BECTON DICKINSON & CO
Form 10-K
November 22, 2017
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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, 2017
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 9, 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

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 þ 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 þ
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 þ No ¨
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes þ 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	ý	Accelerated filer	¨
Non-accelerated filer	¨ (Do not check if a smaller reporting company)		
		Smaller reporting company	¨
		Emerging growth company	¨

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

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

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As of March 31, 2017, the aggregate market value of the registrant's outstanding common stock held by non-affiliates of the registrant was approximately $39,070,060,303.

As of October 31, 2017, 227,978,328 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 23, 2018 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" 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, 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 two worldwide business segments: BD Medical and BD Life Sciences. Information with respect to BD's business segments is included in Note 6 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
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.
Medication and Procedural Solutions	Needles, syringes and intravenous catheters for medication delivery (including safety-engineered and auto-disable devices); prefilled IV flush syringes; regional anesthesia needles and trays; sharps disposal containers; closed-system transfer devices; skin antiseptic products; and surgical and laproscopic instrumentation.
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.
Pharmaceutical Systems	Prefillable drug delivery systems provided to pharmaceutical companies for use as containers for injectable pharmaceutical products, which are then placed on the market as drug/device combinations.

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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; molecular indexing and next-generation sequencing sample preparation for genomics research; clinical oncology, immunological (HIV) and transplantation diagnostic/monitoring reagents and analyzers; and cell culture media supplements for biopharmaceutical manufacturing.

Acquisitions

Definitive Agreement to Acquire C. R. Bard, Inc.

On April 23, 2017, BD entered into a definitive agreement (the "Merger Agreement") under which BD will acquire C.R. Bard, Inc. ("Bard") to create a highly differentiated medical technology company uniquely positioned to improve both the process of care and the treatment of disease for patients and healthcare providers.

Under the terms of the Merger Agreement, each outstanding share of Bard common stock will be converted into the right to receive $222.93 in cash, without interest, and 0.5077 of a share of BD's common stock. The transaction is subject to regulatory approvals, as well as customary closing conditions, and is expected to close in the fourth calendar quarter of 2017. BD plans to finance the transaction with the issuance of BD's common stock to Bard's shareholders and available cash on hand, which will include net proceeds raised in the third quarter through equity and debt transactions.

The foregoing description of the Merger Agreement and the transactions contemplated thereby is not complete and is subject to and qualified in its entirety by reference to the Merger Agreement, a copy of which is included as an exhibit to the Current Report on Form 8-K filed by BD on April 24, 2017.

Acquisition of 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.

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Acquisition of 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.

Divestiture

In March 2016, BD signed a definitive agreement to sell 50.1% of its Respiratory Solutions business and form a joint venture with respect to this business. The Respiratory Solutions business was acquired in the CareFusion acquisition in 2015 and was a component of the Medical segment. Upon closing of the transaction, which occurred on October 3, 2016, the Company transferred the Respiratory Solutions business to a new standalone entity, retaining a 49.9% non-controlling interest in the new entity. The buyer controls the operations and governance of the new entity.

Additional information regarding this transaction 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; 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, 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 end-users by BD and independent sales representatives. 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 and Procedural Solutions organizational unit, and diagnostic products in the Diagnostic Systems organizational unit, which relate to seasonal diseases such as influenza.

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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 our 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 $774 million, $828 million and $632 million on research and development during the fiscal years ended September 30, 2017, 2016, and 2015, 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.

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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

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. Our technologies are subject to worldwide regulations regarding reimbursement developed by government agencies, including the Centers for Medicare and Medicaid Services (CMS) in the United States; the National Health Service in the United Kingdom; the Joint Federal Committee in Germany; the Commission d'Evaluation des Produits et prestations in France; the Ministry for Health, Labor and Welfare in Japan; the Ministry of Health and the National Development and Reform Commission in China; among many others. In addition, our technologies are also subject to reimbursement policies issued by private insurance companies and managed care organizations.

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 have created an increased emphasis on the delivery of more cost-effective and quality-driven healthcare.

In addition, 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

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.

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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.

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, 2017, 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.

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

Employees

As of September 30, 2017, BD had 41,933 employees, of which 17,497 were employed in the U.S. (including Puerto Rico). BD believes that its employee relations are satisfactory.

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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 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 2017 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 also 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.

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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. 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, price, services and other factors. In addition, we face changing customer preferences and requirements, including increased customer demand for more environmentally-friendly products.

The medical technology industry is also subject to rapid technological change and discovery. The development of new or improved products, processes or technologies by other companies (such as needle-free injection technology) 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.

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. 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 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 2017, absent further legislative action, it will be reinstated in 2018.

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Consolidation in the healthcare industry could adversely affect our future revenues and operating income.

The medical technology industry has 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.

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, 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 the company 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.

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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 the effects of fluctuations in foreign currency exchange (discussed above), the effects of local economic and political conditions, 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, differing labor regulations, potential changes to international trade agreements and treaties, changes in tax laws, weakening or loss of the protection of intellectual property rights in some countries, import or export licensing requirements, trade protection measures and restrictions on the transfer of capital across borders. The success of our operations outside the United States depends, in part, on our ability to acquire or form and maintain alliances with local companies and 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.

Under the U.S. tax code, we may also be subject to additional taxation to the extent we repatriate earnings from our foreign operations to the U.S. In the event we require more capital in the United States than is generated by our U.S. operations to fund acquisitions or other activities and elect to repatriate earnings from foreign jurisdictions, our effective tax rate may be higher as a result. Recently in the United States, there have been legislative proposals to tax profits that are earned abroad. These, and other proposals for fundamental U.S. corporate tax reform, if enacted, could have a material impact on our financial results.

The June 2016 referendum result in the United Kingdom (“UK”) to exit the European Union (“EU”) (commonly known as “Brexit”) and the subsequent triggering by the UK government in March 2017 of Article 50 of the Lisbon Treaty, which commenced the UK’s official withdrawal process from the EU, has created uncertainties affecting business operations in the UK and the EU. Following the referendum, there was a significant decline in the value of the British pound compared to the U.S. dollar, and continued volatility in exchange rates and economic conditions is expected as the UK negotiates its exit from the EU. Until the terms of the UK’s exit from the EU are determined, it is difficult to predict its impact but it is possible that the withdrawal could, among other things, affect the legal and regulatory schemes 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.

There have also been recent proposals for the U.S. to significantly modify or withdraw from certain existing international trade agreements, including the North American Free Trade Agreement. While we cannot predict whether any such changes will be implemented, it is possible that changes to international trade agreements could materially impact our business.

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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, we elect to purchase certain raw materials and components from sole suppliers. The supply of these materials can be disrupted for a number of reasons, including economic conditions as described above. 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 sole-sourced 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. In particular, damage to our manufacturing facilities in Puerto Rico resulting from Hurricane Maria in September 2017 could adversely impact our revenue and earnings results for fiscal year 2018.

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 and suits alleging patent infringement, and could be subject to additional lawsuits in the future. A more detailed description of these lawsuits is contained in note 5 to the consolidated financial statements included in Item 8., Financial Statements and Supplementary Data. 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, excess liability insurance. Any such future charges, individually or in the aggregate, could have a material adverse effect on our results of operations and cash flows.

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 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.

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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. For more information regarding the consent decree, see “Regulation” under Item 1, “Business”.

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, unapproved 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 adverse events. These events could lead to recalls or safety alerts relating to our products (either voluntary or 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.

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.

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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.

We may not realize all of the anticipated benefits and cost savings resulting from our acquisition of CareFusion.

While we have realized significant cost savings to date in connection with our acquisition of CareFusion in 2015, achieving additional cost synergies may prove more difficult than expected, and it is possible that the anticipated cost synergies of the merger may not be realized fully, or may take longer to realize than expected.

Risks Relating To Our Acquisition of Bard

Completion of the Bard acquisition is subject to conditions and if these conditions are not satisfied or waived, the Bard acquisition will not be completed.

The obligations of us and Bard to complete the Bard acquisition are subject to satisfaction or waiver of a number of conditions, the expiration or termination of the applicable waiting period in connection with the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (the “HSR Act”), the receipt of any authorization or consent from certain other governmental authorities required to be obtained with respect to the merger under applicable foreign antitrust laws, approval of the listing on the NYSE of shares of our common stock to be issued in the Bard acquisition, and the absence of an injunction prohibiting the Bard acquisition. Each party’s obligation to complete the Bard acquisition is subject to the satisfaction or waiver (to the extent permitted under applicable law) of certain other customary conditions, the accuracy of the representations and warranties of the other party under the Merger Agreement (subject to the materiality standards set forth in the Merger Agreement), the performance by the other party of its respective obligations under the Merger Agreement in all material respects and delivery of officer certificates by the other party certifying satisfaction of the two preceding conditions. Either we or Bard may, subject to certain exceptions, terminate the Merger Agreement upon mutual consent or if the Bard acquisition has not been consummated on or before January 23, 2018 (or before April 23, 2018 if all closing conditions have been satisfied other than the receipt of required competition approvals).

The failure to satisfy all of the required conditions could delay the completion of the Bard acquisition for a significant period of time or prevent it from occurring. If the Bard acquisition is not completed, our ongoing business may be materially adversely affected and, without realizing any of the benefits of having completed the Bard acquisition, we will be subject to a number of risks, including the following:

- the market price of our common stock could decline;
- if the Merger Agreement is terminated and our board of directors seeks another business combination, our stockholders cannot be certain that we will be able to find a party willing to enter into a transaction on terms equivalent to or more attractive than the terms that Bard has agreed to in the Merger Agreement;
- time and resources, financial and other, committed by our management to matters relating to the Bard acquisition could otherwise have been devoted to pursuing other beneficial opportunities for our company;

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- we may experience negative reactions from the financial markets or from our customers or employees; and
- we will be required to pay our respective costs relating to the Bard acquisition, including legal, accounting, financial advisory, financing and printing fees, whether or not the Bard acquisition is completed.

In addition, if the Bard acquisition is not completed, we could be subject to litigation related to any failure to complete the Bard acquisition or related to any enforcement proceeding commenced against us to perform our obligations under the Merger Agreement. The materialization of any of these risks could materially and adversely impact our ongoing business.

Similarly, any delay in completing the Bard acquisition could, among other things, result in additional transaction costs, loss of revenue or other negative effects associated with uncertainty about completion of the Bard acquisition and cause us not to realize some or all of the benefits that we expect to achieve if the Bard acquisition is successfully completed within its expected timeframe. There can be no assurance that the conditions to the closing of the Bard acquisition will be satisfied or waived or that the Bard acquisition will be consummated.

