdictions. The IRS has completed its audit for the BD Legacy fiscal year 2014 and combined company fiscal years 2016 and 2017. For the BD legacy business, all years are effectively settled with the exception of 2015 for which the Company believes it is adequately reserved for any potential exposures. The IRS is currently examining the CareFusion legacy fiscal year 2014 and short period 2015. With the exception of the CareFusion legacy fiscal year 2010 audit, all other periods are at various stages of appeals or protests. With regard to Bard, all examinations have been completed through calendar year 2014. The IRS has commenced the examination of calendar years 2015 and 2016. For the other major tax jurisdictions where the Company conducts business, tax years are generally open after 2012.

Deferred Income Taxes

Deferred income taxes at September 30 consisted of:

	2018		2017	
(Millions of dollars)	**Assets**	**Liabilities**	**Assets**	**Liabilities**
Compensation and benefits	$ 458	$ —	$ 618	$ —
Property and equipment	—	253	—	244
Intangibles	—	2,948	—	1,584
Loss and credit carryforwards	1,290	—	1,098	—
Other	707	384	531	164
	2,455	3,585	2,247	1,992
Valuation allowance	(1,181)	—	(1,032)	—
Net (a)	$ 1,275	$ 3,585	$ 1,216	$ 1,992

(a) Net deferred tax assets are included in *Other Assets* and net deferred tax liabilities are included in *Deferred Income Taxes and Other* on the consolidated balance sheets.

Deferred tax assets and liabilities are netted on the balance sheet by separate tax jurisdictions. Deferred taxes have been provided on undistributed earnings of foreign subsidiaries as of September 30, 2018.

Generally, deferred tax assets have been established as a result of net operating losses and credit carryforwards with expiration dates from 2019 to an unlimited expiration date. Valuation allowances have been established as a result of an evaluation of the uncertainty associated with the realization of certain deferred tax assets on these losses and credit carryforwards. The valuation allowance for 2018 is primarily the result of foreign losses due to the Company's global re-organization of its foreign entities and these generally have no expiration date. Valuation allowances are also maintained with respect to deferred tax assets for certain federal and state carryforwards that may not be realized and that principally expire in 2038.

Tax Rate Reconciliation

A reconciliation of the federal statutory tax rate to the Company's effective income tax rate was as follows:

	2018	2017	2016
Federal statutory tax rate	24.5%	35.0 %	35.0%
New U.S. tax legislation (see discussion above)	54.6	—	—
State and local income taxes, net of federal tax benefit	0.8	(2.6)	1.5
Effect of foreign and Puerto Rico earnings and foreign tax credits	7.3	(40.8)	(23.7)
Effect of Research Credits and Domestic Production Activities	(2.8)	(2.7)	(4.4)
Effect of change in accounting for excess tax benefit relating to share-based compensation (see Note 2)	(6.7)	(7.9)	—
Effect of gain on divestitures	1.3	—	—
Effect of uncertain tax position	3.3	—	—
Effect of valuation allowance release	(4.8)	—	—
Effect of application for change in accounting method	(4.5)	—	—
Effect of nondeductible compensation	1.6	—	—
Other, net	(1.1)	6.3	0.7
Effective income tax rate	73.5%	(12.7)%	9.1%

Tax Holidays and Payments

The approximate amounts of tax reductions related to tax holidays in various countries in which the Company does business were $101 million, $144 million and $121 million, in 2018, 2017 and 2016, respectively. The benefit of the tax holiday on diluted earnings per share was approximately $0.38, $0.64 and $0.56 for fiscal years 2018, 2017 and 2016, respectively. The tax holidays expire at various dates through 2028.

The Company made income tax payments, net of refunds, of $235 million in 2018, $265 million in 2017 and $218 million in 2016.

Note 17 — Sales-Type Leases and Financing Receivables

In April 2017, in conjunction with the implementation of a new “go-to-market” business model for the Company's U.S. dispensing business within the Medication Management Solutions (“MMS”) unit of the Medical segment, the Company amended the terms of certain customer leases for dispensing equipment within the MMS unit. The modification provided customers the ability to reduce its dispensing asset base via a return provision, resulting in a more flexible lease term. Prior to the modification, these leases were accounted for as sales-type leases in accordance with Accounting Standards Codification Topic 840, "Leases", as the non-cancellable lease term of 5 years exceeded 75% of the equipment’s estimated useful life and the present value of the minimum lease payments exceeded 90% of the equipment’s fair value. As a result of the lease modification, the Company was required to reassess the classification of the leases due to the amended lease term. Accordingly, most amended lease contracts were classified as operating leases beginning in April 2017. The change in lease classification resulted in a pre-tax charge to earnings in fiscal year 2017 of $748 million, which was recorded in *Other operating expense, net.* Beginning April 1, 2017, revenue associated with these modified contracts has been recognized on a straight-line basis over the remaining lease term, along with depreciation on the reinstated leased assets.

