ZIMMER BIOMET HOLDINGS, INC. ANNUAL REPORT

2018

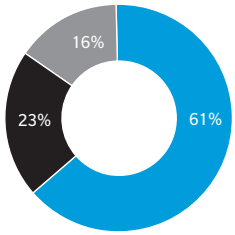
ZIMMER BIOMET

Your progress. Our promise.®

Financial Highlights

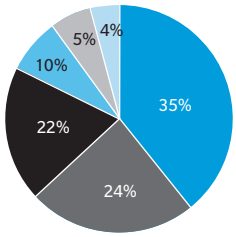
(Dollars in millions except per share amounts)

Sales by Geography



	2014[1]	2015[1]	2016	2017	2018	% Change 2017-2018 Reported	% Change 2017-2018 Constant Currency[2]
Americas	$2,594	$3,662	$4,787	$4,845	$4,837	—	—
EMEA	1,269	1,418	1,730	1,745	1,802	3%	—
Asia Pacific	810	918	1,151	1,213	1,294	7%	6%
Consolidated	$4,673	$5,998	$7,668	$7,803	$7,933	2%	1%

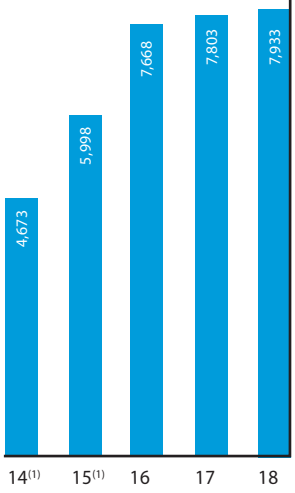
Sales by Product Category



	2014[1]	2015[1]	2016	2017	2018	% Change 2017-2018 Reported	% Change 2017-2018 Constant Currency[2]
Knees	$1,895	$2,277	$2,751	$2,734	$2,774	1%	1%
Hips	1,326	1,533	1,862	1,872	1,921	3%	2%
S.E.T.	863	1,215	1,639	1,701	1,752	3%	2%
Spine & CMF	207	404	661	758	764	1%	—
Dental	243	336	428	419	411	(2%)	(3%)
Other	139	233	327	319	311	(3%)	(3%)
Consolidated	$4,673	$5,998	$7,668	$7,803	$7,933	2%	1%

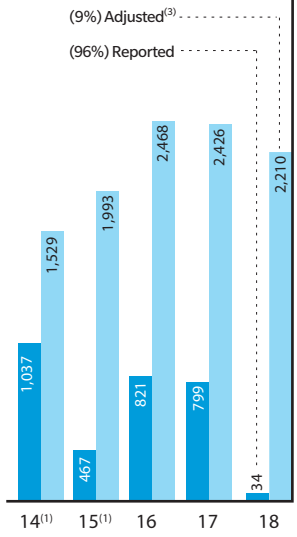
Net Sales

Zimmer Biomet recorded net sales of $7.933 billion in 2018, reflecting 2% revenue growth over 2017. We reported increased sales growth in Knees and Hips, our two largest product categories, as well as S.E.T. Our Spine & CMF product category sales also improved, while our Dental sales declined in 2018. Of note, our consolidated sales growth improved in the second half of 2018, compared to the first half of the year.



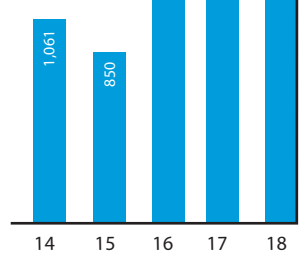
Operating Profit

Operating profit in 2018 declined primarily related to goodwill impairment charges, as well as continued reinvestment in the business and increased costs. Looking forward, we will continue to reinvest and focus on cost reduction.



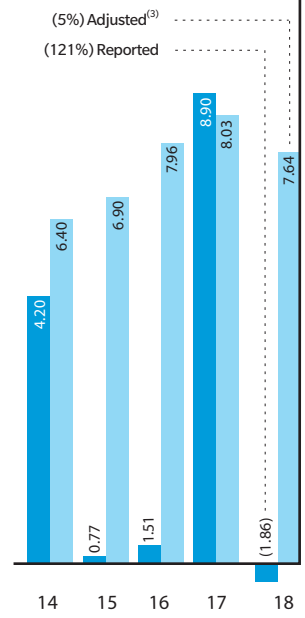
Operating Cash Flow

Our strong cash flow generation in 2018 allowed us to pay down debt. Looking forward to 2019, we intend to use available cash for reinvestment in the business, debt repayment and long term shareholder value creation. If the right opportunities arise, we may also use available cash to pursue business development opportunities.



Diluted Earnings (Loss) per Share

Diluted earnings per share decreased from the prior year. Throughout 2018, we invested in commercial and operational execution, including a number of innovative development projects across our portfolio. We believe these new products and technologies represent opportunities for attractive future return on investment.



GRAPH KEY Reported Adjusted

(1) Effective January 1, 2018 we adopted Accounting Standards Update 2014-09—Revenue from Contracts with Customers (Topic 606) and Accounting Standards Update 2017-07—Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost. We adopted these new standards using the retrospective method, which resulted in restatement of the 2017 and 2016 periods. The 2015 and 2014 periods have not been restated.

(2) "Constant Currency" refers to changes in sales resulting from translating current and prior-period sales at the same predetermined foreign currency exchange rate. The translated results are then used to determine year-over-year percentage increases or decreases that exclude the effect of changes in foreign currency exchange rates. See the reconciliation of this non-GAAP financial measure to the most directly comparable GAAP measure on page 88.

(3) "Adjusted" refers to performance measures that exclude the effects of inventory step-up; certain inventory and manufacturing-related charges, including charges to discontinue certain product lines; intangible asset amortization; goodwill and intangible asset impairment; acquisition, integration and related expenses; quality remediation expenses; certain litigation gains and charges; expenses to comply with the new European Union Medical Device Regulation; other charges; any related effects on our income tax provision associated with these items; the effect of U.S. tax reform; other certain tax adjustments; and provide for the effect of dilutive shares assuming net earnings in periods of a reported net loss. See the reconciliations of these non-GAAP financial measures to the most directly comparable GAAP measures on pages 85-87.

To Our Shareholders,

Zimmer Biomet made exciting progress in 2018. Our company has been a trusted leader in healthcare for more than 90 years, and our achievements this year have enhanced our commitment to our stakeholders, including our shareholders, patients, customers, Team Members and the broader healthcare community.

I was appointed President and Chief Executive Officer roughly one year ago, and we quickly got to work to implement a two-year turnaround plan focused on strengthening the foundation of our business and positioning the Company for offense. We are now more than halfway through this plan and have reshaped the Company into a more proactive and results-driven organization. We still have work to do, but our momentum in 2018 supports our ongoing confidence that we are on-track to drive sustainable long-term revenue growth and shareholder value.

Key Achievements in 2018

Zimmer Biomet's 2018 net sales totaled $7.933 billion, an increase of 1.7% over the prior year on a reported basis, and an increase of 0.8% over the prior year on a constant currency basis. Diluted loss per share for 2018 was $1.86. Adjusted diluted earnings per share for the full year was $7.64, a decrease of 4.9% from the prior year. Our 2018 sales reflected acceleration in the second half of the year, driven by strengthened global large joint sales and the consistent outperformance of our Asia Pacific business, in addition to our improving results in the Europe, Middle East and Africa region. In the second half of 2018, we delivered our two strongest quarters of large joint sales growth on a constant currency basis in the past two years.

Our turnaround plan laid out several strategic priorities aimed at stabilizing our operations and the performance of the business, while positioning our commercial channel for offense in 2019. We are pleased with the progress we made in 2018 and we will continue to focus on these initiatives in the year ahead. Ultimately, we are working toward our goal of consistently delivering revenue growth at or above our weighted average market growth rate in 2020.

Highlights of our accomplishments in 2018 and our priorities for 2019 include:

- **Improved Operational Stability:** We continued to make solid progress on **supply recovery** in 2018, successfully reducing back orders and increasing levels of safety stock. As a result of these actions, supply is no longer a barrier for delivering on our financial commitments or our stated objectives of going on offense and accelerating the performance of the business.

In the area of **quality remediation**, we are executing a detailed remediation plan at the Warsaw North Campus that we expect to complete by the end of 2019. Patient safety, quality and integrity are guiding principles of Zimmer Biomet, and we will continue to invest accordingly to support this important work. In 2019 we will begin to shift our focus from supply recovery efforts to supply efficiency programs and from quality remediation to building best-in-class quality systems.

- **New Products to Expand our Unique Ecosystem:** In 2018, we advanced a number of **important new products** that will be in full launch by the second half of 2019, making this a truly exciting time for our new product pipeline. Important new additions to our flagship Persona® system give us competitive offerings in partial, cementless and revision knee replacement. In the area of robotics, the ROSA® Knee System received CE Mark approval and FDA 510(k) clearance in the first quarter of this year, marking an important milestone for our ROSA platform, which is already cleared for brain applications. And in 2018, we introduced mymobility™, our unique digital platform, which we developed in collaboration with Apple, to connect patients with their surgical teams throughout their entire episode of care.

  As part of an enhanced value proposition for customers, our commercial strategy will increasingly focus on our unique ecosystem of solutions. For example, by bringing together Persona, ROSA and mymobility, Zimmer Biomet can offer a digital health platform backed by Apple and a robotic procedure with greater personalization aimed at transforming the patient's surgical journey and offering greater efficiency to our customers.

- **Significant Enhancements to Culture, Talent and Structure:** When I joined the company last year, we drafted a new **One Zimmer Biomet corporate mission**. We felt this was a vital step toward rebuilding trust and a sense of shared purpose across the organization. Since then, we have held Mission Ceremonies at Zimmer Biomet locations around the world, meeting with more than half of our Team Members so far. This workforce outreach will continue in 2019, to ensure that every Team Member feels a direct personal connection to our mission and culture.

  I'm also pleased to report that we have **significantly enhanced the organization with new talent**, and we are benefiting from a more diverse range of expertise and perspectives. Today, including myself, 70 percent of our Leadership Team are new to their positions. We also restructured each of our businesses to streamline reporting and decision-making, encouraging Team Members at every level to drive a more agile and results-driven organization.

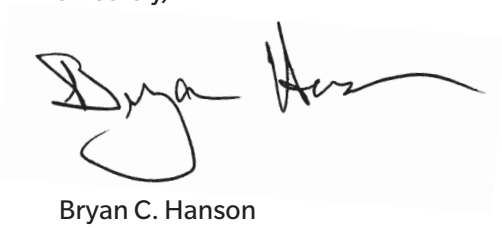
The Road Ahead: 2020 and Beyond

We will remain focused on our key priorities in 2019, as part of the two-year effort to reshape Zimmer Biomet and position us for offense. The pillars of our strategy for 2020 and beyond build on these areas with a focus on developing a best-in-class sustainable organization.

First, we will become the **best and preferred place to work** for our Team Members around the globe—allowing us to continue to attract and benefit from the industry's best talent, acting with a shared sense of purpose and clearly defined values. Second, we will strengthen Zimmer Biomet's reputation as a **trusted partner** to all of our stakeholders, including our customers, patients, regulators, Team Members and shareholders. I take this commitment very seriously, as we continue to work to improve performance across the business. Finally, once we have met our objective of delivering market growth in 2020, our vision is to work toward delivering **top-quartile performance** in terms of total shareholder returns. We will deliver this level of performance through a five-year plan that accelerates our revenue growth while expanding operating margins and increasing free cash flow. To help ensure our Team Members are connected to our strategy, we have already started to better align our compensation structure with these metrics.

As I look back on all that we accomplished in 2018, I want to take a moment to thank our Board of Directors for their support and guidance as we tackled the challenges of a transformational year. I also want to express my sincere appreciation for our more than 23,000 Team Members around the world, who have navigated through significant change and inspire me every day with their hard work and commitment to achieving our mission. Together, we are shaping the future of our great company and delivering on our mission to alleviate pain and improve the quality of life for people around the world.

Sincerely,



Bryan C. Hanson
President and CEO, Zimmer Biomet

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 year ended December 31, 2018

Commission file number 001-16407

ZIMMER BIOMET HOLDINGS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**13-4151777**
(State of Incorporation)	*(IRS Employer Identification No.)*
345 East Main Street Warsaw, Indiana	**46580**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(574) 267-6131**

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

Title of each class	Name of each exchange on which registered
Common Stock, $.01 par value	New York Stock Exchange
1.414% Notes due 2022	New York Stock Exchange
2.425% Notes due 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 ☑ No ☐

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

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

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

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

Indicate by checkmark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer", "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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

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

The aggregate market value of shares held by non-affiliates was $22,648,282,177 (based on the closing price of these shares on the New York Stock Exchange on June 29, 2018 and assuming solely for the purpose of this calculation that all directors and executive officers of the registrant are "affiliates"). As of February 15, 2019, 204,433,342 shares of the registrant's $.01 par value common stock were outstanding.

Documents Incorporated by Reference

Document	**Form 10-K**
Portions of the Proxy Statement with respect to the 2019 Annual Meeting of Stockholders	Part III

Cautionary Note About Forward-Looking Statements

This Annual Report on Form 10-K includes "forward-looking" statements within the meaning of federal securities laws, including, among others, statements about our expectations, plans, strategies or prospects. We generally use the words "may," "will," "expect," "believe," "anticipate," "plan," "estimate," "project," "assume," "guide," "target," "forecast," "see," "seek," "can," "should," "could," "would," "intend" "predict," "potential," "strategy," "is confident that," "future," "opportunity," "work toward," and similar expressions to identify forward-looking statements. All statements other than statements of historical or current fact are, or may be deemed to be, forward-looking statements. Such statements are based upon the current beliefs, expectations and assumptions of management and are subject to significant risks, uncertainties and changes in circumstances that could cause actual results to differ materially from the forward-looking statements. These risks, uncertainties and changes in circumstances include, but are not limited to: the possibility that the anticipated synergies and other benefits from mergers and acquisitions will not be realized, or will not be realized within the expected time periods; the risks and uncertainties related to our ability to successfully integrate the operations, products, employees and distributors of acquired companies; the effect of the potential disruption of management's attention from ongoing business operations due to integration matters related to mergers and acquisitions; the effect of mergers and acquisitions on our relationships with customers, vendors and lenders and on our operating results and businesses generally; compliance with the Deferred Prosecution Agreement entered into in January 2017; the success of our quality and operational excellence initiatives, including ongoing quality remediation efforts at our Warsaw North Campus facility; challenges relating to changes in and compliance with governmental laws and regulations affecting our U.S. and international businesses, including regulations of the U.S. Food and Drug Administration and foreign government regulators, such as more stringent requirements for regulatory clearance of products; the ability to remediate matters identified in any inspectional observations or warning letters issued by the U.S. Food and Drug Administration, while continuing to satisfy the demand for our products; the outcome of government investigations; competition; pricing pressures; changes in customer demand for our products and services caused by demographic changes or other factors; the impact of healthcare reform measures, including the impact of the U.S. excise tax on medical devices if such tax is not further suspended or repealed; reductions in reimbursement levels by third-party payors and cost containment efforts of healthcare purchasing organizations; dependence on new product development, technological advances and innovation; shifts in the product category or regional sales mix of our products and services; supply and prices of raw materials and products; control of costs and expenses; the ability to obtain and maintain adequate intellectual property protection; the ability to form and implement alliances; changes in tax obligations arising from tax reform measures, including European Union rules on state aid, or examinations by tax authorities; product liability and intellectual property litigation losses; the ability to retain the independent agents and distributors who market our products; dependence on a limited number of suppliers for key raw materials and outsourced activities; changes in general industry and market conditions, including domestic and international growth rates; changes in general domestic and international economic conditions, including interest rate and currency exchange rate fluctuations; and the impact of the ongoing financial and political uncertainty on countries in the Euro zone on the ability to collect accounts receivable in affected countries.

See also the section titled "Risk Factors" (refer to Part I, Item 1A of this report) for further discussion of certain risks and uncertainties that could cause actual results and events to differ materially from the forward-looking statements. Readers of this report are cautioned not to rely on these forward-looking statements, since there can be no assurance that these forward-looking statements will prove to be accurate. We expressly disclaim any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. You are advised, however, to consult any further disclosures we make on related subjects in our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K.

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PART I

Item 1. Business

Overview

Zimmer Biomet is a global leader in musculoskeletal healthcare. We design, manufacture and market orthopedic reconstructive products; sports medicine, biologics, extremities and trauma products; office based technologies; spine, craniomaxillofacial and thoracic products; dental implants; and related surgical products. We collaborate with healthcare professionals around the globe to advance the pace of innovation. Our products and solutions help treat patients suffering from disorders of, or injuries to, bones, joints or supporting soft tissues. Together with healthcare professionals, we help millions of people live better lives. In this report, "Zimmer Biomet," "we," "us," "our," "the Company" and similar words refer collectively to Zimmer Biomet Holdings, Inc. and its subsidiaries. "Zimmer Biomet Holdings" refers to the parent company only.

Zimmer Biomet Holdings was incorporated in Delaware in 2001. Our history dates to 1927, when Zimmer Manufacturing Company, a predecessor, was founded in Warsaw, Indiana. On August 6, 2001, we were spun off from our former parent and became an independent public company.

On June 24, 2015 (the "Closing Date"), we acquired LVB Acquisition, Inc. ("LVB"), the parent company of Biomet, Inc. ("Biomet"), and LVB and Biomet became our wholly-owned subsidiaries (sometimes hereinafter referred to as the "Biomet merger" or the "merger"). In connection with the merger, we changed our name from Zimmer Holdings, Inc. to Zimmer Biomet Holdings, Inc.

Customers, Sales and Marketing

Our primary customers include orthopedic surgeons, neurosurgeons, oral surgeons, and other specialists, dentists, hospitals, stocking distributors, healthcare dealers and, in their capacity as agents, healthcare purchasing organizations or buying groups. These customers range from large multinational enterprises to independent clinicians and dentists.

We have operations throughout the world. We manage our operations through three major geographic operating segments and four product category operating segments. Our three major geographic operating segments are the Americas, which is comprised principally of the U.S. and includes other North, Central and South American markets; EMEA, which is comprised principally of Europe and includes the Middle East and African markets; and Asia Pacific, which is comprised primarily of Japan, China and Australia and includes other Asian and Pacific markets. Our four product category operating segments, which are individually not as significant as our geographic operating segments, are as follows: 1) Spine, less Asia Pacific ("Spine"); 2) Office Based Technologies; 3) Craniomaxillofacial and Thoracic ("CMF"); and 4) Dental.

We market and sell products through three principal channels: 1) direct to healthcare institutions, such as hospitals, referred to as direct channel accounts; 2) through stocking distributors and healthcare dealers; and 3) directly to dental practices and dental laboratories. With direct channel accounts, inventory is generally consigned to sales agents or customers. With sales to stocking distributors, some healthcare dealers, dental practices and dental laboratories, title to product passes upon shipment. Consignment sales represented approximately 80 percent of our net sales in 2018. No individual direct channel account, stocking distributor, healthcare dealer, dental practice or dental laboratory accounted for more than 1 percent of our net sales for 2018.

We stock inventory in our warehouse facilities and retain title to consigned inventory in an effort to have sufficient quantities available when products are needed for surgical procedures. Safety stock levels are determined based on a number of factors, including demand, manufacturing lead times and quantities required to maintain service levels. We also carry trade accounts receivable balances based on credit terms that are generally consistent with local market practices.

We utilize a network of sales associates, sales managers and support personnel, some of whom are employed or contracted by independent distributors and sales agencies. We invest a significant amount of time and expense in training sales associates in how to use specific products and how to best inform surgeons of product features and uses. Sales force representatives must have strong technical selling skills and medical education to provide technical support for surgeons.

In response to the different healthcare systems throughout the world, our sales and marketing strategies and organizational structures differ by region. We utilize a global approach to sales force training, marketing and medical education to provide consistent, high quality service. Additionally, we keep current with key surgical developments and other issues related to orthopedic surgeons, neurosurgeons, other specialists, dentists and oral surgeons and the medical and dental procedures they perform.

We allocate resources to achieve our operating profit goals through seven operating segments. Our operating segments are comprised of both geographic and product category business units. We are organized through a combination of geographic and product category operating segments for various reasons, including the distribution channels through which products are sold. Our product category operating segments generally have distribution channels focused specifically on those product categories, whereas our geographic operating segments have distribution channels that sell multiple product categories. The following is a summary of our seven operating segments. See Note 17 to our consolidated financial statements for more information regarding our segments.

Americas. The Americas geographic operating segment is our largest operating segment. The U.S. accounts for 94 percent of net sales in this region. The U.S. sales force consists of a combination of employees and independent sales agents, most of whom sell products exclusively for Zimmer

Biomet. The sales force in the U.S. receives a commission on product sales and is responsible for many operating decisions and costs.

In this region, we contract with group purchasing organizations and managed care accounts and have promoted unit growth by offering volume discounts to customer healthcare institutions within a specified group. Generally, we are designated as one of several preferred purchasing sources for specified products, although members are not obligated to purchase our products. Contracts with group purchasing organizations generally have a term of three years, with extensions as warranted.

In the Americas, we monitor and rank independent sales agents and our direct sales force across a range of performance metrics, including the achievement of sales targets and maintenance of efficient levels of working capital.

EMEA. The EMEA geographic operating segment is our second largest operating segment. France, Germany, Italy, Spain and the United Kingdom collectively account for 56 percent of net sales in the region. This segment also includes other key markets, including Switzerland, Benelux, Nordic, Central and Eastern Europe, the Middle East and Africa. Our sales force in this segment is comprised of direct sales associates, commissioned agents, independent distributors and sales support personnel. We emphasize the advantages of our clinically proven, established designs and innovative solutions and new and enhanced materials and surfaces. In most European countries, healthcare is sponsored by the government and therefore government budgets impact healthcare spending, which can affect our sales in this segment.

Asia Pacific. The Asia Pacific geographic operating segment includes key markets such as Japan, China, Australia, New Zealand, Korea, Taiwan, India, Thailand, Singapore, Hong Kong and Malaysia. Japan is the largest market within this segment, accounting for 46 percent of the region's sales. In Japan and most countries in the Asia Pacific region, we maintain a network of dealers, who act as order agents on behalf of hospitals in the region, and sales associates, who build and maintain relationships with orthopedic surgeons and neurosurgeons in their markets. The knowledge and skills of these sales associates play a critical role in providing service, product information and support to surgeons. We have a research and development center in Beijing, China, which focuses on products and technologies designed to meet the unique needs of Asian patients and their healthcare providers.

Spine. The Spine product category operating segment includes all spine product results except those in Asia Pacific. The U.S. accounts for the majority of sales in this operating segment. The market dynamics of the Spine business are similar to those described in the geographic operating segments. However, our Spine business maintains a separate sales force of employees and independent sales agents.

Office Based Technologies. Our Office Based Technologies product category operating segment only sells to U.S. customers. In this product category, we market our products to doctors who prescribe them for use by patients. The products are mostly provided directly by Zimmer Biomet to patients and are paid for through patients' insurance or by patients themselves. Products are also sold through wholesale channels on a limited basis.

CMF. Our CMF product category operating segment competes across the world through a combination of direct and independent sales agents. The U.S. accounts for the majority of sales in this operating segment. The U.S. sales force consists of a combination of employees and independent sales agents. Internationally, our primary customers are independent stocking distributors who market our products to their customers.

Dental. Our Dental product category operating segment competes across the world. Our sales force is primarily composed of employees who market our products to customers. We sell directly to dental practices or dental laboratories, or to independent stocking distributors depending on the market.

Seasonality

Our business is seasonal in nature to some extent, as many of our products are used in elective procedures, which typically decline during the summer months and can increase at the end of the year once annual deductibles have been met on health insurance plans.

Distribution

We distribute our products both through large, centralized warehouses and through smaller, market specific facilities, depending on the needs of the market. We maintain large, centralized warehouses in the U.S. and Europe to be able to efficiently distribute our products to customers in those regions. In addition to these centralized warehouses, we maintain smaller distribution facilities in the U.S. and in each of the countries where we have a direct sales presence. In many locations, our inventory is consigned to the healthcare institution.

We generally ship our orders via expedited courier. Since most of our sales occur at the time of an elective procedure, we generally do not have firm orders.

Products

Our products include orthopedic reconstructive products; sports medicine, biologics, extremities and trauma products; office based technologies; spine and CMF products; dental implants; and related surgical products.

KNEES

Total knee replacement surgeries typically include a femoral component, a patella (knee cap), a tibial tray and an articular surface (placed on the tibial tray). Knee replacement surgeries include first-time, or primary, joint replacement procedures and revision procedures for the replacement, repair or enhancement of an implant or component from a previous procedure. There are also procedures for partial reconstruction of the knee, which treat limited knee degeneration and involve the replacement of only one side, or

compartment, of the knee with a unicompartmental knee prosthesis. Our knee portfolio also includes early intervention and joint preservation products, which seek to preserve the joint by repairing or regenerating damaged tissues and by treating osteoarthritis.