In order to complete the Bard acquisition, we and Bard must make certain governmental filings and obtain certain governmental authorizations, and if such filings and authorizations are not made or granted or are granted with conditions, completion of the Bard acquisition may be jeopardized or the anticipated benefits of the Bard acquisition could be reduced.

Although we and Bard have agreed in the Merger Agreement to use reasonable best efforts, subject to certain limitations, to make certain governmental filings, to obtain the required expiration or termination of the waiting period under the HSR Act and to obtain any authorization or consent from certain other governmental authorities required to be obtained with respect to the merger under applicable foreign antitrust laws, there can be no assurance that such approvals will be obtained. As a condition to granting termination of the waiting period under the HSR Act and to adoption of approvals of the Bard acquisition, governmental authorities may impose requirements, limitations or costs or require divestitures or place restrictions on the conduct of our business after completion of the Bard acquisition. Under the terms of the Merger Agreement, subject to certain exceptions, we and our subsidiaries are required to accept certain conditions and take certain actions imposed by certain governmental authorities that would apply to, or affect, the businesses, assets or properties of us, our subsidiaries or Bard and its subsidiaries. There can be no assurance that regulators will not impose conditions, terms, obligations or restrictions and that such conditions, terms, obligations or restrictions will not have the effect of (i) delaying completion of the Bard acquisition, (ii) imposing additional material costs on or materially limiting the revenues of the combined company following the Bard acquisition, or (iii) otherwise adversely affecting our businesses and results of operations after completion of the Bard acquisition. In addition, we can provide no assurance that these conditions, terms, obligations or restrictions will not result in the delay or abandonment of the Bard acquisition.

Each party is subject to business uncertainties and contractual restrictions while the proposed merger is pending, which could adversely affect each party’s or the combined company’s business and operations.

In connection with the pendency of the Bard acquisition, it is possible that some customers, suppliers and other persons with whom we or Bard have a business relationship may delay or defer certain business decisions or might decide to seek to terminate, change or renegotiate their relationships with us or Bard, as the case may be, as a result of the Bard acquisition, which could negatively affect our or Bard’s respective revenues, earnings and cash flows, regardless of whether the Bard acquisition is completed. If the Bard acquisition is completed, such terminations, changes or renegotiations could negatively affect the revenues, earnings and cash flows of the combined company. These risks may be exacerbated by delays or other adverse developments with respect to the completion of the Bard acquisition.

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Combining the two companies 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.

We and Bard have operated and, until the completion of the Bard acquisition, will continue to operate, independently. 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 business with the business of Bard.

The Bard acquisition will involve the integration of Bard's business with our existing business, which is a complex, costly and time-consuming process. It is possible that the pendency of the Bard acquisition and/or the integration process could result in material challenges, including, without limitation:

- the diversion of management's attention from ongoing business concerns and performance shortfalls at one or both of the companies as a result of the devotion of management's attention to the Bard acquisition;
- managing a larger combined company;
- maintaining employee morale and retaining key management and other employees;
- the possibility of faulty assumptions underlying expectations regarding the integration process;
- retaining existing business and operational relationships and attracting new business and operational relationships;
- consolidating corporate and administrative infrastructures and eliminating duplicative operations and inconsistencies in standards, controls, procedures and policies;
- coordinating geographically separate organizations;
- unanticipated issues in integrating information technology, communications and other systems; and
- unforeseen expenses or delays associated with the Bard acquisition.

Many of these factors will be outside of the combined company's control and any one of them could result in delays, increased costs, decreases in revenues and diversion of management's time and energy, which could materially affect the combined company's financial position, results of operations and cash flows.

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 (i) each of us and Bard during this transition period and (ii) the combined company for an undetermined period after completion of the Bard acquisition. In addition, the actual cost savings of the Bard acquisition could be less than anticipated.

In addition, certain risks associated with our industry and business described herein and in our public filings may become more significant following consummation of the Bard acquisition, including, but not limited to, risks relating to: the continued focus by third-party payors on cost containment and government scrutiny of the healthcare industry's sales and marketing practices, various healthcare reform proposals that have emerged on the federal and state levels and in other jurisdictions where the combined company sells its products, collective bargaining and labor activity, and the integrity of our information systems that are run by third party vendors and such vendors' ability to maintain their systems and reduce any vulnerability to natural and system disruptions and prevent cyber-attacks and other unauthorized access.

The future results of the combined company may be adversely impacted if the combined company does not effectively manage its expanded operations following the completion of the Bard acquisition.

Following the completion of the Bard acquisition, the size of the combined company's business will be significantly larger than the current size of either our or Bard's respective businesses. The combined company's 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 two discrete 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 the combined company will be successful or that it will realize the expected operating efficiencies, cost savings and other benefits currently anticipated from the Bard acquisition.

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The combined company is expected to incur substantial expenses related to the completion of the Bard acquisition and the integration of BD and Bard.

We and Bard have incurred, and expect to continue to incur, a number of non-recurring costs associated with the Bard acquisition and combining the operations of the two companies. The substantial majority of non-recurring expenses will be comprised of transaction and regulatory costs related to the Bard acquisition.

We also will incur transaction fees and costs 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 acquisition and the integration of the two companies' businesses. 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 have incurred significant additional indebtedness, and certain of Bard's indebtedness will remain outstanding, 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 pending Bard acquisition through the incurrence of new indebtedness to finance the Bard acquisition and, following the Bard acquisition, through the assumption of Bard's existing indebtedness, in comparison to our indebtedness on a recent historical basis, which could have the effect of, among other things, reducing our flexibility to respond to changing business and economic conditions 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, will be 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 could 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 of the 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, we expect that our combined company's credit ratings will be lower following the Bard acquisition, including below "investment grade" by Moody's Investors Service, Inc., which may further increase the combined company's future borrowing costs and reduce the combined company's 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. We cannot assure you that it will be able to obtain additional financing or refinancing on terms acceptable to us or at all.

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We may not be able to service all of the combined company's indebtedness and may be forced to take other actions to satisfy our obligations under our indebtedness, which may not be successful. Our failure to meet our debt service obligations could have a material adverse effect on our business, financial condition and results of operations.

We depend on cash on hand and cash flows from operations to make scheduled debt payments. We expect to be able to meet the estimated cash interest payments on the combined company's debt following the Bard acquisition through a combination of the expected cash flows from operations of the combined company. 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 will govern the indebtedness incurred in connection with the Bard acquisition contain various covenants that impose restrictions on us and certain of our subsidiaries 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.

Uncertainties associated with the Bard acquisition may cause a loss of management personnel and other key employees of Bard or us, which could adversely affect the future business and operations of the combined company following the Bard acquisition.

We and Bard are dependent on the experience and industry knowledge of our respective officers and other key employees to execute our respective business plans. The combined company's success after the Bard acquisition will depend in part upon its ability to retain key management personnel and other key employees of us and Bard. Current and prospective employees of us and Bard may experience uncertainty about their future roles with the combined company following the Bard acquisition, which may materially adversely affect the ability of each of us and Bard to attract and retain key personnel during the pendency of and after the Bard acquisition. Accordingly, no assurance can be given that the combined company will be able to retain key management personnel and other key employees of us and Bard.

Completion of the Bard acquisition will trigger change in control or other provisions in certain agreements to which Bard is a party, which may have an adverse impact on the combined company's business and results of operations.

The completion of the Bard acquisition will trigger change in control and other provisions in certain agreements to which Bard is a party. If we and Bard are unable to negotiate waivers of those provisions, the counterparties may exercise their rights and remedies under the agreements, potentially terminating the agreements or seeking monetary damages. Even if we and Bard are able to negotiate waivers, the counterparties may require a fee for such waivers or seek to renegotiate the agreements on terms less favorable to Bard or the combined company. Any of the foregoing or similar developments may have an adverse impact on the combined company's business and results of operations.

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For example, if the ratings of certain of Bard's outstanding senior notes are reduced beyond certain thresholds within certain time periods prior to or following the consummation of the Bard acquisition, Bard could be required to offer to repurchase such notes at 101% of the aggregate principal amount of such notes plus any accrued and unpaid interest to the repurchase date.

Following the consummation of the Bard acquisition, the combined company will assume certain potential liabilities relating to Bard, including certain products liability and mass torts claims.

Following the consummation of the Bard acquisition, the combined company will have assumed certain potential liabilities relating to Bard, including certain products liability and mass tort claims with respect to the design, manufacture and marketing of medical devices and related settlement agreements and judgments. As of September 30, 2017, Bard has reported that there are: (i) approximately 25 federal and 185 state lawsuits involving individual claims by approximately 205 plaintiffs, as well as one putative class action in the United States, are currently pending against Bard's hernia repair implant products, (ii) product liability lawsuits involving individual claims by approximately 3,285 plaintiffs are currently pending against Bard in various federal and state jurisdictions with respect to Bard's surgical continence products for women and (iii) product liability lawsuits involving individual claims by approximately 1,755 plaintiffs are currently pending against Bard in various federal and state jurisdictions with respect to Bard's vena cava filter products.

Bard does not maintain or has limited remaining insurance coverage for certain of these claims and the combined company may not be able to obtain additional insurance on acceptable terms or at all that will provide adequate protection against potential liabilities. Moreover, in some circumstances adverse events arising from or associated with the design, manufacture, quality or marketing of our combined company's products could result in the FDA suspending or delaying its review of our applications for new product approvals, or imposing post market approval requirements. In addition, reserves established by Bard or the combined company for estimated losses, including with respect to these claims, do not represent an exact calculation of actual liability but instead represent estimates of the probable loss at the time the reserve is established. Due to the inherent uncertainty underlying loss reserve estimates, additional reserves may be established from time-to-time, and actual losses relating to the assumed Bard liabilities may be materially higher or lower than the related reserve. Any of the foregoing could have a material adverse effect on our business, financial condition or results of operations.

Sales of shares of BD common stock after the completion of the transaction may cause the market price of BD equity securities to fall.

We will issue a significant number of shares of our common stock in connection with the Bard acquisition. Many Bard stockholders may decide not to hold the shares of our common stock they will receive in the Bard acquisition. Other Bard stockholders, such as funds with limitations on their permitted holdings of stock in individual issuers, may be required to sell the shares of our common stock that they receive in the Bard acquisition. Such sales of our common stock could have the effect of depressing the market price for our equity securities and may take place promptly following the Bard acquisition.

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.

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Item 2. Properties.

BD's executive offices are located in Franklin Lakes, New Jersey. As of October 31, 2017, BD owned or leased 289 facilities throughout the world, comprising approximately 20,462,405 square feet of manufacturing, warehousing, administrative and research facilities. The U.S. facilities, including those in Puerto Rico, comprise approximately 7,472,419 square feet of owned and 2,976,267 square feet of leased space. The international facilities comprise approximately 7,478,714 square feet of owned and 2,535,005 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	Mixed(A)	Total
Leased	14	25	96	83	218
Owned	6	26	33	6	71
Total	20	51	129	89	289
Square feet	2,263,694	4,421,732	10,838,632	2,938,347	20,462,405

(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, Missouri, Nebraska, New Jersey, North Carolina, Ohio, Oklahoma, South Carolina, 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, Hungary, Ireland, Israel, Italy, Kenya, Luxembourg, Netherlands, Norway, 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.