The Company's consolidated financial results in 2018 and 2017 were not materially impacted by the financing receivables remaining subsequent to the lease modification discussed above.

Note 18 — Supplemental Financial Information

Other Income (Expense), Net

(Millions of dollars)	2018	2017	2016
Losses on debt extinguishment (a)	$ (16)	$ (73)	$ —
Vyaire Medical-related amounts (b)	288	(3)	—
Other equity investment income	8	3	8
Losses on undesignated foreign exchange derivatives, net	(14)	(11)	(3)
Royalty income (c)	51	—	—
Gains on previously held investments (d)	—	24	—
Other	—	3	7
Other income (expense), net	$ 318	$ (57)	$ 11

(a) Represents losses recognized upon our repurchase and extinguishment of certain senior notes, as further discussed in Note 15.

(b) Represents amounts related to the Company’s 2017 divestiture of a controlling interest in its former Respiratory Solutions business and the subsequent sale in 2018 of the remaining ownership interest. The amount in 2018 includes the gain on the sale of the remaining non-controlling interest and transition services agreement income, net of the Company's share of equity investee results. The amount in 2017 represents the Company’s share of equity investee results, net of transition services agreement income. Additional disclosures regarding these divestiture transactions are provided in Note 10 in the Notes to Consolidated Financial Statements.

(c) Represents the royalty income stream acquired in the Bard transaction, net of non-cash purchase accounting amortization. The royalty income stream was previously reported by Bard as revenues.

(d) Represents an acquisition-date accounting gain related to a previously-held equity method investment in an entity the Company acquired.

Trade Receivables, Net

The amounts recognized in 2018, 2017 and 2016 relating to allowances for doubtful accounts and cash discounts, which are netted against trade receivables, are provided in the following table:

(Millions of dollars)	Allowance for Doubtful Accounts	Allowance for Cash Discounts	Total
Balance at September 30, 2015	$ 53	$ 9	$ 62
Additions charged to costs and expenses	23	37	60
Deductions and other	(14) (a)	(40)	(55)
Balance at September 30, 2016	$ 61	$ 6	$ 67
Additions charged to costs and expenses	25	43	68
Deductions and other	(32) (a)	(45)	(76)
Balance at September 30, 2017	$ 54	$ 4	$ 58
Additions charged to costs and expenses	31	58	89
Deductions and other	(11) (a)	(50)	(61)
Balance at September 30, 2018	$ 75	$ 12	$ 86

(a) Accounts written off.

Inventories

Inventories at September 30 consisted of:

(Millions of dollars)	2018	2017
Materials	$ 510	$ 313
Work in process	297	271
Finished products	1,644	1,234
	$ 2,451	$ 1,818

The Company acquired $974 million of inventories in the Bard transaction which is further discussed in Note 9.

Property, Plant and Equipment, Net

Property, Plant and Equipment, Net at September 30 consisted of:

(Millions of dollars)	2018	2017
Land	$ 173	$ 146
Buildings	2,724	2,496
Machinery, equipment and fixtures	7,405	6,584
Leasehold improvements	182	163
	10,485	9,389
Less accumulated depreciation and amortization	5,111	4,752
	$ 5,375	$ 4,638

The Company acquired $553 million of property, plant and equipment assets, which largely consisted of machinery, equipment and fixtures, in the Bard transaction.