Our significant knee brands include the following:

- Persona® The Personalized Knee System
- NexGen® Complete Knee Solution
- Vanguard® Knee
- Oxford® Partial Knee

HIPS

Total hip replacement surgeries replace both the head of the femur and the socket portion of the pelvis (acetabulum) of the natural hip. Hip procedures include first-time, or primary, joint replacement as well as revision procedures. Hip implant procedures involve the use of bone cement to attach or affix the prosthetic components to the surrounding bone, or are press-fit into bone, which means that they have a surface that bone affixes to through either ongrowth or ingrowth technologies.

Our significant hip brands include the following:

- Zimmer® M/L Taper Hip Prosthesis
- Taperloc® Hip System
- Arcos® Modular Hip System
- Continuum® Acetabular System
- G7® Acetabular System

S.E.T.

Our S.E.T. product category includes surgical, sports medicine, biologics, foot and ankle, extremities and trauma products. Our surgical products are used to support various surgical procedures. Our sports medicine products are primarily for the repair of soft tissue injuries, most commonly used in the knee and shoulder. Our biologics products are used as early intervention for joint preservation or to support surgical procedures. Our foot and ankle and extremities products are designed to treat arthritic conditions and fractures in the foot, ankle, shoulder, elbow and wrist. Our trauma products are used to stabilize damaged or broken bones and their surrounding tissues to support the body's natural healing process.

Our significant S.E.T. brands include the following:

- Intellicart® System
- A.T.S.® Tourniquet Systems
- JuggerKnot® Soft Anchor System
- Gel-One®[1] Cross-linked Hyaluronate
- Zimmer® Trabecular Metal™ Reverse Shoulder System
- Comprehensive® Shoulder
- Zimmer® Natural Nail® System
- A.L.P.S.® Plating System

SPINE and CMF

Our spine products division designs, manufactures and distributes medical devices and surgical instruments to deliver comprehensive solutions for individuals with back or neck pain caused by degenerative conditions, deformities or traumatic injury of the spine. Our CMF division includes face and skull reconstruction products as well as products that fixate and stabilize the bones of the chest in order to facilitate healing or reconstruction after open heart surgery, trauma or for deformities of the chest.

Our significant spine and CMF brands include the following:

- Polaris™ Spinal System
- Mobi-C® Cervical Disc
- SternaLock® Blu Closure System
- SternaLock® Rigid Sternal Fixation

DENTAL

Our dental products division manufactures and/or distributes: 1) dental reconstructive implants – for individuals who are totally without teeth or are missing one or more teeth; 2) dental prosthetic products – aimed at providing a more natural restoration to resemble the original teeth; and 3) dental regenerative products – for soft tissue and bone rehabilitation.

Our significant dental brands include the following:

- Tapered Screw-Vent® Implant System
- 3i T3® Implant

OTHER

Our other product category primarily includes our bone cement and office based technology products.

Research and Development

We have extensive research and development activities to develop new surgical techniques, materials, biologics and product designs. The research and development teams work closely with our strategic brand marketing function. The rapid commercialization of innovative new materials, biologics products, implant and instrument designs and surgical techniques remains one of our core strategies and continues to be an important driver of sales growth.

We are broadening our offerings in certain of our product categories and exploring new technologies with possible applications in multiple areas. Our primary research and development facility is located in Warsaw, Indiana. We have other research and development personnel based in, among other places, Canada, China, France, Switzerland and other U.S. locations. As of December 31, 2018, we employed approximately 2,000 research and development employees worldwide.

We expect to continue to identify innovative technologies, which may include acquiring complementary products or businesses, establishing technology licensing arrangements or strategic alliances.

Government Regulation and Compliance

We are subject to government regulation in the countries in which we conduct business. In the U.S., numerous laws and regulations govern all the processes by which our products are

[1] Registered trademark of Seikagaku Corporation

brought to market. These include, among others, the Federal Food, Drug and Cosmetic Act and regulations issued or promulgated thereunder. The U.S. Food and Drug Administration ("FDA") has enacted regulations that control all aspects of the development, manufacture, advertising, promotion and postmarket surveillance of medical products, including medical devices. In addition, the FDA controls the access of products to market through processes designed to ensure that only products that are safe and effective are made available to the public.

Most of our new products fall into an FDA medical device classification that requires the submission of a Premarket Notification (510(k)) to the FDA. This process requires us to demonstrate that the device to be marketed is at least as safe and effective as, that is, substantially equivalent to, a legally marketed device. We must submit information that supports our substantial equivalency claims. Before we can market the new device, we must receive an order from the FDA finding substantial equivalence and clearing the new device for commercial distribution in the U.S.

Other devices we develop and market are in a category (class) for which the FDA has implemented stringent clinical investigation and Premarket Approval ("PMA") requirements. The PMA process requires us to provide clinical and laboratory data that establishes that the new medical device is safe and effective. The FDA will approve the new device for commercial distribution if it determines that the data and information in the PMA application constitute valid scientific evidence and that there is reasonable assurance that the device is safe and effective for its intended use(s).

All of our devices marketed in the U.S. have been cleared or approved by the FDA, with the exception of some devices which are exempt or were in commercial distribution prior to May 28, 1976. The FDA has grandfathered these devices, so new FDA submissions are not required.

Both before and after a product is commercially released, we have ongoing responsibilities under FDA regulations. The FDA reviews design and manufacturing practices, labeling and record keeping, and manufacturers' required reports of adverse experiences and other information to identify potential problems with marketed medical devices. We are also subject to periodic inspection by the FDA for compliance with its Quality System Regulation (21 CFR Part 820) ("QSR"), among other FDA requirements, such as restrictions on advertising and promotion. Our manufacturing operations, and those of our third-party manufacturers, are required to comply with the QSR, which addresses a company's responsibility for product design, testing and manufacturing quality assurance and the maintenance of records and documentation. The QSR requires that each manufacturer establish a quality system by which the manufacturer monitors the manufacturing process and maintains records that show compliance with FDA regulations and the manufacturer's written specifications and procedures relating to the devices. QSR compliance is necessary to receive and maintain FDA clearance or approval to market new and existing products. The FDA conducts announced and unannounced periodic and on-going inspections of medical device manufacturers to determine compliance with the QSR. If in connection with these inspections the FDA believes the manufacturer has failed to comply with applicable regulations and/or procedures, it may issue inspectional observations on Form 483 that would necessitate prompt corrective action. If FDA inspectional observations are not addressed and/or corrective action is not taken in a timely manner and to the FDA's satisfaction, the FDA may issue a warning letter (which would similarly necessitate prompt corrective action) and/or proceed directly to other forms of enforcement action, including the imposition of operating restrictions, including a ceasing of operations, on one or more facilities, enjoining and restraining certain violations of applicable law pertaining to medical devices and assessing civil or criminal penalties against our officers, employees or us. The FDA could also issue a corporate warning letter, a recidivist warning letter or a consent decree of permanent injunction. The FDA may also recommend prosecution to the U.S. Department of Justice ("DOJ"). Any adverse regulatory action, depending on its magnitude, may restrict us from effectively manufacturing, marketing and selling our products and could have a material adverse effect on our business, financial condition and results of operations. For information regarding certain warning letters and FDA Form 483 inspectional observations that we are addressing, see Note 19 to our consolidated financial statements.

The FDA, in cooperation with U.S. Customs and Border Protection ("CBP"), administers controls over the import of medical devices into the U.S. The CBP imposes its own regulatory requirements on the import of our products, including inspection and possible sanctions for noncompliance. We are also subject to foreign trade controls administered by certain U.S. government agencies, including the Bureau of Industry and Security within the Commerce Department and the Office of Foreign Assets Control within the Treasury Department ("OFAC").

There are also requirements of state, local and foreign governments that we must comply with in the manufacture and marketing of our products.

In many of the foreign countries in which we market our products, we are subject to local regulations affecting, among other things, design and product standards, packaging requirements and labeling requirements. Many of the regulations applicable to our products in these countries are similar to those of the FDA. The member countries of the European Union (the "EU") have adopted the European Medical Device Directive, which creates a single set of medical device regulations for products marketed in all member countries. Compliance with the Medical Device Directive and certification to a quality system (e.g., ISO 13485 certification) enable the manufacturer to place a CE mark on its products. To obtain authorization to affix the CE mark to a product, a recognized European Notified Body must assess a manufacturer's quality system and the product's conformity to the requirements of the Medical Device Directive. We are subject to inspection by the Notified Bodies for compliance with these requirements. In May 2017, a new EU Medical Device Regulation was published that will impose significant additional premarket and postmarket requirements. The

regulation has a three-year implementation period, and after that time all products marketed in the EU will require certification according to these new requirements. In addition, many countries, including Canada and Japan, have very specific additional regulatory requirements for quality assurance and manufacturing with which we must comply.

Further, we are subject to other federal, state and foreign laws concerning healthcare fraud and abuse, including false claims and anti-kickback laws, as well as the U.S. Physician Payments Sunshine Act and similar state and foreign healthcare professional payment transparency laws. These laws are administered by, among others, the DOJ, the Office of Inspector General of the Department of Health and Human Services ("OIG-HHS"), state attorneys general and various foreign government agencies. Many of these agencies have increased their enforcement activities with respect to medical device manufacturers in recent years. Violations of these laws are punishable by criminal and/or civil sanctions, including, in some instances, fines, imprisonment and, within the U.S., exclusion from participation in government healthcare programs, including Medicare, Medicaid and Veterans Administration health programs.

Our operations in foreign countries are subject to the extraterritorial application of the U.S. Foreign Corrupt Practices Act ("FCPA"). Our global operations are also subject to foreign anti-corruption laws, such as the United Kingdom ("UK") Bribery Act, among others. As part of our global compliance program, we seek to address anti-corruption risks proactively. On January 12, 2017, we resolved previously-disclosed FCPA matters involving Biomet and certain of its subsidiaries. As part of that settlement, we entered into a Deferred Prosecution Agreement ("DPA") with the DOJ. For information regarding the DPA, see Note 19 to our consolidated financial statements.

Our facilities and operations are also subject to complex federal, state, local and foreign environmental and occupational safety laws and regulations, including those relating to discharges of substances in the air, water and land, the handling, storage and disposal of wastes and the clean-up of properties contaminated by pollutants. We do not expect that the ongoing costs of compliance with these environmental requirements will have a material impact on our consolidated earnings, capital expenditures or competitive position.

In addition, we are subject to federal, state and international data privacy and security laws and regulations that govern the collection, use, disclosure and protection of health-related and other personal information. The FDA has issued guidance to which we may be subject concerning data security for medical devices. In addition, certain of our affiliates are subject to privacy and security regulations promulgated under the Health Insurance Portability and Accountability Act of 1996 and the Health Information Technology for Economic and Clinical Health Act (collectively, "HIPAA"). HIPAA governs the use, disclosure, and security of protected health information by HIPAA "covered entities" and their "business associates." Covered entities are health care providers that engage in specific types of electronic transactions, health plans, and health care clearinghouses. A business associate is any person or entity (other than members of a covered entity's workforce) that performs a service on behalf of a covered entity involving the use or disclosure of protected health information. The U.S. Department of Health and Human Services ("HHS") (through the Office for Civil Rights) has direct enforcement authority against covered entities and business associates with regard to compliance with HIPAA regulations. On December 12, 2018, the Office for Civil Rights of HHS issued a request for information seeking input from the public on how the HIPAA regulations could be modified to amend existing obligations relating to the processing of protected health information. We will monitor this process and assess the impact of changes to the HIPAA regulations to our business.

In addition to the FDA guidance and HIPAA regulations described above, a number of U.S. states have also enacted data privacy and security laws and regulations that govern the confidentiality, security, use and disclosure of sensitive personal information, such as social security numbers, medical and financial information and other personal information. These laws and regulations may be more restrictive and not preempted by U.S. federal laws. These state laws include the California Consumer Privacy Act ("CCPA"), which was signed into law on June 28, 2018 and largely takes effect January 1, 2020. The CCPA, among other things, contains new disclosure obligations for businesses that collect personal information about California residents and affords those individuals new rights relating to their personal information that may affect our ability to use personal information. We will continue to monitor and assess the impact of the CCPA, which has substantial penalties for non-compliance and carries significant potential liability, on our business.

Outside of the U.S., data protection laws, including the EU General Data Protection Regulation and member state implementing legislation, also apply to some of our operations in the countries in which we provide services to our customers. Legal requirements in these countries relating to the collection, storage, processing and transfer of personal data continue to evolve. The EU General Data Protection Regulation, which became effective on May 25, 2018 (the "GDPR"), imposes, among other things, data protection requirements that include strict obligations and restrictions on the ability to collect, analyze and transfer EU personal data, a requirement for prompt notice of data breaches to data subjects and supervisory authorities in certain circumstances, and possible substantial fines for any violations (including possible fines for certain violations of up to 4% of total company revenue).

Failure to comply with U.S. and international data protection laws and regulations could result in government enforcement actions (which could include civil and/or criminal penalties), private litigation and/or adverse publicity and could negatively affect our operating results and business.

Competition

The orthopedics and broader musculoskeletal care industry is highly competitive. In the global markets for our

knees, hips, and S.E.T. products, our major competitors include: the DePuy Synthes Companies of Johnson & Johnson; Stryker Corporation; and Smith & Nephew plc. There are smaller competitors in these product categories as well who have success by focusing on smaller subsegments of the industry.

In the spine and CMF categories, we compete globally primarily with the spinal and biologic business of Medtronic plc, the DePuy Synthes Companies, Stryker Corporation, NuVasive, Inc. and Globus Medical, Inc.

In the dental implant category, we compete primarily with Nobel Biocare Holding AG (part of the Danaher Corporation), Straumann Holding AG and Dentsply Sirona Inc.

Competition within the industry is primarily based on pricing, technology, innovation, quality, reputation and customer service. A key factor in our continuing success in the future will be our ability to develop new products and improve existing products and technologies.

Manufacturing and Raw Materials

We manufacture our products at various sites. We also strategically outsource some manufacturing to qualified suppliers who are highly capable of producing components.

The manufacturing operations at our facilities are designed to incorporate the cellular concept for production and to implement tenets of a manufacturing philosophy focused on continuous improvement efforts in product quality, lead time reduction and capacity optimization. Our continuous improvement efforts are driven by Lean and Six Sigma methodologies. In addition, at certain of our manufacturing facilities, many of the employees are cross-trained to perform a broad array of operations.

We generally target operating our manufacturing facilities at optimal levels of total capacity. We continually evaluate the potential to in-source and outsource production as part of our manufacturing strategy to provide value to our stakeholders.

In most of our manufacturing network, we have improved our manufacturing processes to harmonize and optimize our quality systems and to protect our profitability and offset the impact of inflationary costs. We have, for example, employed computer-assisted robots and multi-axis grinders to precision polish medical devices; automated certain manufacturing and inspection processes, including on-machine inspection and process controls; purchased state-of-the-art equipment; in-sourced core products and processes; and negotiated cost reductions from third-party suppliers. Our Warsaw North Campus facility is in the process of implementing many of these manufacturing process improvements. These process improvements are an integral part of our quality remediation plans.

We use a diverse and broad range of raw materials in the manufacturing of our products. We purchase all of our raw materials and select components used in manufacturing our products from external suppliers. In addition, we purchase some supplies from single sources for reasons of quality assurance, sole source availability, cost effectiveness or constraints resulting from regulatory requirements. We work closely with our suppliers to assure continuity of supply while maintaining high quality and reliability. To date, we have not experienced any significant difficulty in locating and obtaining the materials necessary to fulfill our production schedules.

Intellectual Property

Patents and other proprietary rights are important to the continued success of our business. We also rely upon trade secrets, know-how, continuing technological innovation and licensing opportunities to develop and maintain our competitive position. We protect our proprietary rights through a variety of methods, including confidentiality agreements and proprietary information agreements with vendors, employees, consultants and others who may have access to proprietary information. We own or control through licensing arrangements over 8,500 issued patents and patent applications throughout the world that relate to aspects of the technology incorporated in many of our products.

Employees

As of December 31, 2018, we employed approximately 19,000 employees worldwide, including approximately 2,000 employees dedicated to research and development. Approximately 9,000 employees are located within the U.S. and approximately 10,000 employees are located outside of the U.S., primarily throughout Europe and in Japan. We have approximately 8,500 employees dedicated to manufacturing our products worldwide. The Warsaw, Indiana production facilities employ approximately 3,000 employees in the aggregate.

We have production employees represented by a labor union in each of Dover, Ohio and Bridgend, South Wales. We have other employees in Europe who are represented by Works Councils. We believe that our relationship with our employees is satisfactory.

EXECUTIVE OFFICERS

The following table sets forth certain information with respect to our executive officers as of February 25, 2019.

Name	Age	Position
Bryan C. Hanson	52	President and Chief Executive Officer
Aure Bruneau	44	Group President, Spine, CMF, Thoracic and Surgery Assisting Technology
Didier Deltort	52	President, Europe, Middle East and Africa
Daniel P. Florin	54	Executive Vice President and Chief Financial Officer
Chad F. Phipps	47	Senior Vice President, General Counsel and Secretary
Ivan Tornos	43	Group President, Orthopedics
Sang Yi	56	President, Asia Pacific

Mr. Hanson was appointed President and Chief Executive Officer and a member of the Board of Directors in December 2017. Previously, Mr. Hanson served as Executive Vice President and President, Minimally Invasive Therapies Group of Medtronic plc from January 2015 until joining Zimmer Biomet. Prior to that, he was Senior Vice President and Group President, Covidien of Covidien plc from October 2014 to January 2015; Senior Vice President and Group President, Medical Devices and United States of Covidien from October 2013 to September 2014; Senior Vice President and Group President of Covidien for the Surgical Solutions business from July 2011 to October 2013; and President of Covidien's Energy-based Devices business from July 2006 to June 2011. Mr. Hanson held several other positions of increasing responsibility in sales, marketing and general management with Covidien from October 1992 to July 2006.

Mr. Bruneau was appointed Group President with responsibility for the Company's, Spine, Craniomaxillofacial, Thoracic and Surgery Assisting Technology businesses in December 2017. Prior to that, Mr. Bruneau served as Vice President and General Manager with global responsibility for the Company's Craniomaxillofacial and Thoracic businesses beginning in June 2015. He also led the integration of the Robotics business until assuming his current role. Previously, Mr. Bruneau served in Vice President roles of increasing responsibility in marketing, business development and general management at Biomet from September 2008 until June 2015. Prior to joining Biomet, Mr. Bruneau held numerous positions with Sofamor Danek Group and Medtronic over a 12-year period.

Mr. Deltort was appointed President, Europe, Middle East and Africa in August 2018. He is responsible for the marketing, sales and distribution of products, services and solutions in the European, Middle Eastern and African (EMEA) regions. Prior to joining Zimmer Biomet, Mr. Deltort served as Senior Vice President and General Manager, Global Healthcare Solutions and Partnerships of Boston Scientific Corporation, based in France from May 2016 until August 2018. Before joining Boston Scientific Corporation, he spent 14 years with GE Healthcare in positions of increasing responsibility in Germany, Finland, Dubai and the United States, most recently serving as Global Senior Vice President and General Manager of the global Monitoring Solutions business as well as Managing Director of GE Healthcare Finland. Prior to GE, Mr. Deltort served at Philips, Hewlett-Packard and Marquette Electronics in various international healthcare executive roles.

Mr. Florin was appointed Executive Vice President and Chief Financial Officer in February 2018. Prior to that appointment, he served as Senior Vice President and Chief Financial Officer from June 2015 to February 2018. In addition, he served as Interim Chief Executive Officer from July 2017 to December 2017. Prior to the Biomet merger, Mr. Florin served as Senior Vice President and Chief Financial Officer of Biomet from June 2007 to June 2015. Before joining Biomet, he served as Vice President and Corporate Controller of Boston Scientific Corporation from 2001 through May 2007. Prior to that, Mr. Florin served in financial leadership positions within Boston Scientific Corporation and its various business units. Before joining Boston Scientific Corporation, Mr. Florin worked for C.R. Bard from October 1990 through June 1995. From August 1986 until October 1990, Mr. Florin worked in the Audit Practice of Deloitte Haskins & Sells.

Mr. Phipps was appointed Senior Vice President, General Counsel and Secretary in May 2007. He has global responsibility for the Company's Legal Affairs and he serves as Secretary to the Board of Directors. Mr. Phipps also oversees the Company's Government Affairs activities. Previously, Mr. Phipps served as Associate General Counsel and Corporate Secretary from December 2005 to May 2007. He joined the Company in September 2003 as Associate Counsel and Assistant Secretary. Prior to joining the Company, he served as Vice President and General Counsel of L&N Sales and Marketing, Inc. in Pennsylvania and he practiced law with the firm of Morgan, Lewis & Bockius in Philadelphia, focusing on corporate and securities law, mergers and acquisitions and financial transactions.

Mr. Tornos was appointed Group President, Orthopedics in November 2018. Prior to joining Zimmer Biomet, Mr. Tornos served as Worldwide President of the Global Urology, Medical and Critical Care Divisions of Becton, Dickinson and Company ("BD") (and previously, C. R. Bard, Inc. ("Bard")) from June 2017 until October 2018. From June 2017 until BD's acquisition of Bard in December 2017, Mr. Tornos also continued to serve as President, Europe, Middle East and Africa ("EMEA") of Bard, a position to which he was appointed in September 2013. Mr. Tornos joined Bard in

August 2011 and, prior to his appointment as President, EMEA, served as Vice President and General Manager with leadership responsibility for Bard's business in Southern Europe, Central Europe and the Emerging Markets Region of the Middle East and Africa. Before joining Bard, Mr. Tornos served as Vice President and General Manager of the Americas Pharmaceutical and Medical/Imaging Segments of Covidien International from April 2009 to August 2011. Before that, he served as International Vice President, Business Development and Strategy with Baxter International Inc. from July 2008 to April 2009 and, prior to that, Mr. Tornos spent 11 years with Johnson & Johnson in positions of increasing responsibility.

Mr. Yi was appointed President, Asia Pacific in June 2015. He is responsible for the sales, marketing and distribution of products in the Asia Pacific region. Mr. Yi joined the Company in March 2013 as Senior Vice President, Asia Pacific. Previously, he served as Vice President and General Manager of St. Jude Medical for Asia Pacific and Australia from 2005 to 2013. Prior to that, Mr. Yi held several leadership positions over a ten-year period with Boston Scientific Corporation, ultimately serving as Vice President for North Asia.

AVAILABLE INFORMATION

Our Internet address is www.zimmerbiomet.com. We routinely post important information for investors on our website in the "Investor Relations" section, which may be accessed from our homepage at www.zimmerbiomet.com or directly at http://investor.zimmerbiomet.com. We use this website as a means of disclosing material, non-public information and for complying with our disclosure obligations under Regulation FD. Accordingly, investors should monitor the Investor Relations section of our website, in addition to following our press releases, Securities and Exchange Commission ("SEC") filings, public conference calls, presentations and webcasts. Our goal is to maintain the Investor Relations website as a portal through which investors can easily find or navigate to pertinent information about us, free of charge, including:

- our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended ("Exchange Act"), as soon as reasonably practicable after we electronically file that material with or furnish it to the SEC;
- announcements of investor conferences and events at which our executives talk about our products and competitive strategies, as well as archives of these events;
- press releases on quarterly earnings, product announcements, legal developments and other material news that we may post from time to time;
- corporate governance information including our Corporate Governance Guidelines, Code of Business Conduct and Ethics, Code of Ethics for Chief Executive Officer and Senior Financial Officers, information concerning our Board of Directors and its committees, including the charters of the Audit Committee, Compensation and Management Development Committee, Corporate Governance Committee and Quality, Regulatory and Technology Committee, and other governance-related policies;
- stockholder services information, including ways to contact our transfer agent and information on how to sign up for direct deposit of dividends or enroll in our dividend reinvestment plan; and
- opportunities to sign up for email alerts and RSS feeds to have information provided in real time.

The information available on our website is not incorporated by reference in, or a part of, this or any other report we file with or furnish to the SEC.

Item 1A. Risk Factors

We operate in a rapidly changing economic and technological environment that presents numerous risks, many of which are driven by factors that we cannot control or predict. Our business, financial condition and results of operations may be impacted by a number of factors. In addition to the factors discussed elsewhere in this report, the following risks and uncertainties could materially harm our business, financial condition or results of operations, including causing our actual results to differ materially from those projected in any forward-looking statements. The following list of significant risk factors is not all-inclusive or necessarily in order of importance. Additional risks and uncertainties not presently known to us, or that we currently deem immaterial, also may materially adversely affect us in future periods. You should carefully consider these risks and uncertainties before investing in our securities.

If we fail to comply with the terms of the DPA that we entered into in January 2017, we may be subject to criminal prosecution and/or exclusion from federal healthcare programs.

On January 12, 2017, we resolved previously-disclosed FCPA matters involving Biomet and certain of its subsidiaries. As part of the settlement, we entered into a DPA with the DOJ. A copy of the DPA is incorporated by reference as an exhibit to this report.