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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	64	Chairman since July 2012; Chief Executive Officer since October 2011; President from January 2009 to April 2017; and Chief Operating Officer from July 2010 to October 2011.
Thomas E. Polen	44	President since April 2017; Executive Vice President and President - Medical Segment from October 2014 to April 2017; Group President from October 2013 to October 2014; and Worldwide President - BD Diagnostic Systems from October 2010 to October 2013.
James W. Borzi	55	Executive Vice President, Global Operations and Chief Supply Chain Office since October 2017; Senior Vice President, Global Operations from 2015 to October 2017; Vice President, Global Manufacturing from 2013 to 2015; and Vice President and General Manager, Hydro Aluminum from 2012 to 2013.
Alexandre Conroy	54	Worldwide President, Medication and Procedural Solutions since May 2017; and Executive Vice President and President, Europe, EMA and the Americas from June 2012 to May 2017.
Roland Goette	55	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.
James Lim	53	Executive Vice President and President, Greater Asia since June 2012.
Alberto Mas	56	Executive Vice President and President - Life Sciences Segment since October 2016; Worldwide President - Life Sciences, Diagnostic Systems from October 2013 to October 2016; and Worldwide President - BD Biosciences from October 2011 to October 2013.
Christopher R. Reidy	60	Executive Vice President, Chief Financial Officer and Chief Administrative Officer since July 2013; and prior thereto, Vice President and Chief Financial Officer of ADP Corporation.
Nabil Shabshab	52	Worldwide President, Diabetes Care and Digital Health since August 2017; Executive Vice President and President, Americas and Chief Customer Experience Officer from May 2017 to August 2017; Executive Vice President and Chief Marketing Officer from January 2015 to May 2017; Senior Vice President and Chief Marketing Officer from August 2011 to January 2015.
Ellen R. Strahlman, M.D.	60	Executive Vice President, Research and Development since January 2015, Chief Medical Officer since April 2013; Senior Vice President, Research and Development from April 2013 to January 2015; and prior thereto, Senior Vice President, Office of the CEO and Global Head, Neglected Tropical Diseases of GlaxoSmithKline.
Linda M. Tharby	49	Executive Vice President and Chief Human Resource Officer since October 2016; Executive Vice President and President - Life Sciences Segment from October 2014 to October 2016; Group President from October 2013 to October 2014; and prior thereto, Worldwide President - BD Medical, Diabetes Care.

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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. As of October 31, 2017, there were approximately 13,134 shareholders of record.

Market and Market Prices of Common Stock (per common share)

	2016		2017	
By Quarter	High	Low	High	Low
First	$156.53	$132.19	$179.17	$162.80
Second	152.54	132.88	185.34	164.80
Third	172.19	152.86	195.15	177.07
Fourth	181.55	169.64	205.63	191.56

Dividends (per common share)

By Quarter	2016	2017
First	$ 0.660	$ 0.730
Second	0.660	0.730
Third	0.660	0.730
Fourth	0.660	0.730

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, 2017.

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(2)	Maximum Number of Shares that May Yet be Purchased Under the Plans or Programs(2)
July 1-31, 2017	1,809	$197.71	—	7,857,742
August 1-31, 2017	240	$196.39	—	7,857,742
September 1-30, 2017	—	—	—	7,857,742
Total	2,049	$197.55	—	7,857,742

(1) Includes 2,049 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.

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Item 6. Selected Financial Data.

FIVE-YEAR SUMMARY OF SELECTED FINANCIAL DATA

Becton, Dickinson and Company

	Years Ended September 30				
	2017	2016	2015	2014	2013
	Dollars in millions, except share and per share amounts				
Operations					
Revenues	$12,093	$12,483	$10,282	$8,446	$8,054
Gross Margin	5,942	5,991	4,695	4,301	4,171
Research and Development Expense	774	828	632	550	494
Operating Income	1,478	1,430	1,074	1,606	1,254
Interest Expense, Net	445	367	356	89	98
Income From Continuing Operations Before Income Taxes	976	1,074	739	1,522	1,165
Income Tax (Benefit) Provision	(124)	97	44	337	236
Income from Continuing Operations	1,100	976	695	1,185	929
Net Income	1,100	976	695	1,185	1,293
Basic Earnings Per Share from Continuing Operations	4.70	4.59	3.43	6.13	4.76
Diluted Earnings Per Share from Continuing Operations	4.60	4.49	3.35	5.99	4.67
Dividends Per Common Share	2.92	2.64	2.40	2.18	1.98
Financial Position					
Total Current Assets	$18,633	$6,367	$5,659	$5,775	$5,530
Total Current Liabilities	3,342	4,400	4,381	2,225	2,122
Total PPE, Net	4,638	3,901	4,060	3,605	3,476
Total Assets	37,734	25,586	26,478	12,384	12,029
Total Long-Term Debt	18,667	10,550	11,370	3,768	3,763
Total Shareholders' Equity	12,948	7,633	7,164	5,053	5,043
Book Value Per Common Share	56.80	35.79	34.00	26.33	25.99
Financial Relationships					
Gross Profit Margin	49.1 %	48.0 %	45.7 %	50.9 %	51.8 %
Return on Revenues	9.1 %	7.8 %	6.8 %	14.0 %	11.5 %(A)
Return on Total Assets(B)	4.7 %	5.6 %	5.7 %	13.6 %	11.1 %(A)
Return on Equity	10.7 %	13.2 %	11.4 %	23.5 %	20.2 %(A)
Debt to Capitalization(C)	57.5 %	57.2 %	59.4 %	43.6 %	43.6 %(A)
Additional Data					
Number of Employees	41,900	50,900	49,500	30,600	30,000
Number of Shareholders	13,183	13,788	14,547	8,210	8,412
Average Common and Common Equivalent Shares Outstanding — Assuming Dilution (millions)	223.6	217.5	207.5	197.7	199.2
Depreciation and Amortization	$1,088	$1,114	$891	$562	$546
Capital Expenditures	727	693	596	592	522

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(A) Excludes discontinued operations.
(B) Earnings before interest expense and taxes as a percent of average total assets.
(C) Total debt as a percent of the sum of total debt, shareholders' equity and non-current deferred income tax liabilities.

The results above include the impact of the specified items detailed below. Additional discussion regarding the specified items in fiscal years 2017, 2016 and 2015 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	2017	2016	2015	2014	2013
Total specified items	$1,466	$1,261	$1,186	$153	$442
After-tax impact of specified items	$971	$892	$786	$101	$279
Impact of specified items on diluted earnings per share	$(4.34)	$(4.10)	$(3.79)	$(0.51)	$(1.40)
Impact of dilution from share issuances	$(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, life science researchers, clinical laboratories, the pharmaceutical industry and the general public. The Company's organizational structure is based upon two principal business segments, BD Medical ("Medical") and BD Life Sciences ("Life Sciences").

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, in particular, China and India.

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;

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- 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 and cell therapy;
- 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.

Definitive Agreement to Acquire C.R. Bard, Inc.

On April 23, 2017, we announced that we entered into a definitive agreement under which BD will acquire C. R. Bard, Inc. ("Bard") for an implied value of $317.00 per Bard common share in cash and stock, for estimated total consideration of approximately $24 billion. The combination will create a highly differentiated medical technology company uniquely positioned to improve both the process of care and the treatment of disease for patients and healthcare providers. Additional discussion regarding the acquisition agreement and the related financing the Company has secured, through equity and debt issuances, is provided in Notes 3, 9 and 15 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data. The transaction is subject to regulatory approval and customary closing conditions, and is expected to close in the fourth calendar quarter of 2017.

Acquisition of CareFusion

On March 17, 2015, BD acquired a 100% interest in CareFusion Corporation ("CareFusion"). CareFusion’s operating results were included in BD’s consolidated results of operations beginning on April 1, 2015 and as such, the consolidated results of operations for the first six months of fiscal year 2015 referenced in the commentary provided further below did not include CareFusion's results. CareFusion operates as part of our Medical segment.

Summary of Financial Results

Worldwide revenues in 2017 of $12.093 billion decreased 3.1% from the prior-year period. The decrease reflected an approximate 7% reduction in revenues due to the divestiture of the Respiratory Solutions business in October 2016. Volume growth in 2017 of more than 4% for our continuing businesses was partially offset by an unfavorable impact of foreign currency translation of less than 1%. Pricing did not materially impact 2017 revenues. Additional disclosures regarding our divestiture of the Respiratory Solutions

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business are provided in Note 10 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data. Volume growth in 2017 reflected the following:

- Medical segment volume growth in 2017 was driven by sales growth in all of the segment's units, particularly by growth in the Medication and Procedural Solutions, Medication Management Solutions and Pharmaceutical Systems units.
- Life Sciences segment volume growth in 2017 was driven by growth in all three of its organizational units, particularly in its Preanalytical and Diagnostic Systems units.
- U.S. volume growth in 2017 primarily reflected 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 volume growth in 2017 was driven by sales in the Medical segment's Medication and Procedural 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.

We continue to invest in research and development, geographic expansion, and new product promotions 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 have generally stabilized, 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 for certain geographies and could adversely impact our businesses.

Our financial position remains strong, with cash flows from operating activities totaling $2.550 billion in 2017. At September 30, 2017, we had $14.2 billion in cash and equivalents and short-term investments, which included net proceeds raised through registered public offerings of equity securities and debt transactions during the third quarter of approximately $4.8 billion and $9.6 billion, respectively. We continued to return value to our shareholders in the form of dividends. During fiscal year 2017, we paid cash dividends of $677 million. We also repurchased approximately $220 million of our common stock during 2017.

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. The ongoing relative strength of the U.S. dollar resulted in an unfavorable foreign currency translation impact to our revenue and earnings growth during fiscal year 2017. 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.