SUPPLEMENTARY QUARTERLY DATA (UNAUDITED)

Millions of dollars, except per share amounts	2018				
	1st	2nd	3rd	4th	Year
Revenues	$ 3,080	$ 4,222	$ 4,278	$ 4,402	$ 15,983
Gross Profit	1,550	1,604	2,017	2,091	7,262
Net (Loss) Income	(136)	(12)	594	(135)	311
(Loss) earnings per Share: (a)					
Basic	(0.76)	(0.19)	2.08	(0.64)	0.62
Diluted	(0.76)	(0.19)	2.03	(0.64)	0.60

	2017				
	1st	2nd	3rd	4th	Year
Revenues	$ 2,922	$ 2,969	$ 3,035	$ 3,166	$ 12,093
Gross Profit	1,452	1,432	1,504	1,554	5,942
Net Income (Loss)	562	344	(132)	327	1,100
Earnings (loss) per Share: (a)					
Basic	2.64	1.61	(0.75)	1.27	4.70
Diluted	2.58	1.58	(0.75)	1.24	4.60

(a) Earnings per share amounts are calculated from the underlying whole-dollar amounts. The sums of basic and diluted earnings per share for the quarters of 2018 and 2017 do not equal year-to-date amounts due to the impacts of shares issued during these fiscal years, in connection with the Bard acquisition, on the weighted average common shares included in the calculations of basic and diluted earnings per share. Additional disclosures regarding shares issued related to the Bard acquisition are provided in Notes 3 and 9.

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

None.

Item 9A. ***Controls and Procedures.***

An evaluation was conducted by BD's management, with the participation of BD's Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of BD's disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934) as of September 30, 2018. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the design and operation of these disclosure controls and procedures were, as of the end of the period covered by this report, effective and designed to ensure that material information relating to BD and its consolidated subsidiaries would be made known to them by others within these entities.

On December 29, 2017, BD completed the acquisition of Bard. While BD has extended its oversight and monitoring processes that support our internal control over financial reporting, as well as its disclosure controls and procedures, we continue to integrate the acquired operations of Bard. As such, we have excluded Bard from our evaluation of internal control over financial reporting. This exclusion is in accordance with the U.S. Securities and Exchange Commission's general guidance that a recently acquired business may be omitted from the assessment scope for up to one year from the date of acquisition. Bard is a wholly-owned subsidiary with total assets that represented approximately 5% of BD's consolidated total assets at September 30, 2018 and total revenues that represented approximately 19% of BD's consolidated revenues for fiscal year 2018.

There were no changes in our internal control over financial reporting during the fiscal quarter ended September 30, 2018 identified in connection with the above-referenced evaluation that have materially affected, or are reasonably likely to materially affect, BD's internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting and the Report of Independent Registered Public Accounting Firm are contained in Item 8, Financial Statements and Supplementary Data, and are incorporated herein by reference.

Item 9B. ***Other Information.***

None.

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance.***

The information relating to directors and the Audit Committee of the BD Board of Directors required by this item will be contained under the captions "Proposal 1. Election of Directors" and "Board of Directors - Committee membership and function - Audit Committee" in a definitive proxy statement involving the election of directors, which the registrant will file with the SEC not later than 120 days after September 30, 2018 (the "2018 Proxy Statement"), and such information is incorporated herein by reference.

The information relating to executive officers required by this item is included herein in Part I under the caption "Executive Officers of the Registrant."

Certain other information required by this item will be contained under the captions "Ownership of BD Common Stock - Section 16(a) beneficial ownership reporting compliance", "Corporate Governance - Director nomination process" and Corporate Governance - Code of Conduct" in BD's 2018 Proxy Statement, and such information is incorporated herein by reference.

Item 11. ***Executive Compensation.***

The information required by this item will be contained under the captions "Compensation Discussion and Analysis," "Report of the Compensation and Management Development Committee," "Compensation of Named Executive Officers", "Board of Directors - Non‑management directors' compensation," and "CEO Pay Ratio" in BD's 2018 Proxy Statement, and such information is incorporated herein by reference.

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

The information required by this item will be contained under the caption "Ownership of BD Common Stock" in BD's 2018 Proxy Statement, and such information is incorporated herein by reference.

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

The information required by this item will be contained under the caption "Corporate Governance - Director independence; Policy regarding related person transactions" in BD's 2018 Proxy Statement, and such information is incorporated herein by reference.

Item 14. ***Principal Accounting Fees and Services.***

The information required by this item will be contained under the caption "Proposal 2. Ratification of Selection of Independent Registered Public Accounting Firm" in BD's 2018 Proxy Statement, and such information is incorporated herein by reference.