If we do not comply with the terms of the DPA, we could be subject to prosecution for violating the internal controls provisions of the FCPA and the conduct of Biomet and its subsidiaries described in the DPA, which conduct pre-dated our acquisition of Biomet, as well as any new or continuing violations. We could also be subject to exclusion by OIG-HHS from participation in federal healthcare programs, including Medicaid and Medicare. Any of these events could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We may not be able to effectively integrate acquired businesses into our operations or achieve expected cost savings or profitability from our acquisitions.

Our acquisitions involve numerous risks, including:

- unforeseen difficulties in integrating personnel and sales forces, operations, manufacturing, logistics, research and

development, information technology, communications, purchasing, accounting, marketing, administration and other systems and processes;
- difficulties harmonizing and optimizing quality systems and operations;
- diversion of financial and management resources from existing operations;
- unforeseen difficulties related to entering geographic regions where we do not have prior experience;
- potential loss of key employees;
- unforeseen liabilities associated with businesses acquired; and
- inability to generate sufficient revenue or realize sufficient cost savings to offset acquisition or investment costs.

As a result, if we fail to evaluate and execute acquisitions properly, we might not achieve the anticipated benefits of such acquisitions and we may incur costs in excess of what we anticipate. These risks would likely be greater in the case of larger acquisitions.

Interruption of our manufacturing operations could adversely affect our business, financial condition and results of operations.

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 our facilities from weather or natural disaster-related events, or issues in our manufacturing arising from failure to follow specific internal protocols and procedures, compliance concerns relating to the QSR and Good Manufacturing Practice requirements, equipment breakdown or malfunction or other factors could adversely affect our ability to manufacture our products. In the event of an interruption in manufacturing, we may be unable to move quickly to alternate means of producing affected products or to meet customer demand. In the event of a significant interruption, for example, as a result of a failure to follow regulatory protocols and procedures, we may experience lengthy delays in resuming production of affected products due primarily to the need for regulatory approvals. As a result, we may experience loss of market share, which we may be unable to recapture, and harm to our reputation, which could adversely affect our business, financial condition and results of operations.

Disruptions in the supply of the materials and components used in manufacturing our products could adversely affect our business, financial condition and results of operations.

We purchase many of the materials and components used in manufacturing our products from third-party vendors and we outsource some key manufacturing activities. Certain of these materials and components and outsourced activities can only be obtained from a single source or a limited number of sources due to quality considerations, expertise, costs or constraints resulting from regulatory requirements. In certain cases, we may not be able to establish additional or replacement vendors for such materials or components or outsourced activities in a timely or cost effective manner, largely as a result of FDA regulations that require validation of materials and components prior to their use in our products and the complex nature of our and many of our vendors' manufacturing processes. A reduction or interruption in the supply of materials or components used in manufacturing our products; an inability to timely develop and validate alternative sources if required; or a significant increase in the price of such materials or components could adversely affect our business, financial condition and results of operations.

Moreover, we are subject to the SEC's rule regarding disclosure of the use of certain minerals, known as "conflict minerals" (tantalum, tin and tungsten (or their ores) and gold), which are mined from the Democratic Republic of the Congo and adjoining countries. This rule could adversely affect the sourcing, availability and pricing of materials used in the manufacture of our products, which could adversely affect our manufacturing operations and our profitability. In addition, we are incurring additional costs to comply with this rule, including costs related to determining the source of any relevant minerals and metals used in our products. We have a complex supply chain and we may not be able to sufficiently verify the origins of the minerals and metals used in our products through our due diligence procedures. As a result, we may face reputational challenges with our customers and other stakeholders.

We are subject to costly and complex laws and governmental regulations relating to the manufacturing, labeling and marketing of our products, non-compliance with which could adversely affect our business, financial condition and results of operations.

The products we design, develop, manufacture and market are subject to rigorous regulation by the FDA and numerous other federal, state and foreign governmental authorities. The process of obtaining regulatory approvals to market these products can be costly and time consuming and approvals might not be granted for future products on a timely basis, if at all. Delays in receipt of, or failure to obtain, approvals for future products could result in delayed realization of product revenues or in substantial additional costs.

Both before and after a product is commercially released, we have ongoing responsibilities under FDA regulations and other local, state and foreign requirements. Compliance with these requirements, including the QSR, recordkeeping regulations, labeling and promotional requirements and adverse event reporting regulations, is subject to continual review and is monitored rigorously through periodic inspections by the FDA and other regulators, which may result in observations (such as on Form 483), and in some cases warning letters, that require corrective action, or other forms of enforcement. If the FDA or another regulator were to conclude that we are not in compliance with applicable laws or regulations, or that any of our products are ineffective or pose an unreasonable health risk, they could ban such products, detain or seize adulterated or misbranded products, order a recall, repair, replacement, or refund of payment of such products, refuse to grant pending premarket approval applications, refuse to provide certificates for exports, and/or require us to notify healthcare professionals and others that

the products present unreasonable risks of substantial harm to the public health. The FDA or other regulators may also impose operating restrictions, including a ceasing of operations at one or more facilities, enjoin and restrain certain violations of applicable law pertaining to our products and assess civil or criminal penalties against our officers, employees or us. The FDA or other regulators could also issue a corporate warning letter, a recidivist warning letter, a consent decree of permanent injunction, and/or recommend prosecution. Any adverse regulatory action, depending on its magnitude, may restrict us from effectively manufacturing, marketing and selling our products and could have a material adverse effect on our business, financial condition and results of operations.

In 2012, we received a warning letter from the FDA citing concerns relating to certain processes pertaining to products manufactured at our Ponce, Puerto Rico manufacturing facility. In May 2016, we received a warning letter from the FDA related to observed non-conformities with current good manufacturing practice requirements of the QSR at our facility in Montreal, Quebec, Canada. In August 2018, we received a warning letter from the FDA related to observed non-conformities with current good manufacturing practice requirements of the QSR at our Warsaw North Campus manufacturing facility. As of February 20, 2019, these warning letters remained pending. Until the violations are corrected, we may become subject to additional regulatory action by the FDA as described above, the FDA may refuse to grant premarket approval applications and/or the FDA may refuse to grant export certificates, any of which could have a material adverse effect on our business, financial condition and results of operations. Additional information regarding these and other FDA regulatory matters can be found in Note 19 to our consolidated financial statements.

Governmental regulations outside the U.S. have and may continue to become increasingly stringent and complex. In the EU, for example, a new Medical Device Regulation was published in 2017 which, when it enters into full force in 2020, will include significant additional premarket and post-market requirements. Complying with the requirements of this regulation will require us to incur significant expense. Additionally, the availability of industry notified body services certified to the new requirements is limited, which may cause delays in our receipt of CE certificate approvals and EU Medical Device Regulation submission approvals. Any such delays, or any failure to meet the requirements of the new regulation, could adversely impact our business in the EU and other regions that tie their product registrations to the EU requirements.

Our products and operations are also often subject to the rules of industrial standards bodies, such as the International Standards Organization. If we fail to adequately address any of these regulations, our business could be harmed.

If we fail to comply with healthcare fraud and abuse or data privacy and security laws and regulations, we could face substantial penalties and our business, operations and financial condition could be adversely affected.

Our industry is subject to various federal, state and foreign laws and regulations pertaining to healthcare fraud and abuse, including the federal False Claims Act, the federal Anti-Kickback Statute, the federal Stark law, the federal Physician Payments Sunshine Act and similar state and foreign laws. In addition, we are subject to various federal and foreign laws concerning anti-corruption and anti-bribery matters, sales to countries or persons subject to economic sanctions and other matters affecting our international operations. Violations of these laws are punishable by criminal and/or civil sanctions, including, in some instances, fines, imprisonment and, within the U.S., exclusion from participation in government healthcare programs, including Medicare, Medicaid and Veterans Administration health programs. These laws are administered by, among others, the DOJ, the OIG-HHS, the SEC, the OFAC, the Bureau of Industry and Security of the U.S. Department of Commerce and state attorneys general.

We are also subject to federal, state and international data privacy and security laws and regulations that govern the collection, use, disclosure and protection of health-related and other personal information. The FDA also has issued guidance to which we may be subject concerning data security for medical devices. In addition, certain of our affiliates are subject to privacy and security regulations promulgated under HIPAA. HIPAA governs the use, disclosure, and security of protected health information by HIPAA "covered entities" and their "business associates." Covered entities are health care providers that engage in specific types of electronic transactions, health plans, and health care clearinghouses. A business associate is any person or entity (other than members of a covered entity's workforce) that performs a service on behalf of a covered entity involving the use or disclosure of protected health information. HHS (through the Office for Civil Rights) has direct enforcement authority against covered entities and business associates with regard to compliance with HIPAA regulations. On December 12, 2018, the Office for Civil Rights of HHS issued a request for information seeking input from the public on how the HIPAA regulations could be modified to amend existing obligations relating to the processing of protected health information. We will monitor this process and assess the impact of changes to the HIPAA regulations to our business.

In addition to the FDA guidance and HIPAA regulations described above, a number of U.S. states have also enacted data privacy and security laws and regulations that govern the confidentiality, security, use and disclosure of sensitive personal information, such as social security numbers, medical and financial information and other personal information. These laws and regulations may be more restrictive and not preempted by U.S. federal laws. These state laws include the CCPA, which was signed into law on June 28, 2018 and largely takes effect January 1, 2020. The CCPA, among other things, contains new disclosure obligations for businesses that collect personal information about California residents and affords those individuals new rights relating to their personal information that may affect our ability to use personal information. We will continue to monitor and assess the impact of the CCPA, which has

substantial penalties for non-compliance and carries significant potential liability, on our business.

Outside of the U.S., data protection laws, including the GDPR, also apply to some of our operations in the countries in which we provide services to our customers. Legal requirements in these countries relating to the collection, storage, processing and transfer of personal data continue to evolve. The GDPR imposes, among other things, data protection requirements that include strict obligations and restrictions on the ability to collect, analyze and transfer EU personal data, a requirement for prompt notice of data breaches to data subjects and supervisory authorities in certain circumstances, and possible substantial fines for any violations (including possible fines for certain violations of up to 4% of total company revenue). Other governmental authorities around the world are considering similar types of legislative and regulatory proposals concerning data protection.

The interpretation and enforcement of the laws and regulations described above are uncertain and subject to change, and may require substantial costs to monitor and implement compliance with any additional requirements. Failure to comply with U.S. and international data protection laws and regulations could result in government enforcement actions (which could include substantial civil and/or criminal penalties), private litigation and/or adverse publicity and could negatively affect our operating results and business.

We incurred substantial additional indebtedness in connection with previous mergers and acquisitions and may not be able to meet all of our debt obligations.

We incurred substantial additional indebtedness in connection with previous mergers and acquisitions. At December 31, 2018, our total indebtedness was $8.9 billion, as compared to $1.4 billion at December 31, 2014. As of December 31, 2018, our debt service obligations, comprised of principal and interest (excluding leases and equipment notes), during the next 12 months are expected to be $776.9 million. As a result of the increase in our debt, demands on our cash resources have increased. The increased level of debt could, among other things:

- require us to dedicate a large portion of our cash flow from operations to the servicing and repayment of our debt, thereby reducing funds available for working capital, capital expenditures, research and development expenditures and other general corporate requirements;
- limit our ability to obtain additional financing to fund future working capital, capital expenditures, research and development expenditures and other general corporate requirements;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;
- restrict our ability to make strategic acquisitions or dispositions or to exploit business opportunities;
- place us at a competitive disadvantage compared to our competitors that have less debt;
- adversely affect our credit rating, with the result that the cost of servicing our indebtedness might increase and our ability to obtain surety bonds could be impaired;
- adversely affect the market price of our common stock; and
- limit our ability to apply proceeds from a future offering or asset sale to purposes other than the servicing and repayment of debt.

We are increasingly dependent on sophisticated information technology and if we fail to effectively maintain or protect our information systems or data, including from data breaches, our business could be adversely affected.

We are increasingly dependent on sophisticated information technology for our products and infrastructure. As a result of technology initiatives, recently enacted regulations, changes in our system platforms and integration of new business acquisitions, we have been consolidating and integrating the number of systems we operate and have upgraded and expanded our information systems capabilities. We also have outsourced elements of our operations to third parties, and, as a result, we manage a number of third-party vendors who may or could have access to our confidential information. Our information systems, and those of third-party vendors with whom we contract, require an ongoing commitment of significant resources to maintain, protect and enhance existing systems and develop new systems to keep pace with continuing changes in information technology, evolving systems and regulatory standards and the increasing need to protect patient and customer information. In addition, given their size and complexity, these systems could be vulnerable to service interruptions or to security breaches from inadvertent or intentional actions by our employees, third-party vendors and/or business partners, or from cyber-attacks by malicious third parties attempting to gain unauthorized access to our products, systems or confidential information (including, but not limited to, intellectual property, proprietary business information and personal information). Cyber-attacks, such as those involving the deployment of malware, are increasing in their frequency, sophistication and intensity and have become increasingly difficult to detect. If we fail to maintain or protect our information systems and data integrity effectively, we could:

- lose existing customers;
- have difficulty attracting new customers;
- have problems in determining product cost estimates and establishing appropriate pricing;
- have difficulty preventing, detecting, and controlling fraud;
- have disputes with customers, physicians, and other healthcare professionals;
- have regulatory sanctions or penalties imposed;
- incur increased operating expenses;
- incur expenses or lose revenues as a result of a data privacy breach; or
- suffer other adverse consequences.

While we have invested heavily in the protection of our data and information technology, there can be no assurance that our activities related to consolidating the number of systems we operate, upgrading and expanding our information systems capabilities, protecting and enhancing our systems and implementing new systems will be successful. Despite our efforts, we cannot assure you that cyber-attacks or data

breaches will not occur or that systems issues will not arise in the future. Any significant breakdown, intrusion, breach, interruption, corruption or destruction of these systems could have a material adverse effect on our business and reputation.

Our success depends on our ability to effectively develop and market our products against those of our competitors.

We operate in a highly competitive environment. Our present or future products could be rendered obsolete or uneconomical by technological advances by one or more of our present or future competitors or by other therapies, including biological therapies. To remain competitive, we must continue to develop and acquire new products and technologies. Competition is primarily on the basis of:

- pricing;
- technology;
- innovation;
- quality;
- reputation; and
- customer service.

In markets outside of the U.S., other factors influence competition as well, including:

- local distribution systems;
- complex regulatory environments; and
- differing medical philosophies and product preferences.

Our competitors may:

- have greater financial, marketing and other resources than us;
- respond more quickly to new or emerging technologies;
- undertake more extensive marketing campaigns;
- adopt more aggressive pricing policies; or
- be more successful in attracting potential customers, employees and strategic partners.

Any of these factors, alone or in combination, could cause us to have difficulty maintaining or increasing sales of our products.

If we fail to retain the independent agents and distributors upon whom we rely heavily to market our products, customers may not buy our products and our revenue and profitability may decline.

Our marketing success in the U.S. and abroad depends significantly upon our agents' and distributors' sales and service expertise in the marketplace. Many of these agents have developed professional relationships with existing and potential customers because of the agents' detailed knowledge of products and instruments. A loss of a significant number of our agents could have a material adverse effect on our business and results of operations.

If we do not introduce new products in a timely manner, our products may become obsolete over time, customers may not buy our products and our revenue and profitability may decline.

Demand for our products may change, in certain cases, in ways we may not anticipate because of:

- evolving customer needs;
- changing demographics;
- slowing industry growth rates;
- declines in the musculoskeletal implant market;
- the introduction of new products and technologies;
- evolving surgical philosophies; and
- evolving industry standards.

Without the timely introduction of new products and enhancements, our products may become obsolete over time. If that happens, our revenue and operating results would suffer. The success of our new product offerings will depend on several factors, including our ability to:

- properly identify and anticipate customer needs;
- commercialize new products in a timely manner;
- manufacture and deliver instruments and products in sufficient volumes on time;
- differentiate our offerings from competitors' offerings;
- achieve positive clinical outcomes for new products;
- satisfy the increased demands by healthcare payors, providers and patients for shorter hospital stays, faster post-operative recovery and lower-cost procedures;
- innovate and develop new materials, product designs and surgical techniques; and
- provide adequate medical education relating to new products.

In addition, new materials, product designs and surgical techniques that we develop may not be accepted quickly, in some or all markets, because of, among other factors:

- entrenched patterns of clinical practice;
- the need for regulatory clearance; and
- uncertainty with respect to third-party reimbursement.

Moreover, innovations generally require a substantial investment in research and development before we can determine their commercial viability and we may not have the financial resources necessary to fund the production. In addition, even if we are able to successfully develop enhancements or new generations of our products, these enhancements or new generations of products may not produce revenue in excess of the costs of development and they may be quickly rendered obsolete by changing customer preferences or the introduction by our competitors of products embodying new technologies or features.

If third-party payors decline to reimburse our customers for our products or reduce reimbursement levels, the demand for our products may decline and our ability to sell our products profitably may be harmed.

We sell our products and services to hospitals, doctors, dentists and other healthcare providers, all of which receive reimbursement for the healthcare services provided to their patients from third-party payors, such as domestic and international government programs, private insurance plans and managed care programs. These third-party payors may deny reimbursement if they determine that a device used in a procedure was not in accordance with cost-effective treatment methods, as determined by the third-party payor, or was used for an unapproved indication. Third-party payors may also decline to reimburse for experimental procedures and devices.

In addition, third-party payors are increasingly attempting to contain healthcare costs by limiting both coverage and the level of reimbursement for medical products and services. If third-party payors reduce reimbursement levels to hospitals and other healthcare providers for our products, demand for

our products may decline, or we may experience increased pressure to reduce the prices of our products, which could have a material adverse effect on our sales and results of operations.

We have also experienced downward pressure on product pricing and other effects of healthcare reform in our international markets. If key participants in government healthcare systems reduce the reimbursement levels for our products, our sales and results of operations may be adversely affected.

The ongoing cost-containment efforts of healthcare purchasing organizations may have a material adverse effect on our results of operations.

Many customers for our products have formed group purchasing organizations in an effort to contain costs. Group purchasing organizations negotiate pricing arrangements with medical supply manufacturers and distributors, and these negotiated prices are made available to a group purchasing organization's affiliated hospitals and other members. If we are not one of the providers selected by a group purchasing organization, affiliated hospitals and other members may be less likely to purchase our products, and, if the group purchasing organization has negotiated a strict compliance contract for another manufacturer's products, we may be precluded from making sales to members of the group purchasing organization for the duration of the contractual arrangement. Our failure to respond to the cost-containment efforts of group purchasing organizations may cause us to lose market share to our competitors and could have a material adverse effect on our sales and results of operations.

We conduct a significant amount of our sales activity outside of the U.S., which subjects us to additional business risks and may cause our profitability to decline due to increased costs.

We sell our products in more than 100 countries and derived approximately 40 percent of our net sales in 2018 from outside the U.S. We intend to continue to pursue growth opportunities in sales internationally, including in emerging markets, which could expose us to additional risks associated with international sales and operations. Our international operations are, and will continue to be, subject to a number of risks and potential costs, including:

- changes in foreign medical reimbursement policies and programs;
- changes in foreign regulatory requirements, such as more stringent requirements for regulatory clearance of products;
- differing local product preferences and product requirements;
- fluctuations in foreign currency exchange rates;
- diminished protection of intellectual property in some countries outside of the U.S.;
- trade protection measures, import or export requirements and increased tariffs that may prevent us from shipping products to a particular market and may increase our operating costs;
- foreign exchange controls that might prevent us from repatriating cash earned in countries outside the U.S.;
- complex data privacy requirements and labor relations laws;
- extraterritorial effects of U.S. laws such as the FCPA;
- effects of foreign anti-corruption laws, such as the UK Bribery Act;
- difficulty in staffing and managing foreign operations;
- labor force instability;
- potentially negative consequences from changes in tax laws; and
- political and economic instability.

Violations of foreign laws or regulations could result in fines, criminal sanctions against us, our officers or our employees, prohibitions on the conduct of our business and damage to our reputation.

We may have additional tax liabilities.

We are subject to income taxes in the U.S. and many foreign jurisdictions. Significant judgment is required in determining our worldwide provision for income taxes. In the ordinary course of our business, there are many transactions and calculations where the ultimate tax determination is uncertain. We are regularly under audit by tax authorities. Although we believe our tax estimates are reasonable, the final determination of tax audits and any related litigation could be materially different from our historical income tax provisions and accruals. The results of an audit or litigation could have a material effect on our financial statements in the period or periods for which that determination is made.

The Tax Cuts and Jobs Act of 2017 was signed into law on December 22, 2017 (the "2017 Tax Act"), with significant changes to the U.S. corporate income tax system, including a federal corporate income tax rate reduction from 35 percent to 21 percent, limitations on the deductibility of interest expense, and the transition of U.S. international taxation from a worldwide tax system to a territorial tax system. Although the U.S. Treasury has provided guidance on aspects of the 2017 Tax Act, there still remains further guidance to be provided in the future. On December 22, 2017, the SEC issued Staff Accounting Bulletin No. 118 ("SAB 118"), expressing its views on the application of Financial Accounting Standards Board Accounting Standards Codification Topic 740, *Income Taxes*, in the reporting period that includes December 22, 2017. For the financial statements that include the reporting period in which the 2017 Tax Act was enacted, SAB 118 provides a provisional approach to reflect the income tax effects of the 2017 Tax Act. We finalized our provisional amounts for the effects of the 2017 Tax Act in our 2018 Annual Report on Form 10-K. However, our tax expense and cash flow could be impacted in the event of adverse future regulatory guidance provided by the U.S. Treasury clarifying certain aspects of the 2017 Tax Act.

If the medical device excise tax is not repealed or further suspended, our business, results of operations and cash flows may be adversely affected.

As part of the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Affordability Reconciliation Act of 2010 (collectively, the Affordable Care Act or ACA), in January 2013 we began paying a 2.3 percent medical device excise tax on the vast majority of our U.S sales. A two-year moratorium was placed on the tax

effective January 1, 2016, and that moratorium was extended for an additional two years effective January 1, 2018. Absent further legislative action, the tax will be automatically reinstated for U.S. medical device sales beginning January 1, 2020. If the medical device excise tax is reinstated, we will again be forced to identify ways to reduce spending in other areas to offset the earnings impact due to the tax. We do not expect to be able to pass along the cost of the tax to hospitals, which continue to face cuts to their Medicare reimbursement under the Affordable Care Act and other legislation. Nor do we expect to be able to offset the cost of the tax through higher sales volumes resulting from any further expansion of health insurance coverage through ACA exchanges or Medicaid expansion because of the demographics of the current uninsured population. Accordingly, reinstatement of the medical device excise tax could have a material adverse effect on our business, results of operations and cash flows.

We are subject to risks arising from currency exchange rate fluctuations, which can increase our costs, cause our profitability to decline and expose us to counterparty risks.

A substantial portion of our foreign revenues is generated in Europe and Japan. The U.S. Dollar value of our foreign-generated revenues varies with currency exchange rate fluctuations. Significant increases in the value of the U.S. Dollar relative to the Euro or the Japanese Yen, as well as other currencies, could have a material adverse effect on our results of operations. Although we address currency risk management through regular operating and financing activities, and, on a limited basis, through the use of derivative financial instruments, those actions may not prove to be fully effective.

Pending and future product liability claims and litigation could adversely impact our financial condition and results of operations and impair our reputation.

Our business exposes us to potential product liability risks that are inherent in the design, manufacture and marketing of medical devices. In the ordinary course of business, we are the subject of product liability lawsuits alleging that component failures, manufacturing flaws, design defects or inadequate disclosure of product-related risks or product-related information resulted in an unsafe condition or injury to patients. As discussed further in Note 19 to our consolidated financial statements, we are defending product liability lawsuits relating to the Durom® Acetabular Component ("Durom Cup"), certain products within the M/L Taper and M/L Taper with Kinectiv® Technology hip stems and Versys® Femoral Head implants, and the M2a-Magnum™ hip system. The majority of the Durom Cup cases are pending in a federal Multidistrict Litigation ("MDL") in the District of New Jersey (*In Re: Zimmer Durom Hip Cup Products Liability Litigation*); the majority of the M/L Taper and M/L Taper with Kinectiv Technology hip stem cases and Versys Femoral Head implant cases are pending in a federal MDL in the Southern District of New York (*In Re: Zimmer M/L Taper Hip Prosthesis or M/L Taper Hip Prosthesis with Kinectiv Technology and Versys Femoral Head Products Liability Litigation*); and the majority of the M2a-Magnum hip system cases are pending in a federal MDL in the Northern District of Indiana (*In Re: Biomet M2a Magnum Hip Implant Products Liability Litigation*). We are also currently defending a number of other product liability lawsuits and claims related to various other products. Any product liability claim brought against us, with or without merit, can be costly to defend. Product liability lawsuits and claims, safety alerts or product recalls, regardless of their ultimate outcome, could have a material adverse effect on our business and reputation and on our ability to attract and retain customers.

Although we maintain third-party product liability insurance coverage, we have substantial self-insured retention amounts that we must pay in full before obtaining any insurance proceeds to pay for defense costs, or to satisfy a judgment or settlement. Furthermore, even if any product liability loss is covered by our insurance, it is possible that claims against us may exceed the coverage limits of our insurance policies and we would have to pay the amount of any defense costs, settlement or judgment that is in excess of our policy limits. Product liability claims in excess of applicable insurance could have a material adverse effect on our business, financial condition and results of operations.