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Results of Operations

Medical Segment

The following is a summary of Medical revenues by organizational unit:

(Millions of dollars)	2017	2016	2015	2017 vs. 2016 Total Change	2017 vs. 2016 Estimated FX Impact	2017 vs. 2016 FXN Change	2016 vs. 2015 Total Change	2016 vs. 2015 Estimated FX Impact	2016 vs. 2015 FXN Change
Medication and Procedural Solutions	$3,497	$3,413	$2,850	2.5 %	(0.7)%	3.2 %	19.8 %	(3.6)%	23.4 %
Medication Management Solutions (A)	2,295	2,197	1,015	4.4 %	(0.5)%	4.9 %	116.6%	(2.3)%	118.9 %
Diabetes Care	1,056	1,023	1,012	3.3 %	(0.3)%	3.6 %	1.1 %	(3.3)%	4.4 %
Pharmaceutical Systems	1,256	1,199	1,167	4.8 %	(0.5)%	5.3 %	2.7 %	(2.4)%	5.1 %
Respiratory Solutions (A)	—	822	417	NM	— %	NM	97.2 %	(2.3)%	99.5 %
Total Medical revenues	$8,105	$8,654	$6,460	(6.4)%	(0.6)%	(5.8)%	34.0 %	(3.0)%	37.0 %
Medical segment safety-engineered products	$1,960	$1,924	$1,499	1.9 %	(0.3)%	2.2 %	28.3 %	(2.9)%	31.2 %

(A) The presentation of prior-period amounts has been revised to conform with the presentation of current-period amounts, which does not separately present an immaterial adjustment for the amortization of a deferred revenue balance write-down relating to the CareFusion acquisition.

(B) "NM" denotes that the percentage is not meaningful.

Medical segment revenue growth in 2017 was driven by the Medication and Procedural 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 with customers in the Medication Management Solutions unit, which took place in April 2017. As a result of the lease modification, substantially all new lease contracts entered into beginning in April 2017 will be accounted for as operating leases with revenue recognized over the agreement term, rather than upon the placement of capital. In 2017, revenues in the Medication Management Solutions unit included $151 million of revenues relating to amended preexisting lease contracts.

The Medical segment's growth in 2016 largely reflected the inclusion of CareFusion’s sales for a full fiscal year in 2016 compared with half the fiscal year in 2015, as previously discussed. Medical segment revenue growth in 2016 additionally reflected the Medication and Procedural Solutions unit's international sales of safety-engineered products, the Diabetes Care unit’s sales of pen needles and the Pharmaceutical Systems unit’s sales of self-injection systems. Fiscal year 2016 Medical segment revenue growth was unfavorably impacted by the termination of a distribution contract in the Respiratory Solutions unit.

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Medical segment operating income was as follows:

(Millions of dollars)	2017	2016	2015
Medical segment operating income	$2,155	$2,052	$1,530
Segment operating income as % of Medical revenues	26.6 %	23.7 %	23.7 %

The Medical segment's operating income is driven by its performance with respect to gross profit margin and operating expenses. 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 which enhanced the efficiency of our operations. The Medical segment's gross profit margin as a percentage of revenues was slightly higher in 2016 as compared with 2015 primarily due to lower manufacturing costs resulting from continuous operations improvement projects, partially offset by the recognition of a full year of amortization relating to intangible assets acquired in the CareFusion transaction and by unfavorable foreign currency translation.

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. Selling and administrative expense as a percentage of revenues in 2016 was favorably impacted by the suspension of the medical device excise tax imposed under the U.S. Patient Protection Affordable Care Act. 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. Research and development expense as a percentage of revenues in 2016 increased from 2015, which reflected increased investment in new products and platforms, including the one-time payment noted above.

Life Sciences Segment

The following is a summary of Life Sciences revenues by organizational unit:

				2017 vs. 2016			2016 vs. 2015		
(Millions of dollars)	2017	2016	2015	Total Change	Estimated FX Impact	FXN Change	Total Change	Estimated FX Impact	FXN Change
Preanalytical Systems	$1,471	$1,409	$1,391	4.4%	(0.8)%	5.2 %	1.3 %	(3.9)%	5.2 %
Diagnostic Systems	1,378	1,301	1,299	5.9%	(0.5)%	6.4 %	0.1 %	(3.2)%	3.3 %
Biosciences	1,139	1,119	1,132	1.8%	(0.6)%	2.4 %	(1.2)%	(2.7)%	1.5 %
Total Life Sciences revenues	$3,988	$3,829	$3,822	4.2%	(0.6)%	4.8 %	0.2 %	(3.2)%	3.4 %
Life Sciences segment safety-engineered products	$1,167	$1,113	$1,097	4.9%	(0.8)%	5.7 %	1.4 %	(3.7)%	5.1 %

The Life Sciences segment's 2017 revenues reflected growth in global sales of the Preanalytical Systems unit's safety-engineered 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.

Fiscal year 2016 revenues in the Life Sciences segment were driven by the Preanalytical Systems unit's U.S. and international sales of safety-engineered products. Segment revenue growth in 2016 also reflected the Diagnostic Systems unit's sales of its core microbiology products, as well as placements of its BD Kiestra™

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platform. Fiscal year 2016 revenues in the Life Sciences segment additionally reflected the Biosciences unit’s research instrument and reagent sales, primarily in the United States, which were partially offset by decreased sales of the Biosciences unit's HIV-related clinical products in Africa.

Life Sciences segment operating income was as follows:

(Millions of dollars)	2017	2016	2015
Life Sciences segment operating income	$772	$793	$839
Segment operating income as % of Life Sciences revenues	19.4 %	20.7 %	21.9 %

The Life Sciences segment's operating income is driven by its performance with respect to gross profit margin and operating expenses. 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. The Life Sciences segment's gross profit margin as a percentage of revenues was lower in fiscal year 2016 compared with 2015 primarily due to unfavorable foreign currency translation, partially offset by lower manufacturing costs resulting from operations improvement projects.

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. Selling and administrative expense as a percentage of Life Sciences revenues decreased in 2016 compared with 2015, primarily due to the suspension of the medical device excise tax. Research and development expense as a percentage of revenues in 2017 was relatively flat compared with 2016, which increased compared to 2015 due to increased investment in new products and platforms.

Geographic Revenues

BD’s worldwide revenues by geography are provided below.

				2017 vs. 2016			2016 vs. 2015		
(Millions of dollars)	2017	2016	2015	Total Change	Estimated FX Impact	FXN Change	Total Change	Estimated FX Impact	FXN Change
United States	$6,504	$6,893	$5,069	(5.6)%	—	(5.6)%	36.0%	—	36.0 %
International	5,589	5,590	5,213	— %	(1.2)%	1.2 %	7.2 %	(6.2)%	13.4 %
Total revenues	$12,093	$12,483	$10,282	(3.1)%	(0.5)%	(2.6)%	21.4%	(3.1)%	24.5 %

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.

U.S. revenue growth in 2016 primarily reflected the inclusion of CareFusion's U.S. sales for the full fiscal year. U.S. revenues also reflected growth in sales of the Medical segment's legacy products, particularly in the Medication and Procedural Solutions and Pharmaceutical Systems units. U.S. revenue growth in 2016 was also driven by sales in the Life Science's segment's Preanalytical Systems and Biosciences units.

International revenues in 2017 were driven by sales in the Medical segment's Medication and Procedural 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.

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International revenue growth in 2016 primarily reflected the inclusion of CareFusion's sales for the full fiscal year, as well as growth attributable to the Medical segment's legacy products in the Medication and Procedural Solutions unit. International revenue growth in 2016 also reflected the Life Sciences segment's Preanalytical Systems unit's sales, primarily in Western Europe and Asia Pacific. The Life Sciences segment's international revenue growth in 2016 was negatively impacted by a decrease in certain sales in its Biosciences unit in Africa, as previously discussed.
Emerging market revenues were $1.95 billion, $1.9 billion and $1.8 billion in 2017, 2016 and 2015, respectively. Emerging market revenues in 2016 related to divested businesses, primarily the Respiratory Solutions business, were approximately $105 million. Unfavorable foreign currency translation impacted emerging market revenues in 2017 and 2016 by an estimated $29 million and $156 million, respectively. Emerging market revenue growth in 2017 was driven by sales in Greater Asia, including China, and Latin America. Emerging market revenue growth in 2016 reflected the inclusion of CareFusion's sales for the full fiscal year, as well as growth in China and Latin America, partially offset by declines in the Middle East and Africa.
Specified Items
Reflected in the financial results for 2017, 2016 and 2015 were the following specified items:

(Millions of dollars)	2017	2016	2015
Integration costs [(A)]	$237	$192	$95
Restructuring costs [(A)]	85	526	271
Transaction costs [(A)]	39	10	59
Financing costs [(B)]	131	—	107
Purchase accounting adjustments [(C)]	491	527	645
Lease contract modification-related charge [(D)]	748	—	—
Litigation-related items [(E)]	(337)	—	12
Losses on debt extinguishment [(F)]	73	—	—
Pension settlement charges	—	6	—
Other, net	—	—	(5)
Total specified items	1,466	1,261	1,186
Tax impact of specified items	495	369	400
After-tax impact of specified items	$971	$892	$786

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

(B) The amount in 2017 represents financing costs incurred in connection with the agreement to acquire Bard, including bridge financing commitment fees of $79 million, which were recorded in Interest expense. The amount in 2015 represents financing costs incurred in connection with the CareFusion acquisition, including bridge financing commitment fees.

(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 adjustment in 2015 also included a fair value step-up adjustment of $293 million recorded relative to CareFusion’s inventory on the acquisition date.

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

(E) The amount in 2017 largely represents the reversal of certain reserves related to an appellate court decision recorded in Other operating expense, net as further discussed below.

(F) Represents losses recognized in Other (expense) income, net upon our extinguishment of certain long-term senior notes in the first and third quarters, as further discussed below.

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Gross Profit Margin

The comparison of gross profit margins in 2017 and 2016 and the comparison of gross profit margins in 2016 and 2015 reflected the following impacts:

	2017	2016
Gross profit margin % prior-year period	48.0 %	45.7 %
Operating performance	0.7 %	2.5 %
Impact of divestitures	0.8 %	— %
CareFusion acquisition-related asset depreciation and amortization	— %	0.6 %
Foreign currency translation	(0.4)%	(0.8)%
Gross profit margin % current-year period	49.1 %	48.0 %

The operating performance impacts in 2017 and 2016 primarily reflected lower manufacturing costs resulting from the continuous operations improvement projects discussed above. 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. Gross profit margin in 2016 benefited from a favorable comparison to 2015, which reflected the fair value step-up adjustment recorded relative to CareFusion’s inventory on the acquisition date, as previously discussed, partially offset by the recognition in 2016 of a full year of amortization relating to CareFusion's intangible assets.