PART IV

Item 15. ***Exhibits, Financial Statement Schedules.***

(a)(1) *Financial Statements*

The following consolidated financial statements of BD are included in Item 8 of this report:

- Reports of Independent Registered Public Accounting Firm
- Consolidated Statements of Income — Years ended September 30, 2018, 2017 and 2016
- Consolidated Statements of Comprehensive Income — Years ended September 30, 2018, 2017 and 2016
- Consolidated Balance Sheets — September 30, 2018 and 2017
- Consolidated Statements of Cash Flows — Years ended September 30, 2018, 2017 and 2016
- Notes to Consolidated Financial Statements

(2) *Financial Statement Schedules*

See Note 18 to the Consolidated Financial Statements included in Item 8, Financial Statements and Supplementary Data.

(3) Exhibits

See the Exhibit Index beginning on page 104 hereof for a list of all management contracts, compensatory plans and arrangements required by this item, and all other Exhibits filed or incorporated by reference as a part of this report.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BECTON, DICKINSON AND COMPANY

By: /s/ GARY DEFAZIO
Gary DeFazio
Senior Vice President and Corporate Secretary

Dated: November 21, 2018

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below on the 21st day of November, 2018 by the following persons on behalf of the registrant and in the capacities indicated.

Name	Capacity
/S/ VINCENT A. FORLENZA Vincent A. Forlenza	Chairman and Chief Executive Officer (Principal Executive Officer)
/S/ CHRISTOPHER R. REIDY Christopher R. Reidy	Executive Vice President, Chief Financial Officer and Chief Administrative Officer (Principal Financial Officer)
/S/ CHARLES R. BODNER Charles R. Bodner	Senior Vice President, Corporate Finance, and Chief Accounting Officer (Principal Accounting Officer)
Catherine M. Burzik*	Director
R. Andrew Eckert*	Director
Claire M. Fraser*	Director
Jeffrey W. Henderson*	Director
Christopher Jones*	Director
Marshall O. Larsen*	Director
Gary A. Mecklenburg*	Director

Name	Capacity
David F. Melcher*	Director
Willard J. Overlock, Jr.*	Director
Claire Pomeroy*	Director
Rebecca W. Rimel*	Director
Timothy M. Ring*	Director
Bertram L. Scott*	Director

*By: /s/ GARY DEFAZIO
Gary DeFazio
Attorney-in-fact

EXHIBIT INDEX

Exhibit Number	Description	Method of Filing
2(a)	Agreement and Plan of Merger, dated as of April 23, 2017, among C.R. Bard, Inc., Becton, Dickinson and Company and Lambda Corp. +	Incorporated by reference to Exhibit 2.1 to the registrant's Current Report on Form 8-K filed on April 24, 2017.
2(b)	Amendment No. 1, dated July 28, 2017, to the Agreement and Plan of Merger, dated as of April 23, 2017, among C.R. Bard, Inc., Becton, Dickinson and Company and Lambda Corp.	Incorporated by reference to Exhibit 2.1 to the registrant's Current Report on Form 8-K filed on July 28, 2017.
3(a)(i)	Restated Certificate of Incorporation, dated as of January 29, 2013.	Incorporated by reference to Exhibit 3(a) to the registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2013.
3(a)(ii)	Certificate of Amendment of the Restated Certificate of Incorporation, filed with the State of New Jersey Department of Treasury and effective May 15, 2017.	Incorporated by reference to Exhibit 4.1 to the registrant's registration statement on Form 8-A filed on May 16, 2017.
3(b)	By-Laws, as amended and restated as of April 24, 2018.	Incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K filed on April 25, 2018.
4(a)	Indenture, dated as of March 1, 1997, between the registrant and The Bank of New York Mellon Trust Company, N.A. (as successor to JPMorgan Chase Bank)	Incorporated by reference to Exhibit 4(a) to Form 8-K filed by the registrant on July 31, 1997
4(b)	Form of 7% Debentures due August 1, 2027.	Incorporated by reference to Exhibit 4(d) of the registrant's Current Report on Form 8-K filed on July 31, 1997.
4(c)	Form of 6.70% Debentures due August 1, 2028.	Incorporated by reference to Exhibit 4(d) of the registrant's Current Report on Form 8-K filed on July 29, 1999.
4(d)	Form of 6.00% Notes due May 15, 2039.	Incorporated by reference to Exhibit 4.2 of the registrant's Current Report on Form 8-K filed on May 13, 2009.
4(e)	Form of 3.25% Notes due November 12, 2020.	Incorporated by reference to Exhibit 4.1 of the registrant's Current Report on Form 8-K filed on November 12, 2010.
4(f)	Form of 5.00% Notes due November 12, 2040.	Incorporated by reference to Exhibit 4.2 of the registrant's Current Report on Form 8-K filed on November 12, 2010.
4(g)	Form of 3.125% Notes due November 8, 2021.	Incorporated by reference to Exhibit 4.2 of the registrant's Current Report on Form 8-K filed on November 8, 2011.
4(h)	Form of 2.675% Notes due December 15, 2019.	Incorporated by reference to Exhibit 4.3 of the registrant's Current Report on Form 8-K filed on December 15, 2014.
4(i)	Form of 3.734% Notes due December 15, 2024.	Incorporated by reference to Exhibit 4.4 of the registrant's Current Report on Form 8-K filed on December 15, 2014.