We are substantially dependent on patent and other proprietary rights, and failing to protect such rights or to be successful in litigation related to our rights or the rights of others may result in our payment of significant monetary damages and/or royalty payments, negatively impact our ability to sell current or future products, or prohibit us from enforcing our patent and other proprietary rights against others.

Claims of intellectual property infringement and litigation regarding patent and other intellectual property rights are commonplace in our industry and are frequently time consuming and costly. At any given time, we may be involved as either plaintiff or defendant in a number of patent infringement actions, the outcomes of which may not be known for prolonged periods of time. While it is not possible to predict the outcome of patent and other intellectual property litigation, such litigation could result in our payment of significant monetary damages and/or royalty payments, negatively impact our ability to sell current or future products, or prohibit us from enforcing our patent and proprietary rights against others, which could have a material adverse effect on our business and results of operations. As discussed further in Note 19 to our consolidated financial statements, in 2015 we paid a compensatory damages award of approximately $90 million and in December 2018 we accrued an estimated loss of approximately $168 million related to an award of treble damages and attorneys' fees in a patent infringement lawsuit.

Patents and other proprietary rights are essential to our business. We rely on a combination of patents, trade secrets and non-disclosure and other agreements to protect our proprietary intellectual property, and we will continue to do so. While we intend to defend against any threats to our intellectual property, these patents, trade secrets and other agreements may not adequately protect our intellectual property. Further, our currently pending or future patent applications may not result in patents being issued to us,

patents issued to or licensed by us in the past or in the future may be challenged or circumvented by competitors, and such patents may be found invalid, unenforceable or insufficiently broad to protect our technology or to provide us with any competitive advantage. Third parties could obtain patents that may require us to negotiate licenses to conduct our business, and the required licenses may not be available on reasonable terms or at all.

In addition, intellectual property rights may be unavailable or of limited effect in some foreign countries. If we do not obtain sufficient international protection for our intellectual property, our competitiveness in international markets could be impaired, which could limit our growth and revenue.

We also attempt to protect our trade secrets, proprietary know-how and continuing technological innovation with security measures, including the use of non-disclosure and other agreements with our employees, consultants and collaborators. We cannot be certain that these agreements will not be breached, that we will have adequate remedies for any breach, that others will not independently develop substantially equivalent proprietary information, or that third parties will not otherwise gain access to our trade secrets or proprietary knowledge.

We are involved in legal proceedings that may result in adverse outcomes.

In addition to intellectual property and product liability claims and lawsuits, we are involved in various commercial and securities litigation and claims and other legal proceedings that arise from time to time in the ordinary course of our business. For example, as discussed further in Note 19 to our consolidated financial statements, we are defending a purported class action lawsuit, *Shah v. Zimmer Biomet Holdings, Inc. et al.,* filed against us, certain of our current and former officers, certain current and former members of our Board of Directors, and certain former stockholders of ours who sold shares of our common stock in secondary public offerings in 2016, alleging that we and other defendants violated federal securities laws by making materially false and/or misleading statements and/or omissions about our compliance with FDA regulations and our ability to continue to accelerate our organic revenue growth rate in the second half of 2016. Although we believe we have substantial defenses in these matters, litigation and other claims are subject to inherent uncertainties and management's view of these matters may change in the future. Given the uncertain nature of legal proceedings generally, we are not able in all cases to estimate the amount or range of loss that could result from an unfavorable outcome. We could in the future incur judgments or enter into settlements of claims that could have a material adverse effect on our results of operations in any particular period.

Future material impairments in the carrying value of our intangible assets, including goodwill, would negatively affect our operating results.

Our assets include intangible assets, including goodwill. At December 31, 2018, we had $9.6 billion in goodwill. The goodwill results from our acquisition activity and represents the excess of the consideration transferred over the fair value of the net assets acquired. We assess at least annually whether events or changes in circumstances indicate that the carrying value of our intangible assets may not be recoverable. As discussed further in Note 9 to our consolidated financial statements, we recorded goodwill impairment charges of $975.9 million in 2018. If the operating performance at one or more of our business units falls significantly below current levels, if competing or alternative technologies emerge, or if market conditions or future cash flow estimates for one or more of our businesses decline, we could be required to record additional goodwill impairment charges. Any write-off of a material portion of our goodwill or unamortized intangible assets would negatively affect our results of operations.

Developments relating to the UK's referendum vote in favor of leaving the EU could adversely affect us.

The UK held a referendum in June 2016 in which voters approved the UK's voluntary exit from the EU, commonly referred to as "Brexit". In March 2017, the UK formally notified the EU of its intention to withdraw, which commenced a period of up to two years for negotiating the UK's withdrawal terms. The UK and the EU have been negotiating the terms of the UK's exit from the EU, which is scheduled for March 29, 2019. Although the UK and the EU agreed upon a draft withdrawal agreement in November 2018, the UK Parliament rejected the withdrawal agreement in January 2019, creating significant uncertainty as to the terms under which the UK will leave the EU. If the UK leaves the EU with no agreement, it will likely have an adverse impact on labor and trade and will create further short-term currency volatility. Brexit and the perceptions as to its impact have and may continue to adversely affect business activity and economic conditions in Europe and globally and could contribute to instability in global financial and foreign exchange markets. Brexit could also have the effect of disrupting the free movement of goods, services and people between the UK and the EU. The future relationship for medical device products regulation and trade between the UK and the EU is currently uncertain and any adjustments we make to our business and operations as a result of Brexit could result in significant expense and take significant time to complete. Also, as a result of Brexit, other European countries may seek to conduct referenda with respect to their continuing membership with the EU.

Given these possibilities and others we may not anticipate, as well as the lack of comparable precedent, the full extent to which we will be affected by Brexit is uncertain. Any of the potential negative effects of Brexit could adversely affect our business, results of operations and financial condition.

Anti-takeover provisions in our organizational documents could delay or prevent a change of control.

Certain provisions of our Restated Certificate of Incorporation, our Restated By-Laws and the Delaware General Corporation Law may have an anti-takeover effect and may delay, defer or prevent a merger, acquisition, tender offer, takeover attempt or other change of control transaction that a stockholder might consider in its best interest, including those attempts that might result in a premium over the market price for the shares held by our stockholders.

These provisions provide for, among other things:

- the ability of our board of directors to issue one or more series of preferred stock without further stockholder action;
- advance notice for nominations of directors by stockholders and for stockholders to include matters to be considered at our annual meetings;
- certain limitations on convening special stockholder meetings; and
- the prohibition on engaging in a "business combination" with an "interested stockholder" for three years after the time at which a person became an interested stockholder unless certain conditions are met, as set forth in Section 203 of the Delaware General Corporation Law.

These anti-takeover provisions could make it more difficult for a third party to acquire us, even if the third party's offer may be considered beneficial by many of our stockholders. As a result, our stockholders may be limited in their ability to obtain a premium for their shares.

Our Restated By-Laws designate certain Delaware courts as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or other employees.

Our Restated By-Laws provide that, unless we consent in writing to the selection of an alternative forum, a state court located within the State of Delaware (or, if no state court located in the State of Delaware has jurisdiction, the federal district court for the District of Delaware) will be the sole and exclusive forum for any stockholder (including any beneficial owner) to bring (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim against us or any of our directors, officers or other employees arising pursuant to any provision of the Delaware General Corporation Law or our Restated Certificate of Incorporation or our Restated By-Laws, as either may be amended from time to time, or (iv) any action asserting a claim against us or any of our directors, officers or other employees governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of our common stock is deemed to have received notice of and consented to the foregoing provisions. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find this choice of forum provision inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business, financial condition or results of operations.

Item 1B. Unresolved Staff Comments

Not Applicable.

Item 2. Properties

The following are our principal properties:

Location	Use	Owned / Leased	Square Feet
Warsaw, Indiana	Research & Development, Manufacturing, Warehousing, Marketing & Administration	Owned	1,900,000
Warsaw, Indiana	Corporate Headquarters & The Zimmer Institute	Owned	115,000
Warsaw, Indiana	Manufacturing & Warehousing	Leased	170,000
Westminster, Colorado	Spine Business Unit Headquarters	Leased	105,000
Jacksonville, Florida	CMF Business Unit Headquarters & Manufacturing	Owned	85,000
Palm Beach Gardens, Florida	Dental Business Unit Headquarters & Manufacturing	Owned	190,000
Palm Beach Gardens, Florida	Manufacturing	Leased	45,000
Braintree, Massachusetts	Office, Manufacturing, Warehousing, Laboratory	Leased	50,000
Southaven, Mississippi	Distribution Center	Leased	190,000
Parsippany, New Jersey	Office, Research & Development, Manufacturing, Warehousing & The Zimmer Institute	Leased	235,000
Dover, Ohio	Manufacturing	Owned	140,000
Dover, Ohio	Manufacturing	Leased	60,000
Austin, Texas	Offices & Manufacturing	Leased	90,000
Beijing, China	Manufacturing	Leased	95,000
Changzhou, China	Manufacturing	Owned	160,000
Jinhua, China	Manufacturing	Owned	125,000
Valence, France	Manufacturing	Owned	120,000
Berlin, Germany	Manufacturing	Owned	50,000
Eschbach, Germany	Distribution Center	Owned	100,000
Galway, Ireland	Manufacturing	Owned	125,000
Shannon, Ireland	Offices & Manufacturing	Owned	125,000
Tokyo, Japan	Distribution Center	Leased	180,000
Hazeldonk, The Netherlands	Distribution Center	Leased	295,000
Ponce, Puerto Rico	Offices, Manufacturing & Warehousing	Owned	225,000
Singapore	Regional Headquarters	Leased	30,000
Bridgend, South Wales	Manufacturing	Owned	185,000
Bridgend, South Wales	Manufacturing & Warehousing	Leased	100,000
Valencia, Spain	Manufacturing	Owned	70,000
Valencia, Spain	Manufacturing	Leased	10,000
Winterthur, Switzerland	Regional Headquarters, Offices, Research & Development & Manufacturing	Leased	420,000

In addition to the above, we maintain sales and administrative offices and warehouse and distribution facilities in more than 40 countries around the world. We believe that all of the facilities and equipment are in good condition, well maintained and able to operate at present levels. We believe the current facilities, including manufacturing, warehousing, research and development and office space, provide sufficient capacity to meet ongoing demands.

Item 3. Legal Proceedings

Information pertaining to certain legal proceedings in which we are involved can be found in Note 19 to our consolidated financial statements included in Part II, Item 8 of this report and is incorporated herein by reference.

Item 4. Mine Safety Disclosures

Not Applicable.

PART II

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

Our common stock is traded on the New York Stock Exchange and the SIX Swiss Exchange under the symbol "ZBH." As of February 15, 2019, there were approximately 20,000 holders of record of our common stock. A substantially greater number of holders of our common stock are "street name" or beneficial holders, whose shares of record are held by banks, brokers and other financial institutions.

We expect to continue paying cash dividends on a quarterly basis; however, future dividends are subject to approval of the Board of Directors and may be adjusted as business needs or market conditions change. As further discussed in Note 11 to our consolidated financial statements, our debt facilities restrict the payment of dividends in certain circumstances.

The information required by this Item concerning equity compensation plans is incorporated herein by reference to Item 12 of this report.

Item 6. Selected Financial Data

The financial information for each of the past five years ended December 31 is set forth below (in millions, except per share amounts):

	2018	2017	2016	2015 [1][2]	2014 [1]
STATEMENT OF EARNINGS DATA					
Net sales	$ 7,932.9	$ 7,803.3	$ 7,668.4	$ 5,997.8	$4,673.3
Net (loss) earnings of Zimmer Biomet Holdings, Inc.	(379.2)	1,813.8	305.9	147.0	720.3
(Loss) earnings per common share					
Basic	$ (1.86)	$ 8.98	$ 1.53	$ 0.78	$ 4.26
Diluted	(1.86)	8.90	1.51	0.77	4.20
Dividends declared per share of common stock	$ –	$ –	$ –	$ 0.88	$ 0.88
Average common shares outstanding					
Basic	203.5	201.9	200.0	187.4	169.0
Diluted	203.5	203.7	202.4	189.8	171.7
BALANCE SHEET DATA					
Total assets	$24,126.8	$26,014.0	$26,684.4	$27,160.6	$9,658.0
Long-term debt	8,413.7	8,917.5	10,665.8	11,497.4	1,425.5
Other long-term obligations	2,015.7	2,291.3	3,967.2	4,155.9	656.8
Stockholders' equity	11,276.1	11,735.5	9,669.9	9,889.4	6,551.7

[1] Effective January 1, 2018 we adopted Accounting Standards Update 2014-09 – Revenue from Contracts with Customers (Topic 606). We adopted this new standard using the retrospective method, which resulted in us restating the 2017 and 2016 periods. The 2015 and 2014 periods have not been restated. See Note 2 to our consolidated financial statements for additional information.
[2] Includes the results of Biomet starting on June 24, 2015 and Biomet balance sheet data as of December 31, 2015.

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

The following discussion and analysis should be read in conjunction with the consolidated financial statements and the corresponding notes included elsewhere in this Annual Report on Form 10-K. Certain percentages presented in this discussion and analysis are calculated from the underlying whole-dollar amounts and therefore may not recalculate from the rounded numbers used for disclosure purposes. Certain amounts in the 2017 and 2016 consolidated financial statements have been reclassified to conform to the 2018 presentation.

EXECUTIVE LEVEL OVERVIEW

2018 Results

In December 2017, we announced the appointment of a new Chief Executive Officer ("CEO"). After evaluating the state of our business, our CEO expects it will be a two-year (consisting of 2018 and 2019) effort to get the Company operating at market level or above in terms of sales growth rates. One of his first priorities was to improve our supply chain. Starting in 2016 and continuing into 2017, production delays at our Warsaw North Campus facility directly impacted our ability to fully meet demand in our Knees, Hips and S.E.T. product categories. We successfully reduced backorders and increased safety stock levels in 2018 and no longer consider supply to be a barrier to delivering our financial commitments. This resulted in improved sales growth in 2018 in our largest product categories of Knees and Hips. Knees and Hips sales growth in 2018 was 1.5 percent and 2.6 percent, respectively, compared to a sales decline in Knees of 0.6 percent and sales growth of 0.5 percent in Hips in 2017. Additionally, this sales growth improved in the second half of 2018 compared to the first half of 2018. Overall, net sales increased by 1.7 percent in 2018 compared to 2017, primarily due to the improved product supply and completion of key research and development ("R&D") projects in our Knees product category.

Our net earnings (loss) decreased significantly in 2018 compared to 2017 primarily due to $979.7 million of goodwill and intangible asset impairments and $186.0 million of litigation-related charges in 2018 compared to a $1,272.4 million income tax benefit recognized in 2017 related to the Tax Cuts and Jobs Act of 2017 ("2017 Tax Act"). Net earnings (loss) also decreased in 2018 due to increased excess and obsolescence charges and continued investments in R&D and selling, general and administrative ("SG&A").

2019 Outlook

2019 will mark the second year of our two-year turnaround effort. In late 2018 and early 2019, we had various product launches in our Knees product category, which we anticipate will drive improving commercial momentum, especially in the second half of 2019. We estimate the change in sales in 2019 compared to 2018 will be in a range of negative 0.5 percent to positive 0.5 percent. This range includes estimated negative effects of changes in foreign currency exchange rates of 1.0 percent to 1.5 percent. We anticipate that most of the negative effects of foreign currency exchange rates will occur in the first half of the year.

Assuming we have no significant goodwill and intangible asset impairments or litigation charges in 2019, we expect our net earnings to increase significantly compared to the net loss recognized in 2018. We expect our costs of products sold will continue to reflect costs associated with our quality remediation efforts. We anticipate continuing to make investments in operating expenses to support our new product launches. However, we expect expenses related to our acquisition and integration activities and quality remediation will decline as we complete these projects during 2019. We believe that our interest expense, net, will continue to decline throughout the year due to lower anticipated debt levels.

RESULTS OF OPERATIONS

We analyze sales by three geographies, the Americas, EMEA and Asia Pacific, and by the following product categories: Knees, Hips, S.E.T., Dental, Spine & CMF and Other. This sales analysis differs from our reportable operating segments, which are based upon our senior management organizational structure and how we allocate resources towards achieving operating profit goals. We analyze sales by geography because the underlying market trends in any particular geography tend to be similar across product categories and because we primarily sell the same products in all geographies.

Net Sales by Geography

The following tables present net sales by geography and the components of the percentage changes (dollars in millions):

	Year Ended December 31,					
	2018	2017	% Inc/(Dec)	Volume/ Mix	Price	Foreign Exchange
Americas	$4,837.2	$4,844.8	(0.2)%	2.3%	(2.4)%	(0.1)%
EMEA	1,801.9	1,745.2	3.2	1.7	(1.6)	3.1
Asia Pacific	1,293.8	1,213.3	6.6	9.2	(3.5)	0.9
Total	$7,932.9	$7,803.3	1.7	3.2	(2.4)	0.9

	Year Ended December 31,			Volume/		Foreign
	2017	2016	% Inc	Mix	Price	Exchange
Americas	$4,844.8	$4,786.7	1.2%	3.7%	(2.6)%	0.1%
EMEA	1,745.2	1,730.4	0.9	2.1	(1.9)	0.7
Asia Pacific	1,213.3	1,151.3	5.4	9.4	(3.1)	(0.9)
Total	$7,803.3	$7,668.4	1.8	4.2	(2.5)	0.1

"Foreign Exchange" used in the tables in this report represents the effect of changes in foreign currency exchange rates on sales.

Net Sales by Product Category

The following tables present net sales by product category and the components of the percentage changes (dollars in millions):

	Year Ended December 31,			Volume/		Foreign
	2018	2017	% Inc/(Dec)	Mix	Price	Exchange
Knees	$2,773.7	$2,734.0	1.5%	3.6%	(2.9)%	0.8%
Hips	1,921.4	1,871.8	2.6	4.3	(2.8)	1.1
S.E.T.	1,751.8	1,701.8	2.9	3.9	(1.8)	0.8
Dental	411.2	418.6	(1.8)	(1.7)	(1.5)	1.4
Spine & CMF	763.9	757.9	0.8	2.1	(1.7)	0.4
Other	310.9	319.2	(2.6)	(1.7)	(1.5)	0.6
Total	$7,932.9	$7,803.3	1.7	3.2	(2.4)	0.9

	Year Ended December 31,			Volume/		Foreign
	2017	2016	% Inc/(Dec)	Mix	Price	Exchange
Knees	$2,734.0	$2,751.2	(0.6)%	2.1%	(2.8)%	0.1%
Hips	1,871.8	1,861.8	0.5	3.5	(3.0)	–
S.E.T.	1,701.8	1,639.1	3.8	5.9	(2.0)	(0.1)
Dental	418.6	427.9	(2.2)	(0.3)	(2.3)	0.4
Spine & CMF	757.9	660.7	14.7	15.8	(1.4)	0.3
Other	319.2	327.7	(2.6)	(0.9)	(1.8)	0.1
Total	$7,803.3	$7,668.4	1.8	4.2	(2.5)	0.1

The following table presents net sales by product category by geography for our Knees and Hips product categories, which represent our most significant product categories (dollars in millions):

	Year Ended December 31,				
	2018	2017	2016	2018 vs. 2017 % Inc/(Dec)	2017 vs. 2016 % Inc/(Dec)
Knees					
Americas	$1,642.7	$1,656.5	$1,686.5	(0.8)%	(1.8)%
EMEA	672.3	644.4	638.1	4.4	1.0
Asia Pacific	458.7	433.1	426.6	5.9	1.5
Total	$2,773.7	$2,734.0	$2,751.2	1.5	(0.6)
Hips					
Americas	$ 996.3	$ 968.9	$ 982.1	2.8%	(1.3)%
EMEA	519.9	518.4	522.1	0.3	(0.7)
Asia Pacific	405.2	384.5	357.6	5.4	7.5
Total	$1,921.4	$1,871.8	$1,861.8	2.6	0.5

Demand (Volume/Mix) Trends

Increased volume and changes in the mix of product sales contributed 3.2 percentage points of year-over-year sales growth during 2018. Volume/mix growth was driven by recent product introductions, sales in key emerging markets and an aging population. 2017 year-over-year volume/mix growth of 4.2 percent benefited from acquisitions made in 2016 that resulted in a full year of the sales of acquired companies reflected in the 2017 results.

We believe long-term indicators point toward sustained growth driven by an aging global population, growth in emerging markets, obesity, proven clinical benefits, new material technologies, advances in surgical techniques and more active lifestyles, among other factors. In addition, demand for clinically proven premium products and patient specific devices are expected to continue to positively affect sales growth in markets that recognize the value of these advanced technologies.

Pricing Trends

Global selling prices had a negative effect of 2.4 percentage points on year-over-year sales during 2018. In the majority of countries in which we operate, we continue to experience pricing pressure from governmental healthcare cost containment efforts and from local hospitals and health systems.

Foreign Currency Exchange Rates

In 2018, changes in foreign currency exchange rates had a positive effect of 0.9 percent on sales. We address currency risk through regular operating and financing activities and through the use of forward contracts solely to manage foreign currency volatility and risk. Changes in foreign currency exchange rates affect sales growth, but due to offsetting gains/losses on hedge contracts, which are recorded in cost of products sold, the effect on net earnings in the near term is reduced. If foreign currency exchange rates remain at levels consistent with recent rates, we estimate 2019 sales will be negatively affected by 1.0 percent to 1.5 percent.

Sales by Product Category

Knees

Knee sales increased in 2018 compared to a year-over-year decline in 2017. Knee sales have improved due to recent product launches and improved supply. Knee sales volume/mix growth was led by Persona The Personalized Knee System and the Oxford Partial Knee.

Hips

Hip sales continued to experience year-over-year sales growth driven primarily by volume/mix growth, which principally resulted from strong performance in our Asia Pacific and Americas operating segments. Improved supply contributed positively to our results in the Hips product category. Hip sales volume/mix growth was led by our Taperloc Hip System, Arcos Modular Hip System and G7 Acetabular System.

S.E.T.

Our S.E.T. sales continued to increase in 2018, driven primarily by strong performance in key surgical and upper extremity brands.

Dental

Dental sales continued to decline in 2018. In the past few years, our Dental business has been affected by ongoing competitive challenges in the U.S. and EMEA and restructuring of our dental organization in certain European markets.

Spine & CMF

Spine and CMF sales continued to increase in 2018, primarily due to continuing strong sales of our Thoracic products, partially offset by a decline in Spine sales driven by continuing U.S. distributor integration issues. Year-over-year sales growth in 2017 benefited significantly from the full year impact of an acquisition made in 2016.

The following table presents estimated* 2018 global market size and market share information (dollars in billions):

	Global Market Size	Global Market % Growth**	Zimmer Biomet Market Share	Zimmer Biomet Market Position
Knees	$ 7.9	2%	35%	1
Hips	6.1	2	31	1
S.E.T.	16.6	4	11	5
Dental	5.0	5	8	4
Spine & CMF	10.5	2	7	5

* Estimates are not precise and are based on competitor annual filings, Wall Street equity research and Company estimates
** Excludes the effect of changes in foreign currency exchange rates on sales growth

Expenses as a Percent of Net Sales

	Year Ended December 31,				
	2018	2017	2016	2018 vs. 2017 Inc/(Dec)	2017 vs. 2016 Inc/(Dec)
Cost of products sold, excluding intangible asset amortization	28.6%	27.3%	31.1%	1.3%	(3.8)%
Intangible asset amortization	7.5	7.7	7.4	(0.2)	0.3
Research and development	4.9	4.7	4.8	0.2	(0.1)
Selling, general and administrative	42.6	39.8	38.4	2.8	1.4
Goodwill and intangible asset impairment	12.3	4.2	0.4	8.1	3.8
Acquisition, integration and related	1.7	3.6	6.6	(1.9)	(3.0)
Quality remediation	1.9	2.3	0.7	(0.4)	1.6
Operating Profit	0.4	10.2	10.7	(9.8)	(0.5)

Cost of Products Sold and Intangible Asset Amortization

The following table sets forth the factors that contributed to the gross margin changes in each of 2018 and 2017 compared to the prior year:

	Year Ended December 31,	
	2018	2017
Prior year gross margin	64.9%	61.5%
Lower average selling prices	(0.6)	(0.6)
Average cost per unit	0.8	(0.1)
Excess and obsolete inventory	(1.0)	–
Discontinued products inventory charges	(0.1)	1.0
Foreign currency hedges	(0.4)	(1.1)
Inventory step-up	0.4	3.8
U.S. medical device excise tax	(0.3)	0.7
Intangible asset amortization	0.2	(0.3)
Current year gross margin	63.9%	64.9%

The decrease in gross margin percentage in 2018 compared to 2017 was primarily due to higher excess and obsolete inventory charges, lower average selling prices and the effect of our hedging program. We incurred hedge losses of $26.2 million in 2018 compared to hedge gains of $5.1 million in 2017. For derivatives which qualify as hedges of future cash flows, the effective portion of changes in fair value is temporarily recorded in other comprehensive income and then recognized in cost of products sold when the hedged items affect earnings.