Operating Expenses

Operating expenses in 2017, 2016 and 2015 were as follows:

				Increase (decrease) in basis points	
(Millions of dollars)	2017	2016	2015	2017 vs. 2016	2016 vs. 2015
Selling and administrative expense	$2,925	$3,005	$2,563		
% of revenues	24.2 %	24.1 %	24.9 %	10	(80)
Research and development expense	$774	$828	$632		
% of revenues	6.4 %	6.6 %	6.1 %	(20)	50
Acquisitions and other restructurings	$354	$728	$426		
Other operating expense, net	$410	$—	$—		

Selling and administrative

Selling and administrative expense as a percentage of revenues in 2017 was relatively flat compared with 2016. Selling and administrative expense as a percentage of revenues in 2016 as compared with 2015 reflected synergies resulting from the CareFusion acquisition, as well as favorable foreign currency translation and a suspension of the medical device excise tax, as previously discussed, partially offset by higher selling expenses relating to product launches and higher shipping expenses.

Research and development

Research and development expense as a percentage of revenues was slightly lower in 2017, which reflected a favorable comparison to 2016, which included increased investment in high growth opportunities.

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Acquisitions and other restructurings

Costs relating to acquisitions and other restructurings in 2017, 2016 and 2015 primarily represented integration and restructuring costs substantially associated with our fiscal year 2015 acquisition of CareFusion and other portfolio rationalization initiatives. Integration costs in 2017 also included costs relating to our pending acquisition of Bard. 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. Transaction costs were incurred in 2017 in connection with the pending acquisition of Bard and other portfolio rationalization initiatives. Transaction costs were also incurred in 2015 in connection with the CareFusion acquisition. 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 $336 million reversal of certain reserves related to an appellate court decision which, among other things, reversed an unfavorable antitrust judgment in the Retractable Technologies, Inc. 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)	2017	2016	2015
Interest expense	$(521)	$(388)	$(371)
Interest income	76	21	15
Net interest expense	$(445)	$(367)	$(356)

The increase in interest expense in 2017 compared with 2016 primarily reflected higher levels of debt due to our issuances of senior unsecured U.S. notes during the third quarter of 2017, as well as bridge financing commitment fees of $79 million. The increase in interest expense in 2016 reflected a full year of increased financing costs associated with the CareFusion acquisition, including interest on senior unsecured notes issued in December 2014. This increase in financing costs was partially offset by the full year impact of favorable amortization of the acquisition-date fair value step-up on CareFusion’s long-term debt as well as by the prior-year impact of commitment fees incurred for a bridge loan facility. 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 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, as well as higher investment gains on assets related to our deferred compensation plans. The increase in interest income in 2016 reflected the realization of investment gains on assets related to our deferred compensation plans, compared with the realization of losses in 2015, partially offset by lower cash levels outside of the United States. The offsetting movements in the deferred compensation plan liability were recorded in Selling and administrative expense.

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Income Taxes

The income tax rates in 2017, 2016 and 2015 were as follows:

	2017	2016	2015
Effective income tax rate - (benefit) provision	(12.7)%	9.1 %	5.9 %
Favorable impact, in basis points, from specified items	2,790	1,090	1,720

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. The increase in the effective income tax rate from 2015 to 2016 is primarily due to the decrease in tax benefits on specified items as the tax benefits on specified items in 2015 were primarily incurred in higher tax jurisdictions. The income tax rates in fiscal years 2016 also reflected the extension of the U.S. research and development income tax credit, which was partially offset by the unfavorable impact of one-time discrete items.

Net Income and Diluted Earnings per Share

Net Income and Diluted Earnings per Share in 2017, 2016 and 2015 were as follows:

	2017	2016	2015
Net income (Millions of dollars)	$1,100	$976	$695
Diluted Earnings per Share	$4.60	$4.49	$3.35
Unfavorable impact-specified items	$(4.34)	$(4.10)	$(3.79)
Unfavorable impact-foreign currency translation	$(0.23)	$(0.64)	$(0.69)
Dilutive impact from share issuances	$(0.54)	$—	$(0.02)

The dilutive impact from share issuances in 2017 represents the impact of BD shares issued in the third quarter of fiscal year 2017, in anticipation of the pending Bard acquisition. The dilutive impact from share issuances in 2015 represents the impact from shares issued as consideration for the CareFusion acquisition, prior to the inclusion of CareFusion in consolidated results of operations.

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

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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 2017 or 2016.

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, 2017 and 2016, the impact changes in the U.S. dollar would have on pre-tax earnings was estimated as follows:

	Increase (decrease)	
(Millions of dollars)	2017	2016
10% appreciation in U.S. dollar	$ (38)	$ (67)
10% depreciation in U.S. dollar	$ 38	$ 67

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.

With respect to the interest rate derivatives outstanding at September 30, 2017 and 2016, a 10% change in interest rates would not materially impact the fair value of these derivatives. Based on our overall interest rate exposure at September 30, 2017 and 2016, a 10% change in interest rates would not have a material effect on our earnings or cash flows over a one-year period.

Liquidity and Capital Resources

The following table summarizes our consolidated statement of cash flows in 2017, 2016 and 2015:

(Millions of dollars)	2017	2016	2015
Net cash provided by (used for)			
Operating activities	$2,550	$2,559	$1,730
Investing activities	$(883)	$(669)	$(8,318)
Financing activities	$10,977	$(1,761)	$6,190

Net Cash Flows from Operating Activities

The fiscal year 2017, 2016 and 2015 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 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. The fiscal year 2016 change in operating assets and liabilities was a net source of cash and

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primarily reflected higher levels of accounts payable and accrued expenses as well as lower levels of inventory, prepayments and financing receivables, partially offset by higher levels of accounts receivables. Net cash provided by operating activities in 2017 also reflected an adjustment for the non-cash charge resulting from the modification to our dispensing equipment lease contracts with customers, as previously discussed, and the 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 $727 million, $693 million, $596 million in 2017, 2016 and 2015, respectively, primarily related to manufacturing capacity expansions and details of spending by segment are contained in Note 6 to the consolidated financial statements contained in Item 8. Financial Statements and Supplementary Data.

Investments

Cash inflows from the sales of investments of $840 million in 2015 were attributable to the maturities of time deposits in Europe, Latin America and Asia Pacific.

Acquisitions of Businesses

Cash outflows relating to acquisitions in 2017 included payments for acquisitions which were immaterial both individually and in the aggregate. Cash outflows relating to acquisitions in 2015 of $8.414 billion were primarily attributable to the completion of the CareFusion acquisition in the second quarter of fiscal year 2015. 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 2017 were $165 million. Net cash flows from investing activities in 2016 included $158 million of proceeds from the sales of non-core assets.

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Net Cash Flows from Financing Activities

Net cash from financing activities in 2017, 2016 and 2015 included the following significant cash flows:

(Millions of dollars)	2017	2016	2015
Cash inflow (outflow)			
Increase/(decrease) in borrowings under commercial paper program	$(200)	$(500)	$500
Issuances of senior unsecured U.S. notes	$9,616	$—	$6,164
Issuances of euro-denominated notes	$1,846	$—	$—
Payments of debt	$(3,980)	$(752)	$(6)
Issuances of equity securities	$4,827	$—	$—
Share repurchases under accelerated share repurchase agreement	$(220)	$—	$—
Dividends paid	$(677)	$(562)	$(485)

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. No further share repurchases are currently planned, as our share repurchase program has been suspended in connection with the announced agreement to acquire Bard.

Debt-Related Activities

Certain measures relating to our total debt were as follows:

	2017	2016	2015
Total debt (Millions of dollars)	$18,870	$11,551	$12,822
Short-term debt as a percentage of total debt	1.1 %	8.7 %	11.3 %
Weighted average cost of total debt	3.3 %	3.6 %	3.3 %
Total debt as a percentage of total capital (A)	57.5 %	57.2 %	59.4 %

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

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. The ratio of short-term debt as a percentage of total debt at September 30, 2016 primarily reflected the reclassifications of $800 million of notes from long-term debt to short-term debt, offset by the repayment of $750 million of floating rate notes during the third quarter of fiscal year 2016 and a reduction of commercial paper borrowings. 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, 2017, total worldwide cash and short-term investments were $14.201 billion, of which $1.196 billion was held in jurisdictions outside of the United States. Total cash at September 30, 2017 included net proceeds raised through public offerings of equity securities and debt transactions which occurred during the third quarter of fiscal year 2017, as previously discussed.

We regularly review the amount of cash and short-term investments held outside the United States and currently intend to use such amounts to fund our international operations and their growth initiatives. In addition, if these amounts were repatriated from foreign jurisdictions to the United States, there could be adverse tax consequences.

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Credit Facilities

We have in place a $1.5 billion syndicated credit facility which can be used for general corporate purposes. There were no borrowings outstanding under this credit facility at September 30, 2017. During the first quarter of fiscal year 2017, we extended the expiration date of this credit facility to January 2022 from the original expiration date of January 2021. We may issue up to $100 million in letters of credit under this 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 billion. The credit facility includes a single financial covenant that requires BD to maintain an interest expense coverage ratio of not less than 4-to-1 for the most recent four consecutive fiscal quarters. We were in compliance with this covenant as of September 30, 2017. We also have informal lines of credit outside the United States.

The Company had no commercial paper borrowings outstanding as of September 30, 2017.

The developments discussed below occurred in 2017 relative to our credit facilities in connection with the announcement of the acquisition of Bard.

Term loan and revolving credit facilities

In May 2017, we entered into a three-year $2.25 billion senior unsecured term loan facility. The proceeds from this facility may only be used to fund a portion of the cash consideration for the Bard acquisition, as well as the fees and expenses incurred in connection with this acquisition. Also in May 2017, we entered into a five-year senior unsecured revolving credit facility that will provide borrowing of up to $2.25 billion when the facility becomes effective upon the closing of the Bard acquisition. This facility will expire in May 2022. Upon the effective date of the facility, it will replace the $1.5 billion syndicated credit facility discussed further above. 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 will use proceeds from this facility to fund general corporate needs and to redeem, repurchase or defease certain of Bard's outstanding senior unsecured notes that will be assumed upon the closing of the acquisition.

The agreements for both the new term loan and revolving credit facility contain the following financial covenants:

- 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 were in compliance with this covenant relative to the term loan facility as of September 30, 2017. This covenant becomes effective for the revolving credit facility upon the effective date of the facility.
- We are required to have a leverage coverage ratio 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.

Bridge facility

Upon securing permanent financing, including the issuances of senior unsecured U.S. notes and equity securities in the third quarter of fiscal year 2017, as previously discussed above, an agreement for fully committed bridge financing of $15.7 billion we had secured in concurrence with the announcement of the acquisition agreement was terminated.

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Access to Capital and Credit Ratings

Our ability to generate cash flow from operations, issue debt, enter into other financing arrangements and attract long-term capital on acceptable terms could be adversely affected in the event there was a material decline in the demand for our products, deterioration in our key financial ratios or credit ratings, or other significantly unfavorable changes in conditions.