Exhibit Number	Description	Method of Filing
4(j)	Form of 4.685% Notes due December 15, 2044.	Incorporated by reference to Exhibit 4.5 of the registrant's Current Report on Form 8-K filed on December 15, 2014.
4(k)	Form of 3.300% Senior Notes due March 1, 2023.	Incorporated by reference to Exhibit 4.4 of the registrant's Current Report on Form 8-K filed on April 29, 2015.
4(l)	Form of 3.875% Senior Notes due May 15, 2024.	Incorporated by reference to Exhibit 4.5 of the registrant's Current Report on Form 8-K filed on April 29, 2015.
4(m)	Form of 4.875% Senior Notes due May 15, 2044.	Incorporated by reference to Exhibit 4.6 of the registrant's Current Report on Form 8-K filed on April 29, 2015.
4(n)	Form of 4.90% Notes due April 15, 2018.	Incorporated by reference to Exhibit 4(i) of the registrant's Annual Report on form 10-K for the fiscal year ended September 30, 2016.
4(o)	Form of 1.000% Notes due December 15, 2022.	Incorporated by reference to Exhibit 4.1 of the registrant's Current Report on Form 8-K filed on December 9, 2016.
4(p)	Form of 1.900% Notes due December 15, 2026.	Incorporated by reference to Exhibit 4.2 of the registrant's Current Report on Form 8-K filed on December 9, 2016.
4(q)	Form of 2.133% Notes due June 6, 2019.	Incorporated by reference to Exhibit 4.1 of the registrant's Current Report on Form 8-K filed on June 6, 2017.
4(r)	Form of 2.404% Notes due June 5, 2020.	Incorporated by reference to Exhibit 4.2 of the registrant's Current Report on Form 8-K filed on June 6, 2017.
4(s)	Form of 2.894% Notes due June 6, 2022.	Incorporated by reference to Exhibit 4.3 of the registrant's Current Report on Form 8-K filed on June 6, 2017.
4(t)	Form of Floating Rate Notes due June 6, 2022.	Incorporated by reference to Exhibit 4.4 of the registrant's Current Report on Form 8-K filed on June 6, 2017.
4(u)	Form of 3.363% Notes due June 6, 2024.	Incorporated by reference to Exhibit 4.5 of the registrant's Current Report on Form 8-K filed on June 6, 2017.
4(v)	Form of 3.700% Notes due June 6, 2027.	Incorporated by reference to Exhibit 4.6 of the registrant's Current Report on Form 8-K filed on June 6, 2017.
4(w)	Form of 4.669% Notes due June 6, 2047.	Incorporated by reference to Exhibit 4.7 of the registrant's Current Report on Form 8-K filed on June 6, 2017.
4(x)	Form of Certificate for the 6.125% Mandatory Convertible Preferred Stock, Series A.	Incorporated by reference to Exhibit 4.2 to the registrant's registration statement on Form 8-A filed on May 16, 2017.