The increase in gross margin percentage in 2017 compared to 2016 was primarily due to a decrease in inventory step-up charges. The reduction in inventory step-up charges resulted from the Biomet inventory that was stepped-up to fair value having been fully recognized by June 30, 2016. In 2016, we recognized significant excess and obsolete inventory charges for certain product lines we intend to discontinue, but did not recognize significant charges in 2017, resulting in improvement to our gross margin percentage. Additional favorability was driven by lower medical device excise tax expense due to the two year moratorium on the U.S. medical device excise tax and a favorable resolution on past excise taxes that were paid. Under the applicable accounting rules that we apply to the U.S. medical device excise tax, we had a portion of the tax paid prior to the moratorium included in the cost of inventory and recognized expense through the fourth quarter of 2016. In January 2018, the moratorium on this tax was extended through December 31, 2019. These favorable items were partially offset by lower hedge gains of $5.1 million in 2017 compared to $87.7 million in 2016 and the effect of lower average selling prices.

Operating Expenses

R&D spending has remained generally consistent as a percentage of sales, as we continue to invest in new technologies to address unmet clinical needs. In 2018, with tax savings resulting from the 2017 Tax Act, we were able to invest in R&D at a higher rate on projects such as our recent Knee product launches.

SG&A expenses and SG&A expenses as a percentage of sales increased significantly in 2018 compared to 2017 due to higher litigation-related charges, increased expenses related to our compliance with the DPA, increased incentive compensation due to better performance versus our operating budgets and various spending on other special business transformation initiatives. Our 2017 SG&A expenses and SG&A expenses as a percentage of sales increased in 2017 compared to 2016 due to higher litigation-related charges, increased freight costs due to expedited product shipments and increased investments in our specialized sales forces.

In 2018, we recognized goodwill impairment charges primarily related to our EMEA and Spine reporting units. In 2017, we recognized goodwill impairment charges related to our Spine and Office Based Technologies reporting units. For more information regarding these charges, see Note 9 to our consolidated financial statements.

Acquisition, integration and related expenses declined in both 2017 and 2018 due to the natural regression of integration activities related to the 2015 Biomet merger and other various acquisitions that were consummated in 2016. We are nearing completion of our integration plans for these businesses.

Our quality enhancement and remediation efforts began in late 2016, accelerated throughout 2017 and continued throughout 2018. These costs primarily relate to fees paid to temporary external consultants engaged to assist in the quality remediation at our Warsaw North Campus facility. We have completed many of our remediation milestones and expect quality remediation costs to continue to decline in 2019.

Other Expense, net, Interest Expense, net, and Income Taxes

In 2018, other expense, net, was primarily related to certain components of pension expense and remeasuring monetary assets and liabilities denominated in a foreign currency other than an entity's functional currency, partially offset by foreign currency forward exchange contracts we entered into to mitigate any gain or loss. In 2017, other expense, net, primarily related to certain components of pension expense and remeasuring monetary assets and liabilities denominated in a foreign currency other than an entity's functional currency, partially offset by foreign currency forward exchange contracts we entered into to mitigate any gain or loss. In 2016, other expense, net, primarily included a $53.3 million loss on debt extinguishment. It also included certain components of pension expense and losses on the sale of certain assets and the net expense related to remeasuring monetary assets and liabilities denominated in a foreign currency other than an entity's functional currency, offset by foreign currency forward exchange contracts we entered into to mitigate any gain or loss.

Interest expense, net, declined in 2018 and 2017 when compared to the same prior year periods primarily due to continued debt repayments. Additionally, we implemented hedging strategies that have lowered our interest expense, net, and we extinguished higher-rate debt by issuing notes with lower interest rates.

Our effective tax rate ("ETR") on earnings before income taxes was negative 39.9 percent, negative 290.3 percent and positive 23.8 percent for the years ended December 31, 2018, 2017 and 2016, respectively. In 2018, our negative ETR was primarily due to goodwill impairment that resulted in us having a net loss before income taxes with no associated tax benefit recognized for this charge. In 2018, we also recognized an additional $8.3 million of income tax provision as we completed our estimate of the effects of the 2017 Tax Act. In 2017, the negative ETR was driven by the provisional income tax benefit we recorded of $1,272.4 million from the 2017 Tax Act, as well as $111.3 million of tax benefit we recorded from lower tax rates unrelated to the impact of the 2017 Tax Act. In 2016, we recognized $40.6 million of tax benefit from the favorable resolution of certain tax matters with taxing authorities, which was partially offset by $27.6 million of additional tax provision related to finalizing the tax accounts related to the Biomet merger.

Absent additional discrete tax events, we expect our future ETR will be lower than the U.S. corporate income tax rate of 21.0 percent, due to our mix of earnings between U.S. and foreign locations which have lower corporate income tax rates. Our ETR in future periods could also potentially be impacted by changes in tax rates, tax laws or their interpretation, including the European Union rules on state aid; the outcome of various federal, state and foreign audits; and the expiration of certain statutes of limitations. Currently, we cannot reasonably estimate the impact of these items on our financial results.

Segment Operating Profit

	Net Sales			Operating Profit			Operating Profit as a Percentage of Net Sales		
	Year Ended December 31,			Year Ended December 31,			Year Ended December 31,		
(dollars in millions)	2018	2017	2016	2018	2017	2016	2018	2017	2016
Americas	$3,932.6	$3,928.9	$3,927.9	$2,055.9	$2,126.8	$2,133.3	52.3%	54.1%	54.3%
EMEA	1,576.1	1,523.4	1,512.7	478.4	478.3	498.2	30.4	31.4	32.9
Asia Pacific	1,236.9	1,158.3	1,095.6	427.3	417.6	431.8	34.5	36.1	39.4

In the Americas, operating profit as a percentage of net sales decreased in 2018, primarily due to price declines and higher excess and obsolete inventory charges. In 2017, the Americas segment was unfavorably impacted by price declines, higher contribution of sales from products with lower gross profit margins and higher freight costs. These unfavorable impacts were offset by lower U.S. medical device excise tax expense.

In EMEA, operating profit as a percentage of net sales decreased in 2018 due to price declines and higher excess and obsolete inventory charges. In 2017, operating profit as a percentage of sales decreased primarily due to price declines and a reduced impact of hedge gains.

In Asia Pacific, operating profit as a percentage of net sales decreased in 2018 primarily due to price declines and higher excess and obsolete inventory charges. In 2017, operating profit as a percentage of sales decreased primarily due to price declines and a reduced impact of hedge gains.

Non-GAAP Operating Performance Measures

We use financial measures that differ from financial measures determined in accordance with U.S. Generally Accepted Accounting Principles ("GAAP") to evaluate our operating performance. These non-GAAP financial measures exclude the impact of inventory step-up; certain inventory and manufacturing-related charges including charges to discontinue certain product lines; intangible asset amortization; goodwill and intangible asset impairment; acquisition, integration and related expenses; quality remediation expenses; certain litigation gains and charges; expenses to comply with the new European Union Medical Device Regulation; other charges; any related effects on our income tax provision associated with these items; the effect from finalizing the tax accounts for the Biomet merger; the effect of the 2017 Tax Act; other certain tax adjustments; and, with respect to earnings per share information, provide for the effect of dilutive shares assuming net earnings in a period of a reported net loss. We use these non-GAAP financial measures internally to evaluate the performance of the business. Additionally, we believe these non-GAAP measures provide meaningful incremental information to investors to consider when evaluating our performance. We believe these measures offer the ability to make period-to-period comparisons that are not impacted by certain items that can cause dramatic changes in reported income but that do not impact the fundamentals of our operations. The non-GAAP measures enable the evaluation of operating results and trend analysis by allowing a reader to better identify operating trends that may otherwise be masked or distorted by these types of items that are excluded from the non-GAAP measures. In addition, adjusted diluted earnings per share is used as a performance metric in our incentive compensation programs.

Our non-GAAP adjusted net earnings used for internal management purposes for the years ended December 31, 2018, 2017 and 2016 were $1,565.4 million, $1,636.4 million, and $1,610.8 million, respectively, and our non-GAAP adjusted diluted earnings per share were $7.64, $8.03, and $7.96, respectively.

The following are reconciliations from our GAAP net earnings and diluted earnings per share to our non-GAAP adjusted net earnings and non-GAAP adjusted diluted earnings per share used for internal management purposes (in millions, except per share amounts):

	Year ended December 31,		
	2018	2017	2016
Net (Loss) Earnings of Zimmer Biomet Holdings, Inc.	$ (379.2)	$ 1,813.8	$ 305.9
Inventory step-up and other inventory and manufacturing related charges[1]	32.5	70.8	468.3
Intangible asset amortization[2]	595.9	603.9	565.9
Goodwill and intangible asset impairment[3]	979.7	331.5	31.1
Acquisition, integration and related[4]	133.7	279.8	504.9
Quality remediation[5]	165.4	195.1	54.3
Litigation[6]	186.0	104.0	33.3
European Union Medical Device Regulation[7]	3.7	–	–
Other charges[8]	82.8	43.8	45.9
Taxes on above items[9]	(239.6)	(421.5)	(449.0)
Biomet merger-related measurement period tax adjustments[10]	–	–	52.7
U.S. tax reform[11]	8.3	(1,272.4)	–
Other certain tax adjustments[12]	(3.8)	(112.4)	(2.5)
Adjusted Net Earnings	$1,565.4	$ 1,636.4	$1,610.8
Diluted (Loss) Earnings per share	$ (1.86)	$ 8.90	$ 1.51
Inventory step-up and other inventory and manufacturing related charges[1]	0.16	0.35	2.32
Intangible asset amortization[2]	2.93	2.96	2.80
Goodwill and intangible asset impairment[3]	4.81	1.63	0.15
Acquisition, integration and related[4]	0.66	1.37	2.49
Quality remediation[5]	0.81	0.96	0.27
Litigation[6]	0.91	0.51	0.16
European Union Medical Device Regulation[7]	0.02	–	–
Other charges[8]	0.41	0.22	0.23
Taxes on above items[9]	(1.18)	(2.07)	(2.22)
Biomet merger-related measurement period tax adjustments[10]	–	–	0.26
U.S. tax reform[11]	0.04	(6.25)	–
Other certain tax adjustments[12]	(0.02)	(0.55)	(0.01)
Effect of dilutive shares assuming net earnings[13]	(0.05)	–	–
Adjusted Diluted EPS	$ 7.64	$ 8.03	$ 7.96

[1] Inventory step-up and other inventory and manufacturing-related charges relate to inventory step-up expense, excess and obsolete inventory charges on certain product lines we intend to discontinue and other inventory and manufacturing-related charges. Inventory step-up expense represents the incremental expense of inventory sold recognized at its fair value after business combination accounting is applied versus the expense that would have been recognized if sold at its cost to manufacture. Since only the inventory that existed at the business combination date was stepped-up to fair value, we believe excluding the incremental expense provides investors useful information as to what our costs may have been if we had not been required to increase the inventory's book value to fair value. The excess and obsolete inventory charges on certain product lines are driven by acquisitions where there are competing product lines and we have plans to discontinue one of the competing product lines.

[2] We exclude intangible asset amortization from our non-GAAP financial measures because we internally assess our performance against our peers without this amortization. Due to various levels of acquisitions among our peers, intangible asset amortization can vary significantly from company to company.

[3] In 2018, we recognized $3.8 million of intangible asset impairment from merger-related in-process research and development ("IPR&D) intangible assets and a goodwill impairment charge of $975.9 million. The impairment was comprised of $401.2 million in our Spine reporting unit, $567.0 million in our EMEA reporting unit and $7.7 million in an insignificant reporting unit. In 2017, we recognized $18.8 million and $8.0 million of intangible asset impairment from Biomet merger-related IPR&D and trademark intangible assets, respectively. Also in 2017, we recognized goodwill impairment charges of $32.7 million and $272.0 million on our Office Based Technologies and Spine reporting units, respectively. In 2016, we recognized $31.1 million of intangible asset impairment primarily from Biomet merger-related IPR&D intangible assets.

[4] The acquisition, integration and related expenses we have excluded from our non-GAAP financial measures resulted from our merger with Biomet in 2015 and various acquisitions we consummated in 2016. For Biomet, we have detailed integration roadmaps that cover a three year period from the merger date to accomplish the tasks we feel are necessary to integrate the businesses. For the various 2016 acquisitions, we also have integration plans that are necessary to integrate the businesses. The acquisition, integration and related expenses include the following types of expenses:

- Consulting and professional fees related to third-party integration consulting performed in a variety of areas, such as tax, compliance, logistics and human resources, and legal fees related to the consummation of mergers and acquisitions.
- Employee termination benefits related to terminating employees with overlapping responsibilities in various areas of our business.
- Dedicated project personnel expenses which include the salary, benefits, travel expenses and other costs directly associated with employees who are 100 percent dedicated to our integration of acquired businesses and employees who have been notified of termination, but are continuing to work on transferring their responsibilities.
- Contract termination expenses related to terminated contracts, primarily with sales agents and distribution agreements.
- Other various expenses to relocate facilities, integrate information technology, losses incurred on assets resulting from the applicable acquisition, and other various expenses.

[5] We are addressing inspectional observations on Form 483 and a Warning Letter issued by the U.S. Food and Drug Administration ("FDA") following its inspections of our Warsaw North Campus facility, among other matters. This quality remediation has required us to devote significant financial resources and is for a discrete period of time. The majority of the expenses are related to consultants who are helping us to update previous documents and redesign certain processes.

[6] We are involved in routine patent litigation, product liability litigation, commercial litigation and other various litigation matters. We review litigation matters from both a qualitative and quantitative perspective to determine if excluding the losses or gains will provide our investors with useful incremental information. Litigation matters can vary in their characteristics, frequency and significance to our operating results. The litigation charges and gains excluded from our non-GAAP financial measures in the periods presented relate to product liability matters where we have received numerous claims on specific products and intellectual property litigation. In regards to the product liability matters, due to the complexities involved and claims filed in multiple districts, the expenses associated with these matters are significant to our operating results. Once the litigation matter has been excluded from our non-GAAP financial measures in a particular period, any additional expenses or gains from changes in estimates are also excluded, even if they are not significant, to ensure consistency in our non-GAAP financial measures from period-to-period.

[7] The new European Union Medical Device Regulation imposes significant additional premarket and postmarket requirements. The new regulations will require currently-approved medical devices a transition period until May 2020 to meet the additional requirements. For certain devices, this transition period can be extended until May 2024. We are excluding from our non-GAAP financial measures the incremental costs incurred to comply with the regulations related to our currently-approved medical devices. The incremental costs primarily include third-party consulting necessary to supplement our internal resources.

(8) We have incurred other various expenses from specific events or projects that we consider highly variable or have a significant impact to our operating results that we have excluded from our non-GAAP financial measures. This includes legal entity and operational restructuring as well as our costs of complying with our DPA with the U.S. government related to certain FCPA matters involving Biomet and certain of its subsidiaries. Under the DPA, which has a three-year term, we are subject to oversight by an independent compliance monitor, which monitorship commenced in July 2017. The excluded costs include the fees paid to the independent compliance monitor and to external legal counsel assisting in the matter.
(9) Represents the tax effects on the previously specified items. The tax effect for the U.S. jurisdiction is calculated based on an effective rate considering federal and state taxes, as well as permanent items. For jurisdictions outside the U.S., the tax effect is calculated based upon the statutory rates where the items were incurred.
(10) The 2016 period includes negative effects from finalizing the tax accounts for the Biomet merger. Under the applicable U.S. GAAP rules, these measurement period adjustments are recognized on a prospective basis in the period of change.
(11) The 2017 Tax Act resulted in a net favorable provisional adjustment due to the reduction of deferred tax liabilities for unremitted earnings and revaluation of deferred tax liabilities to a 21 percent rate, which was partially offset by provisional tax charges related to the toll charge provision of the 2017 Tax Act. In 2018, we finalized our estimates of the effects of the 2017 Tax Act based upon final guidance issued by U.S. tax authorities.
(12) Other certain tax adjustments in 2018 primarily related to changes in tax rates on deferred tax liabilities recorded on intangible assets recognized in acquisition-related accounting and adjustments from internal restructuring transactions that provide us access to offshore funds in a tax efficient manner. In 2017, other certain tax adjustments relate to tax benefits from lower tax rates unrelated to the impact of the 2017 Tax Act, net favorable resolutions of various tax matters and net favorable adjustments from internal restructuring transactions. The 2016 adjustment primarily related to a favorable adjustment to certain deferred tax liabilities recognized as part of acquisition-related accounting and favorable resolution of certain tax matters with taxing authorities offset by internal restructuring transactions that provide us access to offshore funds in a tax efficient manner.
(13) Diluted share count used in Adjusted Diluted EPS:

	Year ended December 31, 2018
Diluted shares	203.5
Dilutive shares assuming net earnings	1.5
Adjusted diluted shares	205.0

LIQUIDITY AND CAPITAL RESOURCES

Cash flows provided by operating activities were $1,747.4 million in 2018 compared to $1,582.3 million and $1,632.2 million in 2017 and 2016, respectively. The increase in operating cash flows in 2018 compared to 2017 was driven by additional cash flows from our sale of accounts receivable in certain countries, lower acquisition and integration expenses and lower quality remediation expenses, as well as certain significant payments made in the 2017 period. In the 2017 period, we made payments related to the U.S. Durom Cup Settlement Program, and we paid $30.5 million in Settlement Payments to resolve previously-disclosed FCPA matters involving Biomet and certain of its subsidiaries as discussed in Note 19 to our consolidated financial statements included in Item 8 of this report. The decline in operating cash flows in 2017 compared to 2016 was driven by additional investments in inventory, additional expenses for quality remediation and the significant payments made in the 2017 period as discussed in the previous sentence. These unfavorable items were partially offset by $174.0 million of incremental cash flows in 2017 from our sale of accounts receivable in certain countries.

Cash flows used in investing activities were $416.6 million in 2018 compared to $510.8 million and $1,691.5 million in 2017 and 2016, respectively. Instrument and property, plant and equipment additions reflected ongoing investments in our product portfolio and optimization of our manufacturing and logistics network. In 2018, we entered into receive-fixed-rate, pay-fixed-rate cross-currency interest rate swaps. Our investing cash flows reflect the net cash inflows from the fixed-rate interest rate receipts/payments, as well as the termination of certain of these swaps that were in a gain position in the year. The 2016 period included cash outflows for the acquisition of LDR Holding Corporation ("LDR") and other business acquisitions. Additionally, the 2016 period reflects the maturity of available-for-sale debt securities. As these investments matured, we used the cash to pay off debt and have not reinvested in any additional debt securities.

Cash flows used in financing activities were $1,302.2 million in 2018. Our primary use of available cash in 2018 was for debt repayment. We received net proceeds of $749.5 million from the issuance of additional senior notes and borrowed $400.0 million from our Multicurrency Revolving Facility to repay $1,150.0 million of senior notes that became due on April 2, 2018. We subsequently repaid the $400.0 million of Multicurrency Revolving Facility borrowings. Also in 2018, we borrowed another $675.0 million under a new U.S. Term Loan C and used the cash proceeds along with cash generated from operations throughout the year to repay an aggregate of $835.0 million on U.S. Term Loan A, $450.0 million on U.S. Term Loan B, and we subsequently repaid $140.0 million on U.S. Term Loan C. Overall, we had approximately $1,150 million of net principal repayments on our senior notes and term loans in 2018. In 2017, our primary use of available cash was also for debt repayment compared to 2016 when we were not able to repay as much debt due to financing requirements to complete the LDR and other business acquisitions. Additionally in 2017, we had net cash inflows of $103.5 million on factoring programs that had not been remitted to the third party. In 2018, we had net cash outflows related to these factoring programs as we remitted the $103.5 million and collected only $66.8 million which had not yet been remitted by the end of the year. Since our factoring programs started at the end of 2016, we did not have similar cash flows in that year.

In January 2019, we borrowed an additional $200.0 million under U.S. Term Loan C and used those proceeds, along with cash on hand, to repay the remaining $225.0 million outstanding under U.S. Term Loan B.

In February, May, August and December 2018, our Board of Directors declared cash dividends of $0.24 per share. We expect to continue paying cash dividends on a quarterly basis; however, future dividends are subject to approval of the Board of Directors and may be adjusted as business needs or market conditions change. As further discussed in Note 11 to our consolidated financial statements, our debt facilities restrict the payment of dividends in certain circumstances.

In February 2016, our Board of Directors authorized a $1.0 billion share repurchase program effective March 1, 2016, with no expiration date. As of December 31, 2018, all $1.0 billion remained authorized for repurchase under the program.

We will continue to exercise disciplined capital allocation designed to drive stockholder value creation. We intend to use available cash for reinvestment in the business, debt repayment and dividends. If the right opportunities arise, we may also use available cash to pursue business development opportunities.

As discussed in Note 15 to our consolidated financial statements, the Internal Revenue Service ("IRS") has issued proposed adjustments for years 2005 through 2012 reallocating profits between certain of our U.S. and foreign subsidiaries. We have disputed these proposed adjustments and continue to pursue resolution with the IRS. Although the ultimate timing for resolution of the disputed tax issues is uncertain, future payments may be significant to our operating cash flows.

As discussed in Note 19 to our consolidated financial statements, as of December 31, 2018, a short-term liability of $19.5 million and a long-term liability of $72.1 million related to Durom Cup product liability claims were recorded on our consolidated balance sheet. We expect to continue paying these claims over the next few years. We maintain insurance for product liability claims, subject to self-insurance retention requirements. We have recovered insurance proceeds from certain of our insurance carriers for Durom Cup-related claims. While we may recover additional insurance proceeds in the future for Durom Cup-related claims, we do not have a receivable recorded on our consolidated balance sheet as of December 31, 2018 for any possible future insurance recoveries for these claims. We also had a liability of $70.4 million recorded on our consolidated balance sheet as of December 31, 2018 related to Biomet metal-on-metal hip implant claims. Additionally, we have a liability of approximately $168 million related to the Stryker patent infringement lawsuit that we may be required to pay in 2019.

At December 31, 2018, we had 12 tranches of senior notes outstanding as follows (dollars in millions):

Principal	Interest Rate	Maturity Date
$500.0	4.625%	November 30, 2019
1,500.0	2.700	April 1, 2020
450.0	Floating	March 19, 2021
300.0	3.375	November 30, 2021
750.0	3.150	April 1, 2022
571.6*	1.414	December 13, 2022
300.0	3.700	March 19, 2023
2,000.0	3.550	April 1, 2025
571.6*	2.425	December 13, 2026
253.4	4.250	August 15, 2035
317.8	5.750	November 30, 2039
395.4	4.450	August 15, 2045

* Euro denominated debt securities

We also had four term loans with total principal of $1,057.0 million outstanding as of December 31, 2018.

We have a five-year unsecured multicurrency revolving facility of $1.5 billion (the "Multicurrency Revolving Facility") that will mature on September 30, 2021. There were no outstanding borrowings on this facility as of December 31, 2018. We also have other available uncommitted credit facilities totaling $55.0 million.

For additional information on our debt, see Note 11 to our consolidated financial statements.

We place our cash and cash equivalents in highly-rated financial institutions and limit the amount of credit exposure to any one entity. We invest only in high-quality financial instruments in accordance with our internal investment policy.

As of December 31, 2018, $386.1 million of our cash and cash equivalents were held in jurisdictions outside of the U.S. Of this amount, $89.8 million is denominated in U.S. Dollars and, therefore, bears no foreign currency translation risk. The balance of these assets is denominated in currencies of the various countries where we operate. We intend to repatriate at least $5.1 billion of unremitted earnings in future years.

Management believes that cash flows from operations and available borrowings under the Multicurrency Revolving Facility are sufficient to meet our working capital, capital expenditure and debt service needs, as well as to return cash to stockholders in the form of dividends and share repurchases. Should additional investment opportunities arise, we believe that our earnings, balance sheet and cash flows will allow us to obtain additional capital, if necessary.

CONTRACTUAL OBLIGATIONS

We have entered into contracts with various third parties in the normal course of business that will require future payments. The following table illustrates our contractual obligations and certain other commitments (in millions):

Contractual Obligations	Total	2019	2020 and 2021	2022 and 2023	2024 and Thereafter
Long-term debt	$ 8,966.8	$ 525.0	$2,985.0	$1,918.6	$3,538.2
Interest payments	1,869.5	251.9	374.5	286.4	956.7
Operating leases	309.6	67.1	101.0	59.9	81.6
Purchase obligations	385.6	197.5	148.0	29.7	10.4
Toll charge tax liability	302.4	26.3	52.6	75.6	147.9
Other long-term liabilities	276.3	–	193.3	16.9	66.1
Total contractual obligations	$12,110.2	$1,067.8	$3,854.4	$2,387.1	$4,800.9

$67.1 million of the other long-term liabilities on our balance sheet as of December 31, 2018 are liabilities related to defined benefit pension plans. Defined benefit plan liabilities are based upon the underfunded status of the respective plans;

they are not based upon future contributions. Due to uncertainties regarding future plan asset performance, changes in interest rates and our intentions with respect to voluntary contributions, we are unable to reasonably estimate future contributions beyond 2019. Therefore, this table does not include any amounts related to future contributions to our plans. See Note 14 to our consolidated financial statements for further information on our defined benefit plans.