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, 2017:

	S&P	Moody’s	Fitch
Ratings:			
Senior Unsecured Debt	BBB+	Baa2	BBB-
Commercial Paper	A-2	P-2	
Outlook	Negative	Negative	Stable

Upon our announcement of the agreement to acquire Bard, S&P placed our corporate credit rating of BBB+ on CreditWatch. The BBB+ rating S&P assigned to our new term loan facility and the senior unsecured U.S. notes we issued in the third quarter of fiscal year 2017 have also been placed on CreditWatch by the ratings agency. S&P has indicated that this placement will be resolved upon the acquisition's closing, which is expected to occur in the fourth calendar quarter of 2017, and that our corporate debt rating by S&P will be lowered one notch to BBB. S&P also assigned a BBB- rating to the previously discussed mandatory convertible preferred stock we issued in May 2017.

Also upon our announcement of the agreement to acquire Bard, Moody's placed our Baa2 and P-2 ratings on review for downgrade and these ratings currently remain under review. Additionally, Moody's assigned a corporate credit rating of Ba1 to our new term loan facility and to all of the tranches of senior unsecured U.S. notes issued in the third quarter, except for the tranche of 2.133% notes due June 6, 2019, which was assigned a corporate credit rating of Baa2. Moody's assigned a corporate credit rating of Baa2 to euro-denominated notes we also issued in the third quarter of fiscal year 2017. Moody's has placed the ratings assigned to the tranche of 2.133% notes and the euro-denominated notes on review for downgrade. Moody's also assigned a Ba1 rating to the BD notes we are offering in exchange of exiting Bard notes. Upon the closing of the Bard acquisition, we expect Moody’s to downgrade our credit rating to below investment grade.

Additionally upon our announcement of the Bard agreement, Fitch assigned corporate debt ratings to BD for the first time and assigned BD a Long-term Issuer Default Rating of BBB- and an outlook of Stable. Fitch also assigned a BBB- rating to the euro-denominated notes we issued in the third quarter.

There were no changes to BD's long-term debt and commercial paper ratings during 2016. 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, 2017:

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	Total	2018	2019 to 2020	2021 to 2022	2023 and Thereafter
	(Millions of dollars)				
Short-term debt	$208	$208	$—	$—	$ —
Long-term debt(A)	26,897	615	4,986	5,001	16,295
Operating leases	277	67	104	66	39
Purchase obligations(B)	1,077	682	330	65	—
Unrecognized tax benefits(C)	—	—	—	—	—
Total(D)	$28,458	$1,572	$5,420	$5,132	$ 16,334

(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, 2017 of $349 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 2018 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

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,

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established price lists, costs to produce, profit margins for similar products, market conditions, and customer stratification.

For software and software-related products, we use the relative fair value method to allocate transaction consideration to each unit of accounting; whereby the evidence used in the determination of fair value estimates are based solely on vendor-specific objective evidence. To the extent that vendor specific objective evidence does not exist for delivered elements of the transaction, we apply the residual method.

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

Our accounting for sales-type leases, which are primarily associated with dispensing products within our Medication Management Solutions unit, is based upon certain assumptions including the economic life of our leased products and the fair value of our leased products, which is used to determine the interest rate implicit to the lease. These assumptions affect that amount of gross investment in the lease, unearned income, and the sales price that is recognized relative to each sales-type lease transaction. The economic life of our leased products is based on the estimated period during which the leased product is expected to be economically usable, without limitation by the lease term, and includes an estimate of future technological advances.

The fair value of our leased products is estimated on a quarterly basis, based upon transacted cash sales prices during the preceding 12-month period, and represents normal selling price, reflecting any volume or trade discounts that may apply. Because our products are sold as part of customized systems to a diverse range of customers, many of which are affiliated with a group purchasing organization or integrated delivery network, there is a wide range of negotiated cash selling prices for our products. Accordingly, we stratify our cash selling transactions based on product configuration and customer class to determine an estimate of fair value for each product specific, within determined customer classes. Based upon this stratification, we calculate the weighted average selling price of each configured product using the interquartile range methodology and remove outliers from the population of normal cash selling prices, which narrows the range of selling prices within each stratified customer class. The resulting weighted average selling price is the single point estimate of fair value that we use as the normal selling price and this fair value estimate is used to determine the implicit interest rate for each product subject to a sales-type lease arrangement. In certain instances, we do not have sufficient corresponding historical cash selling transactions to support fair values of specific combinations of product configurations and customer classes. In these instances, fair value is estimated by applying the average discount percentage given to the respective customer class, over the trailing 12 months, to the list price of the products whose fair value was not determined using the interquartile range methodology described above. The resulting fair value(s) is then used to derive the implicit rate of the lease. The interest rate implicit to the lease is then used to determine the amount of revenue recognized at the inception of the lease and the revenue recognized over the life of the lease.

Our net investment in sales-type leases primarily arises from the leasing of dispensing equipment and as such, the methodology for determining the relating allowance for credit losses is based on the collective population and is not stratified by class or portfolio segment. The allowance for credit losses is based on historical experience loss rates as well as on management’s judgments regarding the potential impact of anticipated changes in business practices, market dynamics, and economic conditions. These assumptions are inherently subjective and it is possible that we will experience actual credit losses that are different from our current estimates.

In April 2017, in conjunction with the implementation of a new go-to-market business model for our dispensing business, 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

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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 is shortened and as a result, the majority of leases no longer meet the criteria for recognition as sales-type leases. Accordingly, the leases have been 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 and we aggregate components within an operating segment that have similar economic characteristics. Potential impairment of goodwill is identified by comparing the fair value of a reporting unit with its carrying value. Our annual goodwill impairment test performed on July 1, 2017 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.

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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.

BD has reviewed its needs in the U.S. for possible repatriation of undistributed earnings of its foreign subsidiaries and, with exception for certain countries, continues to invest foreign subsidiaries earnings outside of the U.S. to fund foreign investments or meet foreign working capital and property, plant and equipment expenditure needs. Deferred taxes are not provided on undistributed earnings of foreign subsidiaries that are indefinitely reinvested. At September 30, 2017, the cumulative amount of such undistributed earnings indefinitely reinvested outside the United States was $9.6 billion. The determination of the amount of the unrecognized deferred tax liability related to the undistributed earnings is not practicable because of the complexities associated with its hypothetical calculation.

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.

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, excess 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 3.73% for 2018, which was based on an actuarially-determined, company-specific yield curve to measure liabilities as

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of the measurement date. To calculate the pension expense in 2018, 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 2018 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 2018. 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 $5 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 $3 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 mea 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,

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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.

- 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 (for example, new forms of drug delivery) by our current or future competitors, 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.
- 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 (the "PPACA") in the United States. This tax has been suspended through December 31, 2017, and 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 domestic and foreign healthcare industry 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 agreements.
- 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.
- 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 the FDA or other regulatory agencies or changes in the

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regulatory process may also delay product launches and increase development costs.

- The impact of business combinations, 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 acquire or form strategic business alliances with local companies and 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.
- Political conditions in international markets, including civil unrest, terrorist activity, governmental changes, trade barriers, restrictions on the ability to transfer capital across borders and governmental expropriation of assets. This includes the possible impact of the June 2016 advisory referendum by British voters to exit the European Union, which has created uncertainties affecting 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. In particular, damage to our manufacturing facilities in Puerto Rico resulting from Hurricane Maria in September 2017 could adversely impact our revenue and earnings results for fiscal year 2018.
- Pending and potential future litigation or other proceedings adverse to BD, including antitrust, product liability, environmental 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 recalls, regulatory action on the part of the U.S. Food and Drug Administration (FDA) or foreign counterparts, 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.
- Risks relating to our acquisition of CareFusion, including our ability to continue to successfully

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combine and integrate the CareFusion operations in order to fully obtain the anticipated benefits and costs savings from the transaction.

- Risks related to our pending acquisition of Bard, including:

The failure to satisfy the conditions to completing the transaction, including obtaining required regulatory approvals.
Conditions to obtaining regulatory approval that may place restrictions on the business of the combined company.
Our failure to obtain the anticipated benefits and costs savings from the acquisition.
The impact of the additional debt we incurred and the equity and equity-linked securities that we issued to finance the acquisition, including on our credit ratings and costs of borrowing.

- 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.

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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). Based on this assessment and those criteria, management concluded that internal control over financial reporting was effective as of September 30, 2017.

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/ John Gallagher
Vincent A. Forlenza	Christopher Reidy	John Gallagher
Chairman and Chief Executive Officer	Executive Vice President, Chief Financial Officer and Chief Administrative Officer	Senior Vice President, Corporate Finance, Controller and Treasurer

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Report of Independent Registered Public Accounting Firm
To the Shareholders and Board of Directors of
Becton, Dickinson and Company

We have audited the accompanying consolidated balance sheets of Becton, Dickinson and Company as of September 30, 2017 and 2016, and the related consolidated statements of income, comprehensive income and cash flows for each of the three years in the period ended September 30, 2017. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Becton, Dickinson and Company at September 30, 2017 and 2016, and the consolidated results of its operations and its cash flows for each of the three years in the period ended September 30, 2017, 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), Becton, Dickinson and Company's internal control over financial reporting as of September 30, 2017, 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 22, 2017 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

New York, New York
November 22, 2017

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Report of Independent Registered Public Accounting Firm
To the Shareholders and Board of Directors of
Becton, Dickinson and Company

We have audited Becton, Dickinson and Company's internal control over financial reporting as of September 30, 2017, 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). Becton, Dickinson and 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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.

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.

In our opinion, Becton, Dickinson and Company maintained, in all material respects, effective internal control over financial reporting as of September 30, 2017, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Becton, Dickinson and Company as of September 30, 2017 and 2016, and the related consolidated statements of income, comprehensive income and cash flows for each of the three years in the period ended September 30, 2017 of Becton, Dickinson and Company, and our report dated November 22, 2017 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

New York, New York
November 22, 2017

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Consolidated Statements of Income
Becton, Dickinson and Company
Years Ended September 30

Millions of dollars, except per share amounts	2017	2016	2015
Revenues	$12,093	$12,483	$10,282
Cost of products sold	6,151	6,492	5,587
Selling and administrative expense	2,925	3,005	2,563
Research and development expense	774	828	632
Acquisitions and other restructurings	354	728	426
Other operating expense, net	410	—	—
Total Operating Costs and Expenses	10,615	11,053	9,207
Operating Income	1,478	1,430	1,074
Interest expense	(521)	(388)	(371)
Interest income	76	21	15
Other (expense) income, net	(57)	11	21
Income Before Income Taxes	976	1,074	739
Income tax (benefit) provision	(124)	97	44
Net Income	1,100	976	695
Preferred stock dividends	(70)	—	—
Net income applicable to common shareholders	$1,030	$976	$695
Basic Earnings per Share	$4.70	$4.59	$3.43
Diluted Earnings per Share	$4.60	$4.49	$3.35

Amounts may not add due to rounding.
See notes to consolidated financial statements.
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Consolidated Statements of Comprehensive Income
Becton, Dickinson and Company
Years Ended September 30

Millions of dollars	2017	2016	2015
Net Income	$1,100	$976	$695
Other Comprehensive Income (Loss), Net of Tax			
Foreign currency translation adjustments	11	(50)	(692)
Defined benefit pension and postretirement plans	179	(141)	(36)
Cash flow hedges	17	1	(9)
Other Comprehensive Income (Loss), Net of Tax	206	(191)	(737)
Comprehensive Income (Loss)	$1,306	$786	$(42)

Amounts may not add due to rounding.
See notes to consolidated financial statements.