Exhibit Number	Description	Method of Filing
4(y)	Deposit Agreement, dated as of May 16, 2017, among Becton, Dickinson and Company and Computershare Inc. and Computershare Trust Company, N.A., acting jointly as depositary and Computershare Trust company, N.A., acting as Registrar and Transfer Agent, on behalf of the holders from time to time of the depositary receipts described therein.	Incorporated by reference to Exhibit 4.3 to the registrant's registration statement on Form 8-A filed on May 16, 2017.
4(z)	Form of Depositary Receipt for the Depositary Shares.	Incorporated by reference to Exhibit 4.4 to the registrant's registration statement on Form 8-A filed on May 16, 2017.
4(aa)	Registration Rights Agreement, dated as of December 29, 2017, between Becton, Dickinson and Company and Citigroup Global Markets Inc.	Incorporated by reference to Exhibit 4.1 of the registrant's Current Report on Form 8-K filed on December 29, 2017.
4(bb)	Form of 6.700% Notes due December 1, 2026.	Incorporated by reference to Exhibit 4.4 of the registrant's Current Report on Form 8-K filed on December 29, 2017.
4(cc)	Indenture, dated as of December 1, 1996 between C.R. Bard, Inc. and The Bank of New York Mellon Trust Company, N.A., a national banking association, as trustee.	Incorporated by reference to Exhibit 4.1 to C.R. Bard, Inc.'s Registration Statement on Form S-3 (File No. 333-05997).
4(dd)	First Supplemental Indenture, dated May 18, 2017, between C. R. Bard, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee.	Incorporated by reference to Exhibit 4.2 of the Current Report on Form 8-K of C.R. Bard, Inc. filed on May 23, 2017.
4(ee)	Form of 0.368% Notes due June 6, 2019.	Incorporated by reference to Exhibit 4.1 of the registrant's Current Report on Form 8-K filed on February 22, 2018.
4(ff)	Form of Floating Rate Notes due December 29, 2020.	Incorporated by reference to Exhibit 4.1 of the registrant's Current Report on Form 8-K filed on March 1, 2018.
4(gg)	Form of 1.401% Notes due May 24, 2023.	Incorporated by reference to Exhibit 4.1 of the registrant's Current Report on Form 8-K filed on May 24, 2018.
4(hh)	Form of 3.02% Notes due May 24, 2025.	Incorporated by reference to Exhibit 4.2 of the registrant's Current Report on Form 8-K filed on May 24, 2018.
10(a)(i)	Form of Employment Agreement with executive officers relating to employment following a change of control of the registrant (with tax reimbursement provisions).*	Incorporated by reference to Exhibit 10(a) to the registrant's Quarterly Report on Form 10-Q for the period ended December 31, 2008.
10(a)(ii)	Form of Employment Agreement with executive officers relating to employment following a change of control of the registrant (without tax reimbursement provisions).*	Incorporated by reference to Exhibit 10(a) (ii) to the registrant's Annual Report on Form 10-K for the fiscal year ended September 30, 2013.
10(b)	Stock Award Plan, as amended and restated as of January 31, 2006.*	Incorporated by reference to Exhibit 10(a) to the registrant's Quarterly Report on Form 10-Q for the period ended December 31, 2005.

Exhibit Number	Description	Method of Filing
10(c)	Performance Incentive Plan, as amended and restated January 24, 2017.*	Incorporated by reference to Exhibit 10.1 to the registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2017.
10(d)	Deferred Compensation and Retirement Benefit Restoration Plan, as amended and restated as of January 1, 2018.*	Filed with this report.
10(e)	1996 Directors' Deferral Plan, as amended and restated as of November 25, 2014.*	Incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K filed on December 2, 2014.
10(f)	Amended and Restated Aircraft Time Sharing Agreement between Becton, Dickinson and Company and Vincent A. Forlenza dated as of March 21, 2012.*	Incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on March 27, 2012.
10(g)(i)	2004 Employee and Director Equity-Based Compensation Plan, as amended and restated as of January 26, 2016.*	Incorporated by reference to Exhibit 10 to the registrant's Current Report on Form 8-K filed on January 29, 2016.
10(g)(ii)	Terms of Awards under 2004 Employee and Director Equity-Based Compensation Plan and Stock Award Plan.*	Incorporated by reference to Exhibit 10(g)(ii) to the registrant's Annual Report on Form 10-K for the fiscal year ended September 30, 2016.
10(h)	Five-Year Credit Agreement, dated January 29, 2016 among the registrant and the banks named therein (term has been extended to January 24, 2022).	Incorporated by reference to Exhibit 10 to the registrant's Current Report on Form 8-K filed on February 4, 2016.
10(i)	Form of Commercial Paper Dealer Agreement.	Incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on January 6, 2015.
10(j)	Tax Matters Agreement, dated August 31, 2009, by and between Cardinal Health, Inc. and CareFusion Corporation.	Incorporated by reference to Exhibit 10.3 to Cardinal Health, Inc.'s Current Report on Form 8-K filed on September 4, 2009.
10(k)	Letter of Understanding dated March 28, 2016 between Becton, Dickinson and Company and Alexandre Conroy.*	Incorporated by reference to Exhibit 10 to the registrant's Quarterly Report on Form 10-Q for the period ended December 31, 2016.
10(l)	Three-Year Term Loan Agreement, dated as of May 12, 2017, by and among Becton, Dickinson and Company, the lenders party thereto, and Citibank, N.A., as administrative agent.	Incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed May 16, 2017.
10(m)	Credit Agreement, dated as of May 12, 2017, by and among Becton, Dickinson and Company, the banks and issuers of letters of credit party thereto and Citibank, N.A., as administrative agent.	Incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K filed May 16, 2017.
10(n)	364-Day Term Loan Agreement, dated as of September 6, 2018, among Becton, Dickinson and Company, the banks named therein and Wells Fargo Bank, National Association, as administrative agent.	Incorporated by reference to Exhibit 10 to the registrant's Current Report on Form 8-K filed September 13, 2018.
10(o)	Term sheet, dated August 25, 2017, between the registrant and Samrat Khichi.*	Filed with this report.