Under the 2017 Tax Act, we have a $302.4 million toll charge liability for the one-time deemed repatriation of unremitted foreign earnings. This amount was recorded in current and non-current income tax liabilities on our consolidated balance sheet as of December 31, 2018. We have elected to pay the toll charge in installments over eight years.

Also included in long-term liabilities on our consolidated balance sheets are liabilities related to unrecognized tax benefits and corresponding interest and penalties thereon. Due to the uncertainties inherent in these liabilities, such as the ultimate timing and resolution of tax audits, we are unable to reasonably estimate the amount or period in which potential tax payments related to these positions will be made. Therefore, this table does not include any obligations related to unrecognized tax benefits. See Note 15 to our consolidated financial statements for further information on these tax-related accounts.

We have entered into various agreements that may result in future payments dependent upon various events such as the achievement of certain product R&D milestones, sales milestones, or, at our discretion, maintenance of exclusive rights to distribute a product. Since there is uncertainty on the timing or whether such payments will have to be made, we have not included them in this table. These payments could range from $0 to $58 million.

CRITICAL ACCOUNTING ESTIMATES

Our financial results are affected by the selection and application of accounting policies and methods. Significant accounting policies which require management's judgment are discussed below.

Excess Inventory and Instruments – We must determine as of each balance sheet date how much, if any, of our inventory may ultimately prove to be unsaleable or unsaleable at our carrying cost. Similarly, we must also determine if instruments on hand will be put to productive use or remain undeployed as a result of excess supply. Accordingly, inventory and instruments are written down to their net realizable value. To determine the appropriate net realizable value, we evaluate current stock levels in relation to historical and expected patterns of demand for all of our products and instrument systems and components. The basis for the determination is generally the same for all inventory and instrument items and categories except for work-in-process inventory, which is recorded at cost. Obsolete or discontinued items are generally destroyed and completely written off. Management evaluates the need for changes to the net realizable values of inventory and instruments based on market conditions, competitive offerings and other factors on a regular basis.

Income Taxes – Our income tax expense, deferred tax assets and liabilities and reserves for unrecognized tax benefits reflect management's best assessment of estimated future taxes to be paid. We are subject to income taxes in the U.S. and numerous foreign jurisdictions. Significant judgments and estimates are required in determining the consolidated income tax expense.

We estimate income tax expense and income tax liabilities and assets by taxable jurisdiction. Realization of deferred tax assets in each taxable jurisdiction is dependent on our ability to generate future taxable income sufficient to realize the benefits. We evaluate deferred tax assets on an ongoing basis and provide valuation allowances unless we determine it is "more likely than not" that the deferred tax benefit will be realized.

The calculation of our tax liabilities involves dealing with uncertainties in the application of complex tax laws and regulations in a multitude of jurisdictions across our global operations. We are subject to regulatory review or audit in virtually all of those jurisdictions and those reviews and audits may require extended periods of time to resolve. We record our income tax provisions based on our knowledge of all relevant facts and circumstances, including existing tax laws, our experience with previous settlement agreements, the status of current examinations and our understanding of how the tax authorities view certain relevant industry and commercial matters.

We recognize tax liabilities in accordance with the FASB's guidance on income taxes and we adjust these liabilities when our judgment changes as a result of the evaluation of new information not previously available. Due to the complexity of some of these uncertainties, the ultimate resolution may result in a payment that is materially different from our current estimate of the tax liabilities. These differences will be reflected as increases or decreases to income tax expense in the period in which they are determined.

Commitments and Contingencies – Accruals for product liability and other claims are established with the assistance of internal and external legal counsel based on current information and historical settlement information for claims, related legal fees and for claims incurred but not reported. We use an actuarial model to assist management in determining an appropriate level of accruals for product liability claims. Historical patterns of claim loss development over time are statistically analyzed to arrive at factors which are then applied to loss estimates in the actuarial model.

Goodwill and Intangible Assets – We evaluate the carrying value of goodwill and indefinite life intangible assets annually, or whenever events or circumstances indicate the carrying value may not be recoverable. We evaluate the carrying value of finite life intangible assets whenever events or circumstances indicate the carrying value may not be recoverable. Significant assumptions are required to estimate the fair value of goodwill and intangible assets, most notably estimated future cash flows generated by these assets and risk-adjusted discount rates. As such, these fair value measurements use significant unobservable inputs. Changes to these assumptions could require us to record impairment charges on these assets.

Prior to our annual impairment test in the fourth quarter of 2018, we had six reporting units with goodwill assigned to them. Our annual impairment test determined our EMEA and Spine reporting units' carrying values were in excess of their estimated fair values. Fair value was determined using income and market approaches. Fair value under the income approach was determined by discounting to present value the estimated future cash flows of the reporting units. Fair value under the market approach utilized the guideline public company methodology, which uses valuation indicators determined from other businesses that are similar to our EMEA and Spine reporting units. As a result of its carrying value being in excess of its estimated fair value, we recorded a goodwill impairment charge for the EMEA reporting unit of $567.0 million. As of December 31, 2018, $755.2 million of goodwill remains for this reporting unit. The goodwill impairment charge for the Spine reporting unit was $401.2 million in 2018. No goodwill balance remains for this reporting unit.

See Note 9 to our consolidated financial statements for further discussion and the factors that contributed to these impairment charges and the factors that could lead to further impairment.

Since the carrying value of the EMEA reporting unit was written down to its estimated fair value, future impairment could occur if the estimates used in the income and market approaches change. If our estimates of profitability in the reporting unit decline, the fair value estimate under the income approach will decline. Additionally, changes in the broader economic environment could cause changes to our estimated discount rates, foreign currency exchange rates used to translate cash flows and comparable company valuation indicators, which may impact our estimated fair values.

Additionally, in our annual impairment test in the fourth quarter of 2018, our Dental reporting unit's fair value exceeded its carrying value by less than 5 percent. The goodwill balance of our Dental reporting unit was $387.2 million at December 31, 2018. If our future operating results are below the estimations used for our impairment assessment, or there are negative impacts from the broader economic environment, then we may have to recognize goodwill impairment charges on this reporting unit in the future.

For our other three reporting units that have goodwill assigned to them, their estimated fair value exceeded their carrying value by more than 25 percent. We estimated the fair value of those reporting units using the income and market approaches. If we do not achieve our forecasted operating results or if market valuation indicators decline, we could be required to recognize additional goodwill impairment charges in the future.

RECENT ACCOUNTING PRONOUNCEMENTS

See Note 2 to our consolidated financial statements for information on how recent accounting pronouncements have affected or may affect our financial position, results of operations or cash flows.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

MARKET RISK

We are exposed to certain market risks as part of our ongoing business operations, including risks from changes in foreign currency exchange rates, interest rates and commodity prices that could affect our financial condition, results of operations and cash flows. We manage our exposure to these and other market risks through regular operating and financing activities and through the use of derivative financial instruments. We use derivative financial instruments solely as risk management tools and not for speculative investment purposes.

FOREIGN CURRENCY EXCHANGE RISK

We operate on a global basis and are exposed to the risk that our financial condition, results of operations and cash flows could be adversely affected by changes in foreign currency exchange rates. We are primarily exposed to foreign currency exchange rate risk with respect to transactions and net assets denominated in Euros, Swiss Francs, Japanese Yen, British Pounds, Canadian Dollars, Australian Dollars, Korean Won, Swedish Krona, Czech Koruna, Thai Baht, Taiwan Dollars, South African Rand, Russian Rubles, Indian Rupees, Turkish Lira, Polish Zloty, Danish Krone, and Norwegian Krone. We manage the foreign currency exposure centrally, on a combined basis, which allows us to net exposures and to take advantage of any natural offsets. To reduce the uncertainty of foreign currency exchange rate movements on transactions denominated in foreign currencies, we enter into derivative financial instruments in the form of foreign currency exchange forward contracts with major financial institutions. These forward contracts are designed to hedge anticipated foreign currency transactions, primarily intercompany sale and purchase transactions, for periods consistent with commitments. Realized and unrealized gains and losses on these contracts that qualify as cash flow hedges are temporarily recorded in accumulated other comprehensive income, then recognized in cost of products sold when the hedged item affects net earnings.

For contracts outstanding at December 31, 2018, we had obligations to purchase U.S. Dollars and sell Euros, Japanese Yen, British Pounds, Canadian Dollars, Australian Dollars, Korean Won, Swedish Krona, Czech Koruna, Thai Baht, Taiwan Dollars, South African Rand, Russian Rubles, Indian Rupees, Turkish Lira, Polish Zloty, Danish Krone, and Norwegian Krone and purchase Swiss Francs and sell U.S. Dollars at set maturity dates ranging from January 2019 through June 2021. The notional amounts of outstanding forward contracts entered into with third parties to purchase U.S. Dollars at December 31, 2018 were $1,547.7 million. The notional amounts of outstanding forward contracts entered into with third parties to purchase Swiss Francs at December 31, 2018 were $267.6 million. The weighted average contract rates

outstanding at December 31, 2018 were Euro:USD 1.23, USD:Swiss Franc 0.93, USD:Japanese Yen 105.55, British Pound:USD 1.35, USD:Canadian Dollar 1.28, Australian Dollar:USD 0.76, USD:Korean Won 1,096, USD:Swedish Krona 8.26, USD:Czech Koruna 21.61, USD:Thai Baht 33.21, USD:Taiwan Dollar 29.36, USD:South African Rand 13.82, USD:Russian Ruble 64.53, USD:Indian Ruppee 71.64, USD:Turkish Lira 5.11, USD:Polish Zloty 3.64, USD:Danish Krone 6.09, and USD:Norwegian Krone 7.99.

We maintain written policies and procedures governing our risk management activities. Our policy requires that critical terms of hedging instruments be the same as hedged forecasted transactions. On this basis, with respect to cash flow hedges, changes in cash flows attributable to hedged transactions are generally expected to be offset by changes in the fair value of hedge instruments. As part of our risk management program, we also perform sensitivity analyses to assess potential changes in revenue, operating results, cash flows and financial position relating to hypothetical movements in currency exchange rates. A sensitivity analysis of changes in the fair value of foreign currency exchange forward contracts outstanding at December 31, 2018 indicated that, if the U.S. Dollar uniformly changed in value by 10 percent relative to the various currencies, with no change in the interest differentials, the fair value of those contracts would increase or decrease earnings before income taxes in periods through June 2021, depending on the direction of the change, by the following average approximate amounts (in millions):

Currency	Average Amount
Euro	$22.3
Swiss Franc	7.8
Japanese Yen	3.9
British Pound	1.5
Canadian Dollar	7.1
Australian Dollar	10.8
Korean Won	0.2
Swedish Krona	0.9
Czech Koruna	0.4
Thai Baht	0.2
Taiwan Dollars	0.7
South African Rand	0.7
Russian Rubles	1.7
Indian Rupees	–
Turkish Lira	–
Polish Zloty	0.7
Danish Krone	1.2
Norwegian Krone	1.2

Any change in the fair value of foreign currency exchange forward contracts as a result of a fluctuation in a currency exchange rate is expected to be largely offset by a change in the value of the hedged transaction. Consequently, foreign currency exchange contracts would not subject us to material risk due to exchange rate movements because gains and losses on these contracts offset gains and losses on the assets, liabilities and transactions being hedged.

We had net assets, excluding goodwill and intangible assets, in legal entities with non-U.S. Dollar functional currencies of $1,138.5 million at December 31, 2018, primarily in Euros, Japanese Yen and Australian Dollars.

We enter into foreign currency forward exchange contracts with terms of one month to manage currency exposures for monetary assets and liabilities denominated in a currency other than an entity's functional currency. As a result, foreign currency remeasurement gains/losses recognized in earnings are generally offset with gains/losses on the foreign currency forward exchange contracts in the same reporting period.

For details about these and other financial instruments, including fair value methodologies, see Note 13 to our consolidated financial statements.

COMMODITY PRICE RISK

We purchase raw material commodities such as cobalt chrome, titanium, tantalum, polymer and sterile packaging. We enter into supply contracts generally with terms of 12 to 24 months, where available, on these commodities to alleviate the effect of market fluctuation in prices. As part of our risk management program, we perform sensitivity analyses related to potential commodity price changes. A 10 percent price change across all these commodities would not have a material effect on our consolidated financial position, results of operations or cash flows.

INTEREST RATE RISK

In the normal course of business, we are exposed to market risk from changes in interest rates that could affect our results of operations and financial condition. We manage our exposure to interest rate risks through our regular operations and financing activities.

We invest our cash and cash equivalents primarily in highly-rated corporate commercial paper and bank deposits. The primary investment objective is to ensure capital preservation. Currently, we do not use derivative financial instruments in our investment portfolio.

The majority of our debt is fixed-rate debt and therefore is not exposed to changes in interest rates. Based upon our overall interest rate exposure as of December 31, 2018, a change of 10 percent in interest rates, assuming the principal amount outstanding remains constant, would not have a material effect on interest expense, net. This analysis does not consider the effect of the change in the level of overall economic activity that could exist in such an environment.

CREDIT RISK

Financial instruments, which potentially subject us to concentrations of credit risk, are primarily cash and cash equivalents, derivative instruments and accounts receivable.

We place our cash and cash equivalents and enter into derivative transactions with highly-rated financial institutions

and limit the amount of credit exposure to any one entity. We believe we do not have any significant credit risk on our cash and cash equivalents or derivative instruments.

Our concentrations of credit risks with respect to trade accounts receivable is limited due to the large number of customers and their dispersion across a number of geographic areas and by frequent monitoring of the creditworthiness of the customers to whom credit is granted in the normal course of business. Substantially all of our trade receivables are concentrated in the public and private hospital and healthcare industry in the U.S. and internationally or with distributors or dealers who operate in international markets and, accordingly, are exposed to their respective business, economic and country specific variables. Our ability to collect accounts receivable in some countries depends in part upon the financial stability of these hospital and healthcare sectors and the respective countries' national economic and healthcare systems. Most notably, in Europe healthcare is typically sponsored by the government. Since we sell products to public hospitals in those countries, we are indirectly exposed to government budget constraints. To the extent the respective governments' ability to fund their public hospital programs deteriorates, we may have to record significant bad debt expenses in the future.

While we are exposed to risks from the broader healthcare industry in Europe and around the world, there is no significant net exposure due to any individual customer. Exposure to credit risk is controlled through credit approvals, credit limits and monitoring procedures, and we believe that reserves for losses are adequate.

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

Zimmer Biomet Holdings, Inc.
Index to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Zimmer Biomet Holdings, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Zimmer Biomet Holdings, Inc. and its subsidiaries (the "Company") as of December 31, 2018 and 2017 and the related consolidated statements of earnings, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2018, including the related notes and financial statement schedule of valuation and qualifying accounts for each of the three years in the period ended December 31, 2018 appearing under item 15(a)(2), (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/ PricewaterhouseCoopers LLP
Chicago, Illinois
February 26, 2019

We have served as the Company's auditor since 2000.

CONSOLIDATED STATEMENTS OF EARNINGS

(in millions, except per share amounts)

	For the Years Ended December 31,		
	2018	2017	2016
Net Sales	$7,932.9	$ 7,803.3	$7,668.4
Cost of products sold, excluding intangible asset amortization	2,271.9	2,132.9	2,381.8
Intangible asset amortization	595.9	603.9	565.9
Research and development	391.7	369.9	365.6
Selling, general and administrative	3,379.3	3,104.7	2,944.6
Goodwill and intangible asset impairment	979.7	331.5	31.1
Acquisition, integration and related	133.7	279.8	504.9
Quality remediation	146.9	181.3	53.4
Operating expenses	7,899.1	7,004.0	6,847.3
Operating Profit	33.8	799.3	821.1
Other expense, net	(15.6)	(9.4)	(66.5)
Interest expense, net	(289.3)	(325.3)	(355.0)
(Loss) earnings before income taxes	(271.1)	464.6	399.6
Provision (benefit) for income taxes	108.2	(1,348.8)	95.0
Net (Loss) Earnings	(379.3)	1,813.4	304.6
Less: Net loss attributable to noncontrolling interest	(0.1)	(0.4)	(1.3)
Net (Loss) Earnings of Zimmer Biomet Holdings, Inc.	$ (379.2)	$ 1,813.8	$ 305.9
(Loss) Earnings Per Common Share – Basic	$ (1.86)	$ 8.98	$ 1.53
(Loss) Earnings Per Common Share – Diluted	$ (1.86)	$ 8.90	$ 1.51
Weighted Average Common Shares Outstanding			
Basic	203.5	201.9	200.0
Diluted	203.5	203.7	202.4

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

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in millions)

	For the Years Ended December 31,		
	2018	2017	2016
Net (Loss) Earnings	$(379.3)	$1,813.4	$ 304.6
Other Comprehensive (Loss) Income:			
Foreign currency cumulative translation adjustments, net of tax	(135.4)	445.0	(130.0)
Unrealized cash flow hedge gains/(losses), net of tax	68.2	(95.0)	28.3
Reclassification adjustments on cash flow hedges, net of tax	23.6	(3.8)	(25.8)
Unrealized gains on securities, net of tax	–	–	0.5
Adjustments to prior service cost and unrecognized actuarial assumptions, net of tax	(17.7)	4.6	22.0
Total Other Comprehensive (Loss) Income	(61.3)	350.8	(105.0)
Comprehensive (Loss) Income	(440.6)	2,164.2	199.6
Comprehensive Loss Attributable to Noncontrolling Interest	(0.1)	(1.3)	(0.5)
Comprehensive (Loss) Income Attributable to Zimmer Biomet Holdings, Inc.	$(440.5)	$2,165.5	$ 200.1

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

CONSOLIDATED BALANCE SHEETS

(in millions, except share amounts)

	As of December 31,	
	2018	2017
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 542.8	$ 524.4
Accounts receivable, less allowance for doubtful accounts	1,275.8	1,544.1
Inventories	2,256.5	2,068.3
Prepaid expenses and other current assets	352.3	428.0
Total Current Assets	4,427.4	4,564.8
Property, plant and equipment, net	2,015.4	2,038.6
Goodwill	9,594.4	10,668.4
Intangible assets, net	7,684.6	8,353.4
Other assets	405.0	388.8
Total Assets	$24,126.8	$26,014.0
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	$ 362.6	$ 330.2
Income taxes payable	142.4	165.2
Other current liabilities	1,391.3	1,349.3
Current portion of long-term debt	525.0	1,225.0
Total Current Liabilities	2,421.3	3,069.7
Deferred income taxes, net	999.5	1,101.5
Long-term income tax payable	666.2	744.0
Other long-term liabilities	350.0	445.8
Long-term debt	8,413.7	8,917.5
Total Liabilities	12,850.7	14,278.5
Commitments and Contingencies (Note 19)		
Stockholders' Equity:		
Common stock, $0.01 par value, one billion shares authorized, 307.9 million (306.5 million in 2017) issued	3.1	3.1
Paid-in capital	8,686.1	8,514.9
Retained earnings	9,491.2	10,022.8
Accumulated other comprehensive loss	(187.4)	(83.2)
Treasury stock, 103.9 million shares (103.9 million shares in 2017)	(6,721.7)	(6,721.8)
Total Zimmer Biomet Holdings, Inc. stockholders' equity	11,271.3	11,735.8
Noncontrolling interest	4.8	(0.3)
Total Stockholders' Equity	11,276.1	11,735.5
Total Liabilities and Stockholders' Equity	$24,126.8	$26,014.0

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

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in millions)

	Zimmer Biomet Holdings, Inc. Stockholders								
	Common Shares		Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) Income	Treasury Shares		Noncontrolling Interest	Total Stockholders' Equity
	Number	Amount				Number	Amount		
Balance January 1, 2016	302.7	$3.0	$8,195.3	$ 8,347.7	$(329.0)	(100.0)	$(6,329.1)	$ 1.5	$ 9,889.4
Net earnings	–	–	–	305.9	–	–	–	(1.3)	304.6
Other comprehensive loss	–	–	–	–	(105.0)	–	–	0.8	(104.2)
Cash dividends declared ($0.96 per share)	–	–	–	(191.9)	–	–	–	–	(191.9)
Stock compensation plans	2.0	0.1	173.2	5.4	–	0.1	8.8	–	187.5
Share repurchases	–	–	–	–	–	(4.2)	(415.5)	–	(415.5)
Balance December 31, 2016	304.7	3.1	8,368.5	8,467.1	(434.0)	(104.1)	(6,735.8)	1.0	9,669.9
Net earnings	–	–	–	1,813.8	–	–	–	(0.4)	1,813.4
Other comprehensive income	–	–	–	–	350.8	–	–	(0.9)	349.9
Cash dividends declared ($0.96 per share)	–	–	–	(194.1)	–	–	–	–	(194.1)
Retrospective adoption of new accounting standard	–	–	–	(77.8)	–	–	–	–	(77.8)
Stock compensation plans	1.8	–	146.4	13.8	–	0.2	14.0	–	174.2
Balance December 31, 2017	306.5	3.1	8,514.9	10,022.8	(83.2)	(103.9)	(6,721.8)	(0.3)	11,735.5
Net loss	–	–	–	(379.2)	–	–	–	(0.1)	(379.3)
Other comprehensive loss	–	–	–	–	(61.3)	–	–	–	(61.3)
Cash dividends declared ($0.96 per share)	–	–	–	(195.5)	–	–	–	–	(195.5)
Adoption of new accounting standard	–	–	–	42.9	(42.9)	–	–	–	–
Sale of shares in a subsidiary without loss of control	–	–	–	–	–	–	–	5.2	5.2
Stock compensation plans	1.4	–	171.2	0.2	–	–	0.1	–	171.5
Balance December 31, 2018	307.9	$3.1	$8,686.1	$ 9,491.2	$(187.4)	(103.9)	$(6,721.7)	$ 4.8	$11,276.1

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

CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	For the Years Ended December 31,		
	2018	2017	2016
Cash flows provided by (used in) operating activities:			
Net (loss) earnings	$ (379.3)	$ 1,813.4	$ 304.6
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation and amortization	1,040.5	1,062.7	1,039.3
Share-based compensation	65.5	53.7	57.3
Goodwill and intangible asset impairment	979.7	331.5	31.1
Inventory step-up	–	32.8	323.3
Debt extinguishment	–	–	53.3
Deferred income tax benefit (provision)	13.4	(1,776.0)	(153.2)
Changes in operating assets and liabilities, net of acquired assets and liabilities			
Income taxes	(150.8)	150.2	(10.9)
Receivables	213.6	161.7	(141.6)
Inventories	(199.5)	(120.1)	77.9
Accounts payable and accrued liabilities	155.9	(133.3)	32.6
Other assets and liabilities	8.4	5.7	18.5
Net cash provided by operating activities	1,747.4	1,582.3	1,632.2
Cash flows provided by (used in) investing activities:			
Additions to instruments	(276.3)	(337.0)	(345.5)
Additions to other property, plant and equipment	(162.7)	(156.0)	(184.7)
Purchases of investments	–	–	(1.5)
Sales of investments	–	–	286.2
Net investment hedge settlements	69.2	–	–
LDR acquisition, net of acquired cash	–	–	(1,021.1)
Business combination investments, net of acquired cash	(15.3)	(4.0)	(421.9)
Investments in other assets	(31.5)	(13.8)	(3.0)
Net cash used in investing activities	(416.6)	(510.8)	(1,691.5)
Cash flows provided by (used in) financing activities:			
Proceeds from senior notes	749.5	–	1,073.5
Proceeds from multicurrency revolving facility	400.0	400.0	–
Payments on multicurrency revolving facility	(400.0)	(400.0)	–
Redemption of senior notes	(1,150.0)	(500.0)	(1,250.0)
Proceeds from term loans	675.0	192.7	750.0
Payments on term loans	(1,425.0)	(940.0)	(800.0)
Net payments on other debt	(3.9)	(0.9)	(33.1)
Dividends paid to stockholders	(195.2)	(193.6)	(188.4)
Proceeds from employee stock compensation plans	107.9	145.5	136.6
Net cash flows from unremitted collections from factoring programs	(36.7)	103.5	–
Business combination contingent consideration payments	(19.8)	(9.1)	–
Other financing activities	(4.0)	(8.6)	(16.3)
Repurchase of common stock	–	–	(415.5)
Net cash used in financing activities	(1,302.2)	(1,210.5)	(743.2)
Effect of exchange rates on cash and cash equivalents	(10.2)	29.3	(22.7)
Increase (decrease) in cash and cash equivalents	18.4	(109.7)	(825.2)
Cash and cash equivalents, beginning of year	524.4	634.1	1,459.3
Cash and cash equivalents, end of period	$ 542.8	$ 524.4	$ 634.1

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Business

We design, manufacture and market orthopedic reconstructive products; sports medicine, biologics, extremities and trauma products; office based technologies; spine, craniomaxillofacial and thoracic products; dental implants; and related surgical products. We collaborate with healthcare professionals around the globe to advance the pace of innovation. Our products and solutions help treat patients suffering from disorders of, or injuries to, bones, joints or supporting soft tissues. Together with healthcare professionals, we help millions of people live better lives.