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Consolidated Balance Sheets
Becton, Dickinson and Company
September 30

Millions of dollars, except per share amounts and numbers of shares	2017	2016
Assets		
Current Assets		
Cash and equivalents	$14,179	$1,541
Short-term investments	21	27
Trade receivables, net	1,744	1,618
Current portion of net investment in sales-type leases	16	339
Inventories	1,818	1,719
Assets held for sale	—	642
Prepaid expenses and other	856	480
Total Current Assets	18,633	6,367
Property, Plant and Equipment, Net	4,638	3,901
Goodwill	7,563	7,419
Customer Relationships, Net	2,830	3,022
Developed Technology, Net	2,478	2,655
Other Intangibles, Net	585	604
Net Investment in Sales-Type Leases, Less Current Portion	38	796
Other Assets	968	824
Total Assets	$37,734	$25,586
Liabilities and Shareholders' Equity		
Current Liabilities		
Short-term debt	$203	$1,001
Accounts payable	797	665
Accrued expenses	1,393	1,575
Salaries, wages and related items	773	696
Income taxes	176	274
Liabilities held for sale	—	189
Total Current Liabilities	3,342	4,400
Long-Term Debt	18,667	10,550
Long-Term Employee Benefit Obligations	1,168	1,319
Deferred Income Taxes and Other	1,609	1,684
Commitments and Contingencies (See Note 5)		
Shareholders' Equity		
Preferred stock	2	—
Common stock — $1 par value: authorized — 640,000,000 shares; issued — 346,687,160 shares in 2017 and 332,662,160 shares in 2016.	347	333
Capital in excess of par value	9,619	4,693
Retained earnings	13,111	12,727
Deferred compensation	19	22
Common stock in treasury — at cost — 118,744,758 shares in 2017 and 119,370,934 shares in 2016.	(8,427)	(8,212)
Accumulated other comprehensive loss	(1,723)	(1,929)
Total Shareholders' Equity	12,948	7,633
Total Liabilities and Shareholders' Equity	$37,734	$25,586

Amounts may not add due to rounding.

See notes to consolidated financial statements.

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Consolidated Statements of Cash Flows
Becton, Dickinson and Company
Years Ended September 30

Millions of dollars	2017	2016	2015
Operating Activities			
Net income	$1,100	$976	$695
Adjustments to net income to derive net cash provided by operating activities:			
Depreciation and amortization	1,088	1,114	891
Share-based compensation	174	196	166
Deferred income taxes	(236)	(426)	(336)
Change in operating assets and liabilities:			
Trade receivables, net	(93)	(128)	(2)
Net investment in sales-type leases	14	51	28
Inventories	(46)	69	200
Prepaid expenses and other	(380)	39	(97)
Accounts payable, income taxes and other liabilities	134	368	145
Pension obligation	84	(32)	28
Excess tax benefits from payments under share-based compensation plans	77	—	—
Lease contract modification-related charge	748	—	—
Other, net	(114)	332	11
Net Cash Provided by Operating Activities	2,550	2,559	1,730
Investing Activities			
Capital expenditures	(727)	(693)	(596)
Proceeds from (purchases of) investments, net	13	(1)	840
Acquisitions of businesses, net of cash acquired	(174)	—	(8,414)
Divestitures of businesses, net	165	158	—
Other, net	(161)	(133)	(147)
Net Cash Used for Investing Activities	(883)	(669)	(8,318)
Financing Activities			
Change in short-term debt	(200)	(500)	497
Proceeds from long-term debt	11,462	—	6,164
Payments of debt	(3,980)	(752)	(6)
Proceeds from issuance of equity securities	4,827	—	—
Repurchase of common stock	(220)	—	—
Excess tax benefit from payments under share-based compensation plans	—	86	48
Dividends paid	(677)	(562)	(485)
Other, net	(234)	(32)	(27)
Net Cash Provided by (Used for) Financing Activities	10,977	(1,761)	6,190
Effect of exchange rate changes on cash and equivalents	(6)	(12)	(38)
Net Increase (Decrease) in Cash and Equivalents	12,638	117	(436)
Opening Cash and Equivalents	1,541	1,424	1,861
Closing Cash and Equivalents	$14,179	$1,541	$1,424

Amounts may not add due to rounding.
See notes to consolidated financial statements.

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Notes to Consolidated Financial Statements
Becton, Dickinson and Company
Millions of dollars, except per share amounts and numbers of shares

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.

Short-Term Investments

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

Trade and Financing 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 12 years for leasehold improvements. Depreciation and amortization expense was $406 million, $452 million and $417 million in fiscal years 2017, 2016 and 2015, 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 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, and components within an operating segment that have similar economic characteristics are

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aggregated. Potential impairment of goodwill is 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, 2017 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. Certain trademarks that are considered to generate cash flows indefinitely are also considered to be indefinite-lived intangible assets and these assets are also reviewed at least annually for impairment.

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. 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 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 training 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 installation and training are recognized.

For equipment lease revenue, transactions are evaluated and classified as either operating leases or sales-type leases. Lease income for products sold under sales-type leases is recognized as revenue upon the completion of installation activities in the amount of the present value of the minimum lease payments. The financing component of sales-type leases is recorded as revenue over the lease term. For products sold under operating leases, revenue is recognized at the contracted rate over the rental period, as defined within the customer agreement.

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Notes to Consolidated Financial Statements — (Continued)
Becton, Dickinson and Company

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 $365 million, $401 million and $351 million in 2017, 2016 and 2015, 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
United States income taxes are not provided on undistributed earnings of foreign subsidiaries where such undistributed earnings are indefinitely reinvested outside the United States. Deferred taxes are provided for earnings of foreign subsidiaries when those earnings are not considered indefinitely reinvested. Income taxes are provided and tax credits are recognized based on tax laws enacted at the dates of the financial statements.
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.

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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
On October 1, 2016, the Company prospectively adopted amended requirements issued by the Financial Accounting Standards Board ("FASB") relating to the timing of recognition and classification of share-based compensation award-related income tax effects. Upon the settlement of awards during fiscal year 2017, the Company recorded tax benefits for the year ended of $77 million to Income tax provision (benefit) within its consolidated statement of income. These tax benefits were recorded within Capital in excess of par value on the Company's consolidated balance sheet in the prior-year period. Because these excess tax benefits are no longer recorded in Capital in excess of par value, the current period adjustment for the dilutive impact of share equivalents from share-based plans, which is used in the Company's computation of diluted earnings per share, increased by approximately 1 million shares. Also per the amended guidance, the Company classified the $77 million of excess tax benefits for the year ended September 30, 2017 on its consolidated statement of cash flows within Net Cash Provided by Operating Activities, rather than Net Cash Provided by (Used for) Financing Activities, which included the excess tax benefits for the years ended September 30, 2016 and 2015. The amended guidance allows entities to account for award forfeitures as they occur; however, the Company has elected to continue its determination of compensation cost recognized in each period based upon an estimate of expected future forfeitures.
New Accounting Principles Not Yet Adopted
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 is currently evaluating the impact that this new lease accounting standard will have on its consolidated financial statements upon its adoption of the standard on October 1, 2019.
In May 2014, the FASB issued a new revenue recognition standard. Under this standard, revenue will be recognized upon the transfer of goods or services to customers and the amount of revenue recognized will reflect the consideration to which a reporting entity expects to be entitled in exchange for those goods or services. The Company intends to adopt the standard, as required, on October 1, 2018 and recently completed an initial assessment to identify the potential areas of impact that this new revenue recognition standard will have on its consolidated financial statements. As part of the initial assessment, the Company reviewed a representative sample of its contracts across its various businesses and geographies to identify potential differences that could result from applying the requirements of the new standard. The analysis included identifying whether there may be differences in timing of revenue recognition under the new standard as well as assessing performance obligations, variable consideration, and contract costs. The Company has not yet estimated the impact of the new standard on the timing and pattern of its revenue recognition. The Company continues to evaluate the available adoption methods, and apprises its audit committee of the project status regularly.

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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)	Treasury Stock Amount
Balance at September 30, 2014	$ 333	$ 2,198	$ 12,105	$ 19	(140,770)	$ (8,601)
Net income	—	—	695	—	—	—
Cash dividends:						
Common ($2.40 per share)	—	—	(485)	—	—	—
Common stock issued for:						
Share-based compensation and other plans, net	—	30	(2)	1	2,839	(6)
Acquisitions	—	2,083	—	—	15,959	368
Share-based compensation	—	164	—	—	—	—
Common stock held in trusts, net	—	—	—	—	5	—
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	—	—	—	—	(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	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	—	—	—	—	7	—
Repurchase of common stock	—	—	—	—	(1,289)	(220)
Balance at September 30, 2017	$ 347	$ 9,619	$ 13,111	$ 19	(118,745)	$ (8,427)

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.

Accelerated Share Repurchase Agreement

Using proceeds received from the divestiture of the Respiratory Solutions business in the first quarter of fiscal year 2017, the Company repurchased approximately 1.3 million shares of its common stock under an

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accelerated share repurchase agreement. The repurchased shares were recorded as a $220 million increase to Common stock in treasury.

Common and Preferred Stock Offerings

In May 2017 and in connection with the Company's pending agreement to acquire C.R. Bard, Inc. ("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 for net proceeds of $2.4 billion (gross proceeds of $2.5 billion).
- 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 net proceeds of $2.4 billion (gross proceeds of $2.5 billion). If and when declared, dividends on the mandatory convertible preferred stock will be 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.

The Company will use the net proceeds from these offerings to finance a portion of the cash consideration payable upon the closing of the Bard acquisition, which the Company expects to occur in the fourth calendar quarter of 2017.

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, 2014	$(1,001)	$ (270)	$ (705)	$ (26)
Other comprehensive loss before reclassifications, net of taxes	(787)	(692)	(80)	(16)
Amounts reclassified into income, net of taxes	50	—	44	6
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)

The amount of foreign currency translation recognized in other comprehensive income during the year ended September 30, 2017 included net 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.