Exhibit Number	Description	Method of Filing
10(p)	C. R. Bard, Inc. Supplemental Executive Retirement Plan, dated as of July 13, 1988.*	Incorporated by reference to Exhibit 10p of the C.R. Bard, Inc. Annual Report on Form 10-K for the fiscal year ending December 31, 1993.
10(q)	Supplemental Insurance/Retirement Plan Agreement (as Amended and Restated) between C.R. Bard, Inc. and its executive officers.*	Incorporated by reference to Exhibit 10be of the C.R. Bard, Inc. Quarterly Report on Form 10-Q for the period ending September 30, 2005.
10(r)	2005 Directors' Stock Award Plan of C. R. Bard, Inc. (as Amended and Restated).*	Incorporated by reference to Exhibit 10bw of the C.R. Bard, Inc. Annual Report on Form 10-K for the fiscal year ending December 31, 2010.
21	Subsidiaries of the registrant.	Filed with this report.
23	Consent of independent registered public accounting firm.	Filed with this report.
24	Power of Attorney.	Filed with this report.
31	Certifications of Chief Executive Officer and Chief Financial Officer, pursuant to SEC Rule 13(a)-14(a).	Filed with this report.
32	Certifications of Chief Executive Officer and Chief Financial Officer, pursuant to Section 1350 of Chapter 63 of Title 18 of the U.S. Code.	Filed with this report.
101	The following materials from this report, formatted in XBRL (Extensible Business Reporting Language): (i) the Consolidated Statements of Income, (ii) the Consolidated Statements of Comprehensive Income, (iii) the Consolidated Balance Sheets, (iv) the Consolidated Statements of Cash Flows, and (v) Notes to Consolidated Financial Statements.	Filed with this report.

+ Pursuant to Item 601(b)(2) of Regulation S-K, the schedules to the Agreement and Plan of Merger have been omitted from this Report and will be furnished supplementally to the SEC upon request.

* Denotes a management contract or compensatory plan or arrangement.

Copies of any Exhibits not accompanying this Form 10-K are available at a charge of 10 cents per page by contacting: Investor Relations, Becton, Dickinson and Company, 1 Becton Drive, Franklin Lakes, New Jersey 07417-1880, Phone: 1-800-284-6845.

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Corporate information

Annual meeting

Tuesday, January 22, 2019 – 1:00 p.m.
Four Seasons Hotel New York
57 East 57th Street
New York, NY 10022

This annual report is not a solicitation of proxies.

Transfer agent and registrar

Computershare Trust Company, N.A.

By regular mail

P.O. Box 505000
Louisville, KY 40233-5000

By overnight mail

462 South 4th Street, Suite 1600
Louisville, KY 40202
Toll free: 877.498.8861
Toll: 781.575.2879
https://www.computershare.com

Direct stock purchase plan

The direct stock purchase plan established through Computershare Trust Company, N.A., enhances the services provided to existing shareholders and facilitates initial investments in BD shares. Plan documentation and additional information may be obtained by calling Computershare Trust Company, N.A., at 877.498.8861, or by accessing the "Buy stock direct" feature located within the Investor Center of Computershare's website at http://www.computershare.com.