We have reclassified expenses that were previously recognized in a financial statement line item labeled "Acquisition, quality remediation and other" (and prior to that, labeled "Special items") to the financial statement line items of "Research and development," "Selling, general and administrative," "Goodwill and intangible asset impairment," "Acquisition, integration and related" and "Quality remediation". Prior periods have been reclassified to conform to the current year presentation. Please refer to Note 2 for additional details on the reclassified items, "Acquisition, integration and related" and "Quality remediation". We made this change to provide additional transparency and better reflect the nature of these expenses.

The words "Zimmer Biomet," "we," "us," "our," "the Company" and similar words refer to Zimmer Biomet Holdings, Inc. and its subsidiaries. "Zimmer Biomet Holdings" refers to the parent company only. In 2015, we completed our merger with LVB Acquisition, Inc. ("LVB"), the parent company of Biomet, Inc. ("Biomet") (which merger is sometimes referred to herein as the "Biomet merger"). In 2016, we acquired LDR Holding Corporation ("LDR") and other individually immaterial companies.

2. Significant Accounting Policies

Basis of Presentation – The consolidated financial statements include the accounts of Zimmer Biomet Holdings and its subsidiaries in which it holds a controlling financial interest. All significant intercompany accounts and transactions are eliminated.

Use of Estimates – The consolidated financial statements are prepared in conformity with accounting principles generally accepted in the U.S. which require us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Foreign Currency Translation – The financial statements of our foreign subsidiaries are translated into U.S. Dollars using period-end exchange rates for assets and liabilities and average exchange rates for operating results. Unrealized translation gains and losses are included in accumulated other comprehensive loss in stockholders' equity. When a transaction is denominated in a currency other than the subsidiary's functional currency, we recognize a transaction gain or loss when the transaction is settled. Foreign currency transaction gains and losses included in net earnings for the years ended December 31, 2018, 2017 and 2016 were not significant.

Shipping and Handling – Amounts billed to customers for shipping and handling of products are reflected in net sales and are not significant. Expenses incurred related to shipping and handling of products are reflected in SG&A expenses and were $290.2 million, $263.6 million and $231.7 million for the years ended December 31, 2018, 2017 and 2016, respectively.

Research and Development – We expense all research and development ("R&D") costs as incurred except when there is alternative future use for the R&D. R&D costs include salaries, prototypes, depreciation of equipment used in R&D, consultant fees and service fees paid to collaborative partners. Where contingent milestone payments are due to third parties under R&D arrangements, the milestone payment obligations are expensed when the milestone results are achieved.

Litigation – We record a liability for contingent losses, including future legal costs, settlements and judgments, when we consider it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated.

Acquisition, integration and related – We use the financial statement line item, "Acquisition, integration and related" to recognize expenses resulting from the consummation of business mergers and acquisitions and the related integration of those businesses. Acquisition, integration and related expenses are primarily composed of:

- Consulting and professional fees related to third-party integration consulting performed in a variety of areas, such as tax, compliance, logistics and human resources, and legal fees related to the consummation of mergers and acquisitions.
- Employee termination benefits related to terminating employees with overlapping responsibilities in various areas of our business.
- Dedicated project personnel expenses which include the salary, benefits, travel expenses and other costs directly associated with employees who are 100 percent dedicated to our integration of acquired businesses and employees who have been notified of termination, but are continuing to work on transferring their responsibilities.
- Contract termination expenses related to terminated contracts, primarily with sales agents and distribution agreements.
- Other various expenses to relocate facilities, integrate information technology, losses incurred on assets resulting from the applicable acquisition, and other various expenses.

Quality remediation – We use the financial statement line item "Quality remediation" to recognize expenses related to addressing inspectional observations on Form 483 and a warning letter issued by the FDA following its inspections of

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

our Warsaw North Campus facility, among other matters. See Note 19 for additional information about the Form 483 and warning letter. The majority of these expenses are related to consultants who are helping us to update previous documents and redesign certain processes.

Cash and Cash Equivalents – We consider all highly liquid investments with an original maturity of three months or less to be cash equivalents. The carrying amounts reported in the balance sheet for cash and cash equivalents are valued at cost, which approximates their fair value.

Accounts Receivable – Accounts receivable consists of trade and other miscellaneous receivables. We grant credit to customers in the normal course of business and maintain an allowance for doubtful accounts for potential credit losses. We determine the allowance for doubtful accounts by geographic market and take into consideration historical credit experience, creditworthiness of the customer and other pertinent information. We make concerted efforts to collect all accounts receivable, but sometimes we have to write-off the account against the allowance when we determine the account is uncollectible. The allowance for doubtful accounts was $65.7 million and $60.2 million as of December 31, 2018 and 2017, respectively.

We also have receivables purchase arrangements with unrelated third parties to transfer portions of our trade accounts receivable balance. Funds received from the transfers are recorded as an increase to cash and a reduction to accounts receivable outstanding in our consolidated balance sheets. We report the cash flows attributable to the sale of receivables to third parties in cash flows from operating activities in our consolidated statements of cash flows. Net expenses resulting from the sales of receivables are recognized in SG&A expense. Net expenses include any resulting gains or losses from the sales of receivables, credit insurance and factoring fees. Any collections that we make that are unremitted to the third parties are recognized on our consolidated balance sheets under other current liabilities and in our consolidated statements of cash flows in financing activities.

Inventories – Inventories are stated at the lower of cost or market, with cost determined on a first-in first-out basis.

Property, Plant and Equipment - Property, plant and equipment is carried at cost less accumulated depreciation. Depreciation is computed using the straight-line method based on estimated useful lives of ten to forty years for buildings and improvements and three to eight years for machinery and equipment. Maintenance and repairs are expensed as incurred. We review property, plant and equipment for impairment whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. An impairment loss would be recognized when estimated future undiscounted cash flows relating to the asset are less than its carrying amount. An impairment loss is measured as the amount by which the carrying amount of an asset exceeds its fair value.

Software Costs – We capitalize certain computer software and software development costs incurred in connection with developing or obtaining computer software for internal use when both the preliminary project stage is completed and it is probable that the software will be used as intended. Capitalized software costs generally include external direct costs of materials and services utilized in developing or obtaining computer software and compensation and related benefits for employees who are directly associated with the software project. Capitalized software costs are included in property, plant and equipment on our balance sheet and amortized on a straight-line or weighted average estimated user basis when the software is ready for its intended use over the estimated useful lives of the software, which approximate three to fifteen years.

Instruments – Instruments are hand-held devices used by surgeons during total joint replacement and other surgical procedures. Instruments are recognized as long-lived assets and are included in property, plant and equipment. Undeployed instruments are carried at cost or realizable value. Instruments that have been deployed to be used in surgeries are carried at cost less accumulated depreciation. Depreciation is computed using the straight-line method based on average estimated useful lives, determined principally in reference to associated product life cycles, primarily five years. We review instruments for impairment whenever events or changes in circumstances indicate that the carrying value of an instrument may not be recoverable. Depreciation of instruments is recognized as SG&A expense.

Goodwill – Goodwill is not amortized but is subject to annual impairment tests. Goodwill has been assigned to reporting units. We perform annual impairment tests by either comparing a reporting unit's estimated fair value to its carrying amount or doing a qualitative assessment of a reporting unit's fair value from the last quantitative assessment to determine if there is potential impairment. We may do a qualitative assessment when the results of the previous quantitative test indicated the reporting unit's estimated fair value was significantly in excess of the carrying value of its net assets and we do not believe there have been significant changes in the reporting unit's operations that would significantly decrease its estimated fair value or significantly increase its net assets. If a quantitative assessment is performed, the fair value of the reporting unit and the fair value of goodwill are determined based upon a discounted cash flow analysis and/or use of a market approach by looking at market values of comparable companies. Significant assumptions are incorporated into our discounted cash flow analyses such as estimated growth rates and risk-adjusted discount rates. We perform this test in the fourth quarter of the year or whenever events or changes in circumstances indicate that the carrying value of the reporting unit's assets may not be recoverable. If the fair value of the reporting unit is less than its carrying value, an impairment loss is recorded in the amount that the carrying value of the business unit exceeds the fair value. See Note 9 for more information regarding goodwill.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

Intangible Assets – Intangible assets are initially measured at their fair value. We have determined the fair value of our intangible assets either by the fair value of the consideration exchanged for the intangible asset or the estimated after-tax discounted cash flows expected to be generated from the intangible asset. Intangible assets with an indefinite life, including certain trademarks and trade names and in-process research and development ("IPR&D") projects, are not amortized. Indefinite life intangible assets are assessed annually to determine whether events and circumstances continue to support an indefinite life. Intangible assets with a finite life, including technology, certain trademarks and trade names, customer-related intangibles, intellectual property rights and patents and licenses are amortized on a straight-line basis over their estimated useful life or contractual life, which may range from less than one year to twenty years. Intangible assets with a finite life are tested for impairment whenever events or circumstances indicate that the carrying amount may not be recoverable.

Intangible assets with an indefinite life are tested for impairment annually or whenever events or circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized if the carrying amount exceeds the estimated fair value of the asset. The amount of the impairment loss to be recorded would be determined based upon the excess of the asset's carrying value over its fair value. The fair values of indefinite lived intangible assets are determined based upon a discounted cash flow analysis using the relief from royalty method or a qualitative assessment may be performed for any changes to the asset's fair value from the last quantitative assessment. The relief from royalty method estimates the cost savings associated with owning, rather than licensing, assets. Significant assumptions are incorporated into these discounted cash flow analyses such as estimated growth rates, royalty rates and risk-adjusted discount rates. We may do a qualitative assessment when the results of the previous quantitative test indicated that the asset's fair value was significantly in excess of its carrying value.

In determining the useful lives of intangible assets, we consider the expected use of the assets and the effects of obsolescence, demand, competition, anticipated technological advances, changes in surgical techniques, market influences and other economic factors. For technology-based intangible assets, we consider the expected life cycles of products, absent unforeseen technological advances, which incorporate the corresponding technology. Trademarks and trade names that do not have a wasting characteristic (i.e., there are no legal, regulatory, contractual, competitive, economic or other factors which limit the useful life) are assigned an indefinite life. Trademarks and trade names that are related to products expected to be phased out are assigned lives consistent with the period in which the products bearing each brand are expected to be sold. For customer relationship intangible assets, we assign useful lives based upon historical levels of customer attrition. Intellectual property rights are assigned useful lives that approximate the contractual life of any related patent or the period for which we maintain exclusivity over the intellectual property.

Income Taxes – We account for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial statements and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period the new tax rate is enacted.

We reduce our deferred tax assets by a valuation allowance if it is more likely than not that we will not realize some portion or all of the deferred tax assets. In making such determination, we consider all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax planning strategies and recent financial operations. In the event we were to determine that we would be able to realize our deferred income tax assets in the future in excess of their net recorded amount, we would make an adjustment to the valuation allowance which would reduce the provision for income taxes.

We operate on a global basis and are subject to numerous and complex tax laws and regulations. Our income tax filings are regularly under audit in multiple federal, state and foreign jurisdictions. Income tax audits may require an extended period of time to reach resolution and may result in significant income tax adjustments when interpretation of tax laws or allocation of company profits is disputed. Because income tax adjustments in certain jurisdictions can be significant, we record accruals representing management's best estimate of the probable resolution of these matters. To the extent additional information becomes available, such accruals are adjusted to reflect the revised estimated probable outcome.

Derivative Financial Instruments – We measure all derivative instruments at fair value and report them on our consolidated balance sheet as assets or liabilities. We maintain written policies and procedures that permit, under appropriate circumstances and subject to proper authorization, the use of derivative financial instruments solely for risk management purposes. The use of derivative financial instruments for trading or speculative purposes is prohibited by our policy. See Note 13 for more information regarding our derivative and hedging activities.

Accumulated Other Comprehensive (Loss) Income – Accumulated other comprehensive (loss) income ("AOCI") refers to revenues, expenses, gains and losses that under generally accepted accounting principles are included in comprehensive income but are excluded from net earnings as these amounts are recorded directly as an adjustment to stockholders' equity. Our AOCI is comprised of foreign

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

currency translation adjustments, including unrealized gains and losses on net investments hedges, unrealized gains and losses on cash flow hedges and amortization of prior service costs and unrecognized gains and losses in actuarial assumptions.

Treasury Stock – We account for repurchases of common stock under the cost method and present treasury stock as a reduction of stockholders' equity. We reissue common stock held in treasury only for limited purposes.

Noncontrolling Interest – We have investments in other companies in which we have a controlling financial interest, but not 100 percent of the equity. Further information related to the noncontrolling interests of those investments have not been provided as it is not significant to our consolidated financial statements.

Accounting Pronouncements Recently Adopted

In August 2017, the Financial Accounting Standards Board ("FASB") issued Accounting Standard Update ("ASU") 2017-12 – Targeted Improvements to Accounting for Hedging Activities. This ASU amends the hedge accounting guidance to simplify the application of hedge accounting, makes more financial and nonfinancial hedging strategies eligible for hedge accounting treatment, changes how companies assess effectiveness and updates presentation and disclosure requirements. We early adopted this ASU in the first quarter of 2018. Based upon our hedging portfolio that existed prior to adoption, the adoption of this ASU did not have any impact on our financial position, results of operations or cash flows. However, after adoption we entered into cross-currency interest rate swaps that we designated as net investment hedges. Under this ASU, we have made a policy election for changes in the fair value of the cross-currency component of the cross-currency interest rate swaps to be recorded in AOCI. Therefore, all changes in the fair value of the cross-currency interest rate swaps are recorded as a component of AOCI in our consolidated balance sheet. The portion of this change related to the excluded component will be amortized into earnings over the life of the derivative while the remainder will be recorded in AOCI until the hedged net investment is sold or substantially liquidated. Under previous guidance, the fair value change related to the cross-currency component was recognized in earnings. See Note 13 for additional information.

In February 2018, the FASB issued ASU 2018-02 – Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income. Under GAAP, when there is a change in tax rates, it requires remeasurement of deferred tax assets and liabilities to be recognized as part of income, even if the deferred tax asset or liability had been recorded and recognized in AOCI. As a result, a portion of the amount recognized in AOCI at the previous tax rate would remain stranded in AOCI permanently. ASU 2018-02 allows the stranded tax effects in AOCI related only to the Tax Cuts and Jobs Act of 2017 ("2017 Tax Act") to be reclassified from AOCI to retained earnings. The only stranded tax effects in AOCI we had related to the 2017 Tax Act were due to changes in the U.S. federal corporate income tax rate. We early adopted this ASU in the first quarter of 2018 and elected to use the beginning of period transition method, which means we recognized the reclassification as of January 1, 2018. As a result, we reclassified $42.9 million from AOCI to retained earnings.

In March 2017, the FASB issued ASU 2017-07 – Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost. This ASU requires us to report the service cost component of pensions in the same location as other compensation costs arising from services rendered by the pertinent employees during the period. We are required to report the other components of net benefit costs in other income (expense) in the statements of earnings. This ASU was effective for us as of January 1, 2018. This ASU must be applied retrospectively for the presentation of the service cost component and the other components of net periodic pension cost in the statements of earnings and prospectively, on and after the effective date, for the capitalization of the service cost component of net periodic pension cost in assets. This ASU provides a practical expedient that allows companies to use the amounts disclosed in prior financial statements as the basis for the retrospective application. We elected to use this practical expedient. The impacts of this ASU on our consolidated financial statements for the years ended December 31, 2017 and 2016 are included in the tables below. See Note 14 for further information on the components of our net benefit cost.

In May 2014, the FASB issued ASU 2014-09 – Revenue from Contracts with Customers (Topic 606). This ASU provides a five-step model for revenue recognition that all industries will apply to recognize revenue when a customer obtains control of a good or service. This ASU was effective for us as of January 1, 2018. Entities were permitted to apply the standard and related amendments either retrospectively to each prior reporting period presented or retrospectively with the cumulative effect of initially applying the ASU recognized at the date of initial application. We adopted this new standard using the retrospective method, which resulted in us restating prior reporting periods presented. This ASU did not result in a change to the timing of our revenue recognition. Accordingly, we did not recognize a cumulative adjustment to retained earnings upon adoption. However, we were required to reclassify certain immaterial costs from SG&A expense to net sales, which resulted in a reduction of net sales, but had no impact on operating profit. This ASU also required us to reclassify our estimated refund liability for products expected to be returned from a reduction of accounts receivable to other current liabilities and the related right to receive products from the return from inventories to prepaid expenses and other current assets. The impacts of this ASU on our

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

consolidated financial statements for the years ended December 31, 2017 and 2016 and as of December 31, 2017 are included in the tables below.

(in millions)	As Previously Reported	New Revenue Standard Adjustment	New Pension Standard Adjustment	Reclassifications	As Restated
Statement of Earnings					
Year Ended December 31, 2017					
Net Sales	$7,824.1	$(20.8)	$ –	$ –	$7,803.3
Research and development	367.4	–	–	2.5	369.9
Selling, general and administrative	2,973.9	(20.8)	8.9	142.7	3,104.7
Goodwill and intangible asset impairment	304.7	–	–	26.8	331.5
Acquisition, integration and related	–	–	–	279.8	279.8
Quality remediation	–	–	–	181.3	181.3
Special items	633.1	–	–	(633.1)	–
Operating expenses	7,015.9	(20.8)	8.9	–	7,004.0
Operating Profit	808.2	–	(8.9)	–	799.3
Other expense, net	(18.3)	–	8.9	–	(9.4)

(in millions)	As Previously Reported	New Revenue Standard Adjustment	New Pension Standard Adjustment	Reclassifications	As Restated
Statement of Earnings					
Year Ended December 31, 2016					
Net Sales	$7,683.9	$(15.5)	$ –	$ –	$7,668.4
Selling, general and administrative	2,932.9	(15.5)	4.8	22.4	2,944.6
Goodwill and intangible asset impairment	–	–	–	31.1	31.1
Acquisition, integration and related	–	–	–	504.9	504.9
Quality remediation	–	–	–	53.4	53.4
Special items	611.8	–	–	(611.8)	–
Operating expenses	6,858.0	(15.5)	4.8	–	6,847.3
Operating Profit	825.9	–	(4.8)	–	821.1
Other expense, net	(71.3)	–	4.8	–	(66.5)

(in millions)	As Previously Reported	New Revenue Standard Adjustment	As Restated
Balance Sheet			
December 31, 2017			
Accounts receivable, less allowance for doubtful accounts	$1,494.6	$ 49.5	$1,544.1
Inventories	2,081.8	(13.5)	2,068.3
Prepaid expenses and other current assets	414.5	13.5	428.0
Other current liabilities	1,299.8	49.5	1,349.3

Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued ASU 2016-02 – Leases. This ASU requires lessees to recognize right-of-use assets and lease liabilities on the balance sheet. This ASU will be effective for us beginning January 1, 2019. This ASU requires a modified retrospective transition method that can either be applied at the earliest comparative period in the financial statements or the period of adoption. We plan to use the period of adoption (January 1, 2019) transition method and therefore will not restate prior periods. This ASU allows for certain practical expedients to make the adoption of the ASU less burdensome. We have elected the practical expedients upon transition which permits us to not reassess

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

lease identification, classification, and initial direct costs under the new standard for leases that commenced prior to the effective date. We have also elected not to recognize a right-of-use asset nor a lease liability for leases with an initial term of twelve months or less. Finally, we have elected not to separate non-lease components from the leased components in the valuation of our right-of-use asset and lease liability.

We own most of our manufacturing facilities, but lease various office space, vehicles and other less significant assets throughout the world. We have collected all of our lease agreements from across the organization that were entered into as of December 31, 2018 and completed our analysis of the key terms of these lease agreements to determine the appropriate accounting treatment. We have also reviewed other various agreements for potential embedded leases. We are in our final reviews of this implementation. We expect the right-of-use asset and corresponding lease liability that we recognize as of January 1, 2019 will be in a range of $265 million to $295 million. We do not expect the adoption of this ASU will require us to recognize a significant cumulative-effect adjustment in retained earnings. Since substantially all of our leases are considered operating leases, we do not expect this ASU will have a material effect on our consolidated statements of earnings.

There are no other recently issued accounting pronouncements that we have not yet adopted that are expected to have a material effect on our financial position, results of operations or cash flows.

3. Revenue Recognition

We recognize revenue when our performance obligations under the terms of a contract with our customer are satisfied. This happens when we transfer control of our products to the customer, which generally occurs upon implantation or when title passes upon shipment. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring our product. Taxes collected from customers and remitted to governmental authorities are excluded from revenues.

We sell product through three principal channels: 1) direct to healthcare institutions, referred to as direct channel accounts; 2) through stocking distributors and healthcare dealers; and 3) directly to dental practices and dental laboratories. In direct channel accounts and with some healthcare dealers, inventory is generally consigned to sales agents or customers so that products are available when needed for surgical procedures. No revenue is recognized upon the placement of inventory into consignment, as we retain the ability to control the inventory. Upon implantation, we issue an invoice and revenue is recognized. Consignment sales represented approximately 80 percent of our net sales in 2018. Pricing for products is generally predetermined by contracts with customers, agents acting on behalf of customer groups or by government regulatory bodies, depending on the market. Price discounts under group purchasing contracts are generally linked to volume of implant purchases by customer healthcare institutions within a specified group. At negotiated thresholds within a contract buying period, price discounts may increase. Payment terms vary by customer, but are typically less than 90 days.

With sales to stocking distributors, some healthcare dealers, dental practices and dental laboratories, revenue is generally recognized when control of our product passes to the customer, which is typically upon shipment of the product. We estimate sales recognized in this manner represented approximately 20 percent of our net sales in 2018. It is our accounting policy to account for shipping and handling activities as a fulfillment cost rather than as an additional promised service. We have contracts with these customers or orders may be placed from available price lists. Payment terms vary by customer, but are typically less than 90 days.

We offer standard warranties to our customers that our products are not defective. These standard warranties are not considered separate performance obligations. In limited circumstances, we offer extended warranties that are separate performance obligations. We have very few contracts that have multiple performance obligations. Since we do not have significant multiple element arrangements and essentially all of our sales are recognized upon implantation of a product or when title passes, very little judgment is required to allocate the transaction price of a contract or determine when control has passed to a customer. Our costs to obtain contracts consist primarily of sales commissions to employees or third party agents that are earned when control of our product passes to the customer. Therefore, sales commissions are expensed as part of SG&A expenses at the same time revenue is recognized. Accordingly, we do not have significant contract assets, liabilities or future performance obligations.

We offer volume-based discounts, rebates, prompt pay discounts, right of return and other various incentives which we account for under the variable consideration model. If sales incentives may be earned by a customer for purchasing a specified amount of our product, we estimate whether such incentives will be achieved and recognize these incentives as a reduction in revenue in the same period the underlying revenue transaction is recognized. We primarily use the expected value method to estimate incentives. Under the expected value method, we consider the historical experience of similar programs as well as review sales trends on a customer-by-customer basis to estimate what levels of incentives will be earned. Occasionally, products are returned and, accordingly, we maintain an estimated refund liability based upon the expected value method that is recorded as a reduction in revenue.

We analyze sales by three geographies, the Americas, Europe, Middle East and Africa (“EMEA”) and Asia Pacific, and by the following product categories: Knees; Hips; Surgical, Sports Medicine, Biologics, Foot and Ankle, Extremities and Trauma (“S.E.T.”); Dental; Spine & Craniomaxillofacial and

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

Thoracic ("CMF"); and Other. As discussed in Note 17, we have seven operating segments that are based upon geography and product categories. The geographic segments include sales of all product categories exclusive of the specific product category operating segments. The geographic operating segments are the Americas, EMEA and Asia Pacific. These three operating segments are our reporting segments. The product category operating segments are Spine, less Asia Pacific; Office Based Technologies; CMF; and Dental. The product operating segments do not constitute a reporting segment because they are, individually and on a combined basis, insignificant to our consolidated results.

Our sales analysis differs from our reporting operating segments because the underlying market trends in any particular geography tend to be similar across product categories, we primarily sell the same products in all geographies and the product category operating segments are not individually significant to our consolidated results.

Net sales by geography are as follows (in millions):

	For the Years Ended December 31,		
	2018	2017	2016
Americas	$4,837.2	$4,844.8	$4,786.7
EMEA	1,801.9	1,745.2	1,730.4
Asia Pacific	1,293.8	1,213.3	1,151.3
Total	$7,932.9	$7,803.3	$7,668.4

Net sales by product category are as follows (in millions):

	For the Years Ended December 31,		
	2018	2017	2016
Knees	$2,773.7	$2,734.0	$2,751.2
Hips	1,921.4	1,871.8	1,861.8
S.E.T	1,751.8	1,701.8	1,639.1
Dental	411.2	418.6	427.9
Spine & CMF	763.9	757.9	660.7
Other	310.9	319.2	327.7
Total	$7,932.9	$7,803.3	$7,668.4

4. Share-Based Compensation

Our share-based payments primarily consist of stock options and restricted stock units ("RSUs"). Share-based compensation expense was as follows (in millions):

	For the Years Ended December 31,		
	2018	2017	2016
Total expense, pre-tax	$65.5	$53.7	$57.3
Tax benefit related to awards	14.6	12.5	31.5
Total expense, net of tax	$50.9	$41.2	$25.8

We had two equity compensation plans in effect at December 31, 2018: the 2009 Stock Incentive Plan ("2009 Plan") and the Stock Plan for Non-Employee Directors. The 2009 Plan succeeded the 2006 Stock Incentive Plan ("2006 Plan"). No further awards have been granted under the 2006 Plan since 2009, and shares remaining available for grant under those plans have been merged into the 2009 Plan. Vested stock options previously granted under the 2006 Plan remained outstanding as of December 31, 2018. We have reserved the maximum number of shares of common stock available for award under the terms of each of these plans. We have registered 71.6 million shares of common stock under these plans. The 2009 Plan provides for the grant of nonqualified stock options and incentive stock options, long-term performance awards in the form of performance shares or units, restricted stock, RSUs and stock appreciation rights. The Compensation and Management Development Committee of the Board of Directors determines the grant date for annual grants under our equity compensation plans. The date for annual grants under the 2009 Plan to our executive officers is expected to occur in the first quarter of each year following the earnings announcements for the previous quarter and full year. The Stock Plan for Non-Employee Directors provides for awards of stock options, restricted stock and RSUs to non-employee directors. It has been our practice to issue shares of common stock upon exercise of stock options from previously unissued shares, except in limited circumstances where they are issued from treasury stock. The total number of awards which may be granted in a given year and/or over the life of the plan under each of our equity compensation plans is limited. At December 31, 2018, an aggregate of 9.8 million shares were available for future grants and awards under these plans.

Stock Options

Stock options granted to date under our plans vest over two or four years and have a maximum contractual life of 10 years. As established under our equity compensation plans, vesting may accelerate upon retirement after the first anniversary date of the award if certain criteria are met. We recognize expense related to stock options on a straight-line basis over the requisite service period, less awards expected to be forfeited using estimated forfeiture rates. Due to the accelerated retirement provisions, the requisite service period of our stock options range from one to four years. Stock options are granted with an exercise price equal to the market price of our common stock on the date of grant, except in limited circumstances where local law may dictate otherwise.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

A summary of stock option activity for the year ended December 31, 2018 is as follows (options in thousands):

	Stock Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Intrinsic Value (in millions)
Outstanding at January 1, 2018	7,257	$ 93.83		
Options granted	2,027	116.23		
Options exercised	(1,136)	82.80		
Options forfeited	(326)	115.11		
Options expired	(59)	108.97		
Outstanding at December 31, 2018	7,763	$100.29	6.6	$82.0
Vested or expected to vest as of December 31, 2018	7,503	$ 99.76	6.5	$81.9
Exercisable at December 31, 2018	4,159	$ 87.57	5.0	$80.9

We use a Black-Scholes option-pricing model to determine the fair value of our stock options. Expected volatility was derived from a combination of historical volatility and implied volatility because the options that were actively traded around the grant date of our stock options did not have maturities of over one year. The expected term of the stock options has been derived from historical employee exercise behavior. The risk-free interest rate was determined using the implied yield currently available for zero-coupon U.S. government issues with a remaining term approximating the expected life of the options. The dividend yield was determined by using an estimated annual dividend and dividing it by the market price of our stock on the grant date.

The following table presents information regarding the weighted average fair value of stock options granted, the assumptions used to determine fair value, the intrinsic value of options exercised and the tax benefit of options exercised in the indicated year:

	For the Years Ended December 31,		
	2018	2017	2016
Dividend yield	0.8%	0.8%	0.9%
Volatility	22.1%	21.6%	21.9%
Risk-free interest rate	2.7%	2.0%	1.4%
Expected life (years)	5.2	5.3	5.3
Weighted average fair value of options granted	$26.66	$26.09	$21.30
Intrinsic value of options exercised (in millions)	$ 46.6	$ 67.6	$ 73.0
Tax benefit of options exercised (in millions)	$ 6.8	$ 27.7	$ 30.1

As of December 31, 2018, there was $53.6 million of unrecognized share-based payment expense related to nonvested stock options granted under our plans. That expense is expected to be recognized over a weighted average period of 2.3 years.

RSUs

We have awarded RSUs to certain of our employees. The terms of the awards have been from five months to four years. Some of the awards have only service conditions while some have performance and market conditions in addition to service conditions. Future service conditions may be waived if an employee retires after the first anniversary date of the award, but performance and market conditions continue to apply. Accordingly, the requisite service period used for share-based payment expense on our RSUs range from five months to four years.

A summary of nonvested RSU activity for the year ended December 31, 2018 is as follows (RSUs in thousands):

	RSUs	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2018	1,361	$107.56
Granted	542	120.85
Vested	(160)	102.71
Forfeited	(396)	110.28
Outstanding at December 31, 2018	1,347	112.81

For the RSUs with service conditions only, the fair value of the awards was determined based upon the fair market value of our common stock on the date of grant. For the RSUs with market conditions, a Monte Carlo valuation technique was used to simulate the market conditions of the awards. The outcome of the simulation was used to determine the fair value of the awards.

We are required to estimate the number of RSUs that will vest and recognize share-based payment expense on a straight-line basis over the requisite service period. As of December 31, 2018, we estimate that approximately 672,307 outstanding RSUs will vest. If our estimate were to change in the future, the cumulative effect of the change in estimate will be recorded in that period. Based upon the number of RSUs

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

that we expect to vest, the unrecognized share-based payment expense as of December 31, 2018 was $47.7 million and is expected to be recognized over a weighted-average period of 2.2 years. The fair value of RSUs vesting during the years ended December 31, 2018, 2017 and 2016 based upon our stock price on the date of vesting was $18.7 million, $31.2 million, and $25.5 million, respectively.

5. Inventories

Inventories consisted of the following (in millions):

	As of December 31,	
	2018	2017
Finished goods	$1,797.7	$1,618.7
Work in progress	230.4	200.0
Raw materials	228.4	249.6
Inventories	$2,256.5	$2,068.3

Amounts charged to the consolidated statements of earnings for excess and obsolete inventory, including certain product lines we intend to discontinue, in the years ended December 31, 2018, 2017 and 2016 were $226.1 million, $128.4 million and $195.4 million, respectively.

6. Property, Plant and Equipment

Property, plant and equipment consisted of the following (in millions):

	As of December 31,	
	2018	2017
Land	$ 28.0	$ 29.0
Building and equipment	1,885.6	1,838.5
Capitalized software costs	425.8	421.6
Instruments	2,950.5	2,683.9
Construction in progress	147.2	110.7
	5,437.1	5,083.7
Accumulated depreciation	(3,421.7)	(3,045.1)
Property, plant and equipment, net	$ 2,015.4	$ 2,038.6

Depreciation expense was $442.6 million, $454.1 million and $466.7 million for the years ended December 31, 2018, 2017 and 2016, respectively.

7. Transfers of Financial Assets

In the fourth quarter of 2016, we executed receivables purchase arrangements with unrelated third parties to liquidate portions of our trade accounts receivable balance. The receivables relate to products sold to customers and are short-term in nature. The factorings were treated as sales of our accounts receivable. Proceeds from the transfers reflect either the face value of the accounts receivable or the face value less factoring fees.

In the U.S. and Japan, our programs are executed on a revolving basis with a maximum funding limit as of December 31, 2018 of $400 million combined. We act as the collection agent on behalf of the third party, but have no significant retained interests or servicing liabilities related to the accounts receivable sold. In order to mitigate credit risk, we purchased credit insurance for the factored accounts receivable. As a result, our risk of loss is limited to the factored accounts receivable not covered by the insurance. Additionally, we have provided guarantees for the factored accounts receivable. The maximum exposures to loss associated with these arrangements were $33.0 million and $22.9 million as of December 31, 2018 and 2017, respectively.

In Europe, we sell to a third party and have no continuing involvement or significant risk with the factored accounts receivable.

For the years ended December 31, 2018, 2017 and 2016, we sold receivables having an aggregate face value of $2,706.4 million, $1,456.9 million and $103.1 million to third parties in exchange for cash proceeds of $2,704.9 million, $1,455.6 million and $103.1 million, respectively. Expenses recognized on these sales during the years ended December 31, 2018, 2017 and 2016 were not significant. For the years ended December 31, 2018 and 2017, under the U.S. and Japan programs, we collected $2,273.5 million and $1,031.2 million, respectively, from our customers and remitted that amount to the third party, and we effectively repurchased $208.9 million and $96.3 million, respectively, of previously sold accounts receivable from the third party due to the programs' revolving nature. In the year ended December 31, 2016, we did not collect any amounts from our customers or repurchase any accounts receivable from the third party as we executed the program at the end of the year. At December 31, 2018 and 2017, we had collected $66.8 million and $103.5 million, respectively, that were unremitted to the third party. We estimate the incremental operating cash inflows related to all of our programs were approximately $33 million, $174 million and $103 million for the years ended December 31, 2018, 2017 and 2016, respectively.

At December 31, 2018 and 2017, the outstanding principal amount of receivables that has been derecognized under the U.S. and Japan revolving arrangements combined amounted to $365.9 million and $261.2 million, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

8. Fair Value Measurements of Assets and Liabilities

The following financial assets and liabilities are recorded at fair value on a recurring basis (in millions):

	As of December 31, 2018			
		Fair Value Measurements at Reporting Date Using:		
Description	Recorded Balance	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Derivatives, current and long-term				
Foreign currency forward contracts	$45.7	$ –	$45.7	$ –
Interest rate swaps	17.9	–	17.9	–
	$63.6	$ –	$63.6	$ –
Liabilities				
Derivatives, current and long-term				
Foreign currency forward contracts	$ 0.5	$ –	$ 0.5	$ –
Interest rate swaps	2.5	–	2.5	–
Contingent payments related to acquisitions	17.2	–	–	17.2
	$20.2	$ –	$ 3.0	$17.2

	As of December 31, 2017			
		Fair Value Measurements at Reporting Date Using:		
Description	Recorded Balance	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Derivatives, current and long-term				
Foreign currency forward contracts	$ 1.6	$ –	$ 1.6	$ –
Interest rate swaps	4.5	–	4.5	–
	$ 6.1	$ –	$ 6.1	$ –
Liabilities				
Derivatives, current and long-term				
Foreign currency forward contracts	$50.9	$ –	$50.9	$ –
Contingent payments related to acquisitions	41.0	–	–	41.0
	$91.9	$ –	$50.9	$41.0

We value our foreign currency forward contracts using a market approach based on foreign currency exchange rates obtained from active markets, and we perform ongoing assessments of counterparty credit risk.

We value our interest rate swaps using a market approach based on publicly available market yield curves, foreign currency exchange rates and the terms of our swaps, and we perform ongoing assessments of counterparty credit risk.

Contingent payments related to acquisitions consist of commercial milestone, cost savings and sales-based payments, and are valued using discounted cash flow techniques. The fair value of commercial milestone payments reflects management's expectations of probability of payment, and increases as the probability of payment increases or expectation of timing of payments is accelerated. The fair value of cost savings and sales-based payments is based upon probability-weighted future cost savings and revenue estimates, and increases as cost savings and revenue estimates increase, probability weighting of higher cost savings and revenue scenarios increase or expectation of timing of payment is accelerated.

The following table provides a reconciliation of the beginning and ending balances of items measured at fair value on a recurring basis in the 2018 table above that used significant unobservable inputs (Level 3) (in millions):

	Level 3 - Liabilities
Contingent payments related to acquisitions	
Beginning balance December 31, 2017	$ 41.0
Changes in estimates	(2.9)
Settlements	(20.9)
Ending balance December 31, 2018	$ 17.2

Changes in estimates are recognized in Acquisition, integration and related on our consolidated statements of earnings.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

9. Goodwill and Other Intangible Assets

The following table summarizes the changes in the carrying amount of goodwill (in millions):

	Americas	EMEA	Asia Pacific	Immaterial Product Category Operating Segments	Total
Balance at January 1, 2017					
Goodwill	$7,634.5	$1,263.7	$487.3	$ 1,631.4	$11,016.9
Accumulated impairment losses	–	–	–	(373.0)	(373.0)
	7,634.5	1,263.7	487.3	1,258.4	10,643.9
LDR purchase accounting	–	–	–	24.5	24.5
Other acquisitions	(0.5)	(33.2)	–	27.6	(6.1)
Currency translation	90.8	149.3	13.2	57.5	310.8
Impairment	–	–	–	(304.7)	(304.7)
Balance at December 31, 2017					
Goodwill	7,724.8	1,379.8	500.5	1,741.0	11,346.1
Accumulated impairment losses	–	–	–	(677.7)	(677.7)
	7,724.8	1,379.8	500.5	1,063.3	10,668.4
Currency translation	(12.4)	(57.6)	6.7	(34.8)	(98.1)
Impairment	–	(567.0)	–	(408.9)	(975.9)
Balance at December 31, 2018					
Goodwill	7,712.4	1,322.2	507.2	1,706.2	11,248.0
Accumulated impairment losses	–	(567.0)	–	(1,086.6)	(1,653.6)
	$7,712.4	$ 755.2	$507.2	$ 619.6	$ 9,594.4

During the year ended December 31, 2018, we recorded goodwill impairment charges related to our Spine reporting unit, our EMEA reporting unit and an insignificant reporting unit of $401.2 million, $567.0 million and $7.7 million, respectively. During the year ended December 31, 2017, we recorded goodwill impairment charges related to our Office Based Technologies and Spine reporting units of $32.7 million and $272.0 million, respectively.

In our annual impairment tests, we determined our Spine reporting unit's carrying value was in excess of its estimated fair value in each of the last two years. This resulted in impairment charges of $401.2 million and $272.0 million in the years ended December 31, 2018 and 2017, respectively. There is no goodwill balance remaining in this reporting unit as of December 31, 2018. This reporting unit included goodwill from both the Biomet merger in 2015 and the LDR merger in 2016, as well as goodwill that existed prior to those mergers. The forecasts used to recognize the goodwill related to the spine product categories of Biomet and LDR assumed cross sale opportunities of the combined businesses would enable the reporting unit to grow faster than the overall spine market. In 2017, the primary drivers of impairment were lower than expected sales due to sales force integration issues and additional complexities of combining the Zimmer, Biomet and LDR spine product supply chains. As a result, in our 2017 forecasts we estimated it would take longer than originally anticipated to realize the benefits of the mergers of the Biomet and LDR spine product categories. In 2018, our Spine reporting unit's performance did not significantly improve as we continued to work through integration and supply issues. We estimate our Spine sales are currently growing below overall market growth. Consequently, we lowered our expectations of future sales growth.

The impairment charge of $567.0 million in our EMEA reporting unit in 2018 was driven by a combination of operational and non-operational factors. We believe sales growth in the EMEA knees and hips overall market has softened in the past two years to low single digits. Accordingly, we have tempered our sales growth estimates for this reporting unit. Also, higher interest rates as well as increased volatility in our stock price compared to the overall market resulted in us utilizing a higher risk-adjusted discount rate compared to prior year tests to discount our future estimated cash flows to present value. In addition, our anticipated costs in the near term to comply with the European Union Medical Device Regulation ("MDR") will be higher than previously anticipated. MDR, which will be effective beginning in 2020, will require us to update clinical data, technical documentation and labelling on our products that we sell in EMEA. As a result, in the next few years we expect to incur incremental costs to comply with the

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

standards to update previously approved products. Additionally, in the future we expect to incur increased costs on new product development to comply with the standard. Lastly, the weakening of European foreign currencies against the U.S. Dollar and other factors has contributed to the impairment charge.

We estimated the fair value of the Spine and EMEA reporting units based on income and market approaches. Fair value under the income approach was determined by discounting to present value the estimated future cash flows of the reporting unit. Fair value under the market approach utilized the guideline public company methodology, which uses valuation indicators from publicly traded companies that are similar to our Spine and EMEA reporting units and considers differences between our reporting unit and the comparable companies.

In estimating the future cash flows of the reporting units, we utilized a combination of market and company specific inputs that a market participant would use in assessing the fair value of the reporting units. The primary market input was revenue growth rates. These rates were based upon historical trends and estimated future growth drivers such as an aging global population, obesity and more active lifestyles. Significant company specific inputs included assumptions regarding how the reporting units could leverage operating expenses as revenue grows and the impact any of our differentiated products or new products will have on revenues.

Under the guideline public company methodology, we took into consideration specific risk differences between our reporting unit and the comparable companies, such as recent financial performance, size risks and product portfolios, among other considerations.

In 2018, we also recognized an impairment charge of $7.7 million for an insignificant reporting unit that we acquired in 2016. The $7.7 million represented the entire goodwill balance of this reporting unit.

In the third quarter of 2017, we performed a goodwill impairment test on our Office Based Technologies reporting unit due to continued revenue declines. As a result, we recognized a $32.7 million impairment charge. The $32.7 million impairment represented the entire goodwill balance of the reporting unit and therefore no goodwill remains. This reporting unit was acquired as part of the Biomet merger in 2015 and therefore its assets and liabilities were recognized at their estimated fair values at the merger date. Since the merger date valuation, operating performance had been lower than expected due to integration issues, management turnover and poor execution of its operating plans.

We estimated the fair value of the Office Based Technologies reporting unit using a market approach. GAAP defines fair value as "the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date." We used market indicators based upon the reporting unit's operating performance to estimate what price would be paid for the assets in an orderly transaction.

We have four other reporting units with goodwill assigned to them. The estimated fair value of our Dental reporting unit only exceeded its carrying value by less than 5 percent. The estimated fair value of each of the other three reporting units exceeded its carrying value by more than 25 percent. We estimated the fair value of those reporting units using the income and market approaches.

We will continue to monitor the fair value of our EMEA and Dental reporting units as well as our other three reporting units in our interim and annual reporting periods. If our estimated cash flows for these reporting units decrease, we may have to record further impairment charges in the future. Factors that could result in our cash flows being lower than our current estimates include: 1) decreased revenues caused by unforeseen changes in the healthcare market, or our inability to generate new product revenue from our research and development activities, and 2) our inability to achieve the estimated operating margins in our forecasts due to unforeseen factors. Additionally, changes in the broader economic environment could cause changes to our estimated discount rates, foreign currency exchange rates used to translate cash flows and comparable company valuation indicators, which may impact our estimated fair values.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

The components of identifiable intangible assets were as follows (in millions):

	Technology	Intellectual Property Rights	Trademarks and Trade Names	Customer Relationships	IPR&D	Other	Total
As of December 31, 2018:							
Intangible assets subject to amortization:							
Gross carrying amount	$ 3,638.5	$ 180.7	$ 664.2	$ 5,384.4	$ –	$128.3	$ 9,996.1
Accumulated amortization	(1,282.7)	(177.6)	(169.3)	(1,194.5)	–	(80.0)	(2,904.1)
Intangible assets not subject to amortization:							
Gross carrying amount	–	–	457.1	–	135.5	–	592.6
Total identifiable intangible assets	$ 2,355.8	$ 3.1	$ 952.0	$ 4,189.9	$135.5	$ 48.3	$ 7,684.6
As of December 31, 2017:							
Intangible assets subject to amortization:							
Gross carrying amount	$ 3,669.8	$ 180.7	$ 671.1	$ 5,409.5	$ –	$160.0	$10,091.1
Accumulated amortization	(1,061.4)	(176.1)	(132.1)	(890.4)	–	(84.1)	(2,344.1)
Intangible assets not subject to amortization:							
Gross carrying amount	–	–	460.0	–	146.4	–	606.4
Total identifiable intangible assets	$ 2,608.4	$ 4.6	$ 999.0	$ 4,519.1	$146.4	$ 75.9	$ 8,353.4

We recognized intangible asset impairment charges of $3.8 million, $26.8 million and $31.1 million in the years ended December 31, 2018, 2017 and 2016, respectively, in Acquisition, integration and related on our consolidated statements of earnings. The impairment charges were primarily related to the abandonment of IPR&D projects that were recognized as part of the Biomet merger purchase accounting.

Estimated annual amortization expense based upon intangible assets recognized as of December 31, 2018 for the years ending December 31, 2019 through 2023 is (in millions):

For the Years Ending December 31,	
2019	$604.5
2020	598.3
2021	595.0
2022	589.3
2023	584.0

10. Other Current Liabilities

Other current liabilities consisted of the following (in millions):

	As of December 31, 2018	2017
Other current liabilities:		
License and service agreements	$ 181.8	$ 171.4
Salaries, wages and benefits	260.3	255.2
Litigation and product liability	278.6	147.7
Accrued liabilities	670.6	775.0
Total other current liabilities	$1,391.3	$1,349.3

11. Debt

Our debt consisted of the following (in millions):

	As of December 31, 2018	2017
Current portion of long-term debt		
2.000% Senior Notes due 2018	$ –	$1,150.0
4.625% Senior Notes due 2019	500.0	–
U.S. Term Loan B	25.0	75.0
Total short-term debt	$ 525.0	$1,225.0
Long-term debt		
4.625% Senior Notes due 2019	$ –	$ 500.0
2.700% Senior Notes due 2020	1,500.0	1,500.0
Floating Rate Notes due 2021	450.0	–
3.375% Senior Notes due 2021	300.0	300.0
3.150% Senior Notes due 2022	750.0	750.0
3.700% Senior Notes due 2023	300.0	–
3.550% Senior Notes due 2025	2,000.0	2,000.0
4.250% Senior Notes due 2035	253.4	253.4
5.750% Senior Notes due 2039	317.8	317.8
4.450% Senior Notes due 2045	395.4	395.4
1.414% Euro Notes due 2022	571.6	600.4
2.425% Euro Notes due 2026	571.6	600.4
U.S. Term Loan A	–	835.0
U.S. Term Loan B	200.0	600.0
U.S. Term Loan C	535.0	–
Japan Term Loan A	105.3	103.2
Japan Term Loan B	191.7	187.9
Other long-term debt	–	4.1
Debt discount and issuance costs	(42.7)	(53.2)
Adjustment related to interest rate swaps	14.6	23.1
Total long-term debt	$8,413.7	$8,917.5

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

At December 31, 2018, our total debt balance consisted of $7.9 billion aggregate principal amount of senior notes, which included $1.1 billion of Euro-denominated senior notes ("Euro notes"), $225.0 million outstanding under a U.S. term loan ("U.S. Term Loan B") that will mature on September 30, 2019, $535.0 million outstanding under a U.S. term loan ("U.S. Term Loan C") that will mature on December 14, 2020, an 11.7 billion Japanese Yen term loan agreement ("Japan Term Loan A") and a 21.3 billion Japanese Yen term loan agreement ("Japan Term Loan B") that each will mature on September 27, 2022, and other debt and fair value adjustments totaling $14.6 million, partially offset by debt discount and issuance costs of $42.7 million.

On December 14, 2018, we entered into a credit agreement (the "2018 Credit Agreement") that provides for U.S. Term Loan C, which is a two-year unsecured multi-draw term loan facility for the Company in the principal amount of $900.0 million, with a maturity date of December 14, 2020. On December 14, 2018, we borrowed $675.0 million under U.S. Term Loan C and utilized those borrowings: (i) to repay the full $295.0 million balance of a U.S. term loan ("U.S. Term Loan A"), (ii) to repay $375.0 million of the $600.0 million balance of U.S. Term Loan B; and (iii) for general corporate purposes and transaction costs. In January 2019, we borrowed an additional $200.0 million under U.S. Term Loan C and used those proceeds, along with cash on hand, to repay the remaining $225.0 million outstanding under U.S. Term Loan B. Under the applicable accounting rules, since $200.0 million of U.S. Term Loan B was refinanced on a long-term basis before the issuance of these consolidated financial statements, we classified the refinanced portion of U.S. Term Loan B as long-term as of December 31, 2018.

On March 19, 2018, we completed the offering of $450.0 million aggregate principal amount of our floating rate senior notes due March 19, 2021 and $300.0 million aggregate principal amount of our 3.700% senior notes due March 19, 2023. Interest on the floating rate senior notes is equal to three-month LIBOR plus 0.750% and is payable quarterly, commencing on June 19, 2018, until maturity. Interest is payable on the 3.700% senior notes semi-annually, commencing on September 19, 2018, until maturity. We received net proceeds of $749.5 million from this offering. On April 2, 2018, these proceeds, together with borrowings under the Multicurrency Revolving Facility (as defined below) and cash on hand, were used to repay the 2.000% Senior Notes due 2018.

On September 22, 2017, we entered into a term loan agreement for the Japan Term Loan B, and an amended and restated term loan agreement, which amended and restated the Japan Term Loan A loan agreement dated as of May 24, 2012, as amended as of October 31, 2014. As described above, the term loans under both of these agreements will mature on September 27, 2022. Each of these term loans bears interest at a fixed rate of 0.635 percent per annum.

On December 13, 2016, we completed the offering of