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

(Millions of dollars)	2017	2016	2015
Benefit Plans			
Income tax (provision) benefit for net gains (losses) recorded in other comprehensive income	$(60)	$ 79	$ 47
Cash Flow Hedges			
Income tax (provision) benefit for net gains (losses) recorded in other comprehensive income	$(5)	$ 7	$ 10

Reclassifications out of Accumulated other comprehensive income (loss) relating to benefit plans and cash flow hedges in 2017, 2016 and 2015 were 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:

	2017	2016	2015
Average common shares outstanding	218,943	212,702	202,537
Dilutive share equivalents from share-based plans (A) (B)	4,645	4,834	4,972
Average common and common equivalent shares outstanding — assuming dilution	223,588	217,536	207,509

(A) For the year ended September 30, 2017, 5 million dilutive share equivalents associated with mandatory convertible preferred stock issued during 2017, as further discussed in Note 3, were excluded from the diluted shares outstanding calculation because the result would have been antidilutive. For the years ended September 30, 2017, 2016 and 2015 there were no options to purchase shares of common stock which were excluded from the diluted earnings per share calculation.

(B) The adjustments to calculate diluted share equivalents from share-based plans in 2016 and 2015 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 adjustment in 2017 excluded these excess tax benefits.

Note 5 — Commitments and Contingencies
Commitments
Rental expense for all operating leases amounted to $110 million in 2017, $112 million in 2016 and $89 million in 2015. Future minimum rental commitments on non-cancelable leases are as follows: 2018 — $67 million; 2019 — $57 million; 2020 — $47 million; 2021 — $35 million; 2022 — $31 million and an aggregate of $39 million thereafter. As of September 30, 2017, the Company has certain future purchase commitments aggregating to approximately $1.077 billion, which will be expended over the next several years.

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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). 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.

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. 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, and stayed the non-patent claims during the pendency of the patent claims at the trial court level. On April 1, 2008, RTI filed a complaint against BD under the caption Retractable Technologies, Inc. and Thomas J. Shaw v. Becton Dickinson and Company (Civil Action No. 2:08-cv-141, U.S. District Court, Eastern District of Texas) alleging that the BD Integra™ syringes infringe another patent licensed exclusively to RTI. On August 29, 2008, the Court ordered the consolidation of the patent cases. RTI was subsequently awarded $5 million in damages at a jury trial with respect to the patent claims, which has been paid, and the patent cases are now concluded.

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). The jury's verdict rejected RTI's monopolization claims in the markets for safety syringes, conventional syringes and safety IV catheters; its attempted monopolization claims in the markets for conventional syringes and safety IV catheters; and its claims for contractual restraint of trade and exclusive dealing in the markets for safety syringes, conventional syringes and safety IV catheters. In connection with the verdict, the Company recorded a pre-tax charge of approximately $341 million in the fourth quarter of fiscal year 2013. With respect to RTI's requested injunction relief, in November 2014, the Court granted RTI's request that BD be ordered to issue certain corrective statements regarding its advertising and enjoined from making certain advertising claims. The Court denied RTI's request for injunctive relief relating to BD's contracting practices and BD's safety syringe advertising, finding that RTI failed to prove that BD's contracting practices violated the antitrust laws or that BD's safety syringe advertising is false. On January 14, 2015, the Court granted in part and denied in part BD's motion for a stay of the injunction. The Court held that, pending appeal, BD would not be required to send the corrective advertising notices to end-user customers, but only to employees, distributors and Group Purchasing Organizations. On January 15, 2015, the Court entered its Final Judgment in the case ordering that RTI recover $341 million for its attempted monopolization claim and $12 million for attorneys' fees, and awarded pre and post-judgment interest and costs. On February 3, 2015, the Court of Appeals for the Fifth Circuit denied BD's motion for a stay of the injunction pending the final appeal, and BD thereafter complied with the Court's order. On April 23, 2015, the Court granted BD's motion to eliminate the award of pre-judgment interest, and entered a new Final Judgment. BD thereafter appealed to the Court of Appeals challenging the entirety of the Final Judgment. On December 2, 2016, the Court of Appeals issued an opinion reversing the judgment as to RTI's attempted monopolization claim and rendered judgment on that claim in favor of BD. As a result, the Company reversed $336 million of reserves associated with this judgment, which was recorded in Other operating (income) expense, net. 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 vacated and remanded the injunction ordered by the Court. On January 31, 2017, RTI filed a petition for a writ of certiorari with the U.S. Supreme Court.

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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.

On July 17, 2015, a class action complaint was filed against the Company in the U.S. District Court for the Southern District of Georgia. The plaintiffs, Glynn-Brunswick Hospital Authority, trading as Southeast Georgia Health System, and Southeast Georgia Health System, Inc., seek to represent a class of acute care purchasers of BD syringes and IV catheters. The complaint alleges that BD monopolized the markets for syringes and IV catheters through contracts, theft of technology, false advertising, acquisitions, and other conduct. The complaint seeks treble damages but does not specify the amount of alleged damages. The Company filed a motion to dismiss the complaint which was granted on January 29, 2016. On September 23, 2016, the court denied plaintiffs' motion to alter or amend the judgment to allow plaintiffs to file an amended complaint, and plaintiffs appealed that decision to the Eleventh Circuit Court of Appeals. The plaintiffs thereafter voluntarily dismissed their appeal, and the Court of Appeals dismissed the case on November 21, 2016.

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 the suits pending against the Company and is engaged in a vigorous defense of each of these matters.

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.

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Note 6 — Segment Data

The Company's organizational structure is based upon two principal business segments: BD Medical ("Medical") and BD Life Sciences ("Life Sciences"). The Company's two 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
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.
Medication and Procedural Solutions	Needles, syringes and intravenous catheters for medication delivery (including safety-engineered and auto-disable devices); prefilled IV flush syringes; regional anesthesia needles and trays; sharps disposal containers; closed-system transfer devices; skin antiseptic products; and surgical and laproscopic instrumentation.
Medication Management Solutions	Intravenous medication safety and infusion therapy delivery systems, including infusion pumps and dedicated disposables; medication compounding workflow systems; and automated medication dispensing; automated supply management systems; medication inventory optimization and tracking systems; and analytics related to all the above products.
Pharmaceutical Systems	Prefillable drug delivery 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:

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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; molecular indexing and next-generation sequencing sample preparation for genomics research; clinical oncology, immunological (HIV) and transplantation diagnostic/monitoring reagents and analyzers; and cell culture media supplements for biopharmaceutical manufacturing.

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.

The Company evaluates performance of its business segments and allocates resources to them primarily based upon operating income. Segment operating income represents revenues reduced by product costs and operating expenses. 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 years ended September 30, 2016 and 2015 included $822 million and $417 million, respectively, of revenues which did not occur in the current year.

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(Millions of dollars)	2017	2016	2015
Revenues (A)			
Medical	$8,105	$8,654	$6,460
Life Sciences	3,988	3,829	3,822
Total Revenues	$12,093	$12,483	$10,282
Income Before Income Taxes			
Medical	$2,155	$2,052	$1,530
Life Sciences	772	793	839
Total Segment Operating Income	2,927	2,845	2,368
Acquisitions and other restructurings	(354)	(728)	(426)
Net interest expense	(445)	(367)	(356)
Other unallocated items (B)	(1,152)	(676)	(847)
Income Before Income Taxes	$976	$1,074	$739
Segment Assets			
Medical	$18,332	$19,154	$20,055
Life Sciences	4,056	3,848	3,932
Total Segment Assets	22,388	23,002	23,987
Corporate and All Other (C)	15,347	2,584	2,491
Total Assets	$37,734	$25,586	$26,478
Capital Expenditures			
Medical	$502	$482	$414
Life Sciences	212	200	168
Corporate and All Other	13	12	14
Total Capital Expenditures	$727	$693	$596
Depreciation and Amortization			
Medical	$825	$857	$619
Life Sciences	254	254	256
Corporate and All Other	10	3	17
Total Depreciation and Amortization	$1,088	$1,114	$891

(A)Intersegment revenues are not material.

(B)Primarily comprised of foreign exchange, corporate expenses, and share-based compensation expense. 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 a $336 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 the legal matter and the lease contract modification are provided in Notes 5 and 17, respectively. Results in 2015 reflected $293 million in recognition of the fair value step-up adjustment recorded relative to CareFusion’s inventory on the acquisition date.

(C)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

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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)	2017	2016	2015
Revenues			
United States	$6,504	$6,893	$5,069
Europe	2,588	2,674	2,434
Greater Asia	1,744	1,692	1,545
Other	1,257	1,225	1,234
	$12,093	$12,483	$10,282
Long-Lived Assets			
United States	$13,151	$14,075	$15,513
Europe	4,421	3,747	3,908
Greater Asia	578	586	573
Other	584	483	494
Corporate	366	329	332
	$19,101	$19,220	$20,819

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"), stock options, 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)	2017	2016	2015
Cost of products sold	$ 30	$ 29	$ 23
Selling and administrative expense	113	106	82
Research and development expense	24	22	17
Acquisitions and other restructurings	10	39	44
	$ 177	$ 196	$ 166
Tax benefit associated with share-based compensation costs recognized	$ 61	$ 69	$ 59

In 2015, certain pre-acquisition equity awards of CareFusion were converted into BD restricted stock awards or BD stock options with accelerated vesting terms at the acquisition date. In addition, as an incentive to encourage post-acquisition employee retention, certain pre-acquisition equity awards of CareFusion were converted into either BD restricted stock awards or BD stock options, as applicable, as of the acquisition date, with substantially the same terms and conditions as were applicable under such CareFusion awards immediately prior to the acquisition date. The compensation expense associated with these replacement awards was recorded in Acquisitions and other restructurings.

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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:

	2017	2016	2015
Risk-free interest rate	2.33%	2.17%	2.20%
Expected volatility	20.0%	19.0%	19.0%
Expected dividend yield	1.71%	1.76%	1.78%
Expected life	7.5 years	7.6 years	7.6 years
Fair value derived	$33.81	$27.69	$24.82

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 793 thousand shares during 2017 to satisfy the SARs exercised.

A summary of SARs outstanding as of September 30, 2017 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	7,027	$ 103.83		
Granted	996	170.69		
Exercised	(1,445)	83.81		
Forfeited, canceled or expired	(112)	142.04		
Balance at September 30	6,466	$ 117.94	6.24	$ 504
Vested and expected to vest at September 30	6,215	$ 116.54	6.16	$ 493
Exercisable at September 30	3,952	$ 96.00	4.98	$ 395

A summary of SARs exercised 2017, 2016 and 2015 is as follows:

(Millions of dollars)	2017	2016	2015
Total intrinsic value of SARs exercised	$ 148	$	