NYSE symbol: BDX

Independent auditors

Ernst & Young LLP

5 Times Square
New York, NY 10036-6530
Phone: 212.773.3000
http://www.ey.com

Shareholder information

As of November 30, 2018, BD had 14,064 shareholders of record. The BD Statement of Corporate Governance Principles, the BD Code of Conduct, the charters of the BD Committees of the Board of Directors, BD reports and statements filed with or furnished to the Securities and Exchange Commission and other information are posted on the BD website at bd.com/investors.

Shareholders may receive, without charge, printed copies of these documents, including the BD 2018 Annual Report on Form 10-K, including the financial statements and related schedules, by contacting:

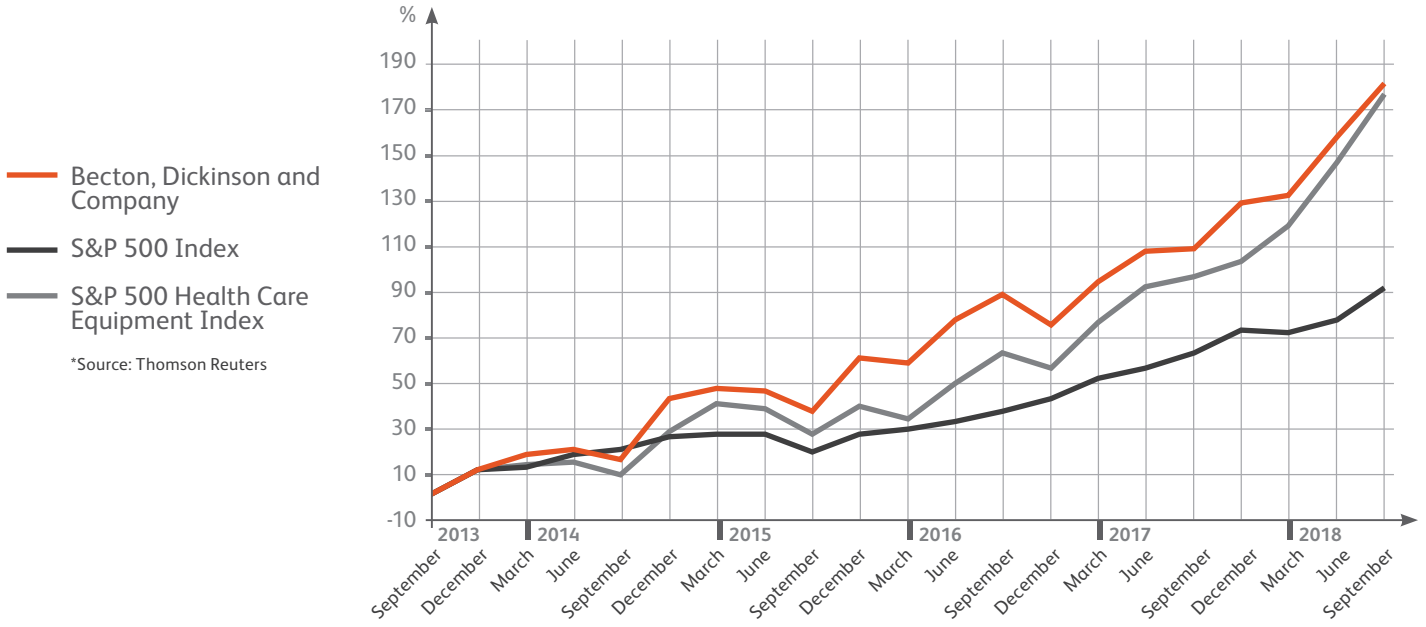
Investor relations

BD
1 Becton Drive
Franklin Lakes, NJ 07417-1880
Phone: 800.284.6845
bd.com

Comparison of 5-year cumulative total return among BD, the S&P 500 Index and the S&P 500 Health Care Equipment Index

The graph below presents a comparison of cumulative total return to shareholders for the 5-year period ended September 30, 2018, for BD, the S&P 500 Index and the S&P 500 Health Care Equipment Index.*

Cumulative total return to shareholders is measured by dividing total dividends *(assuming dividend reinvestment)* plus per-share price change for the period by the share price at the beginning of the measurement period. The BD cumulative shareholder return is based on an investment of $100 on September 30, 2013, and is compared to the cumulative total return of the S&P 500 Index and the S&P 500 Health Care Equipment Index over the same period with a like amount invested.



BD, Franklin Lakes, NJ, 07417, U.S.

bd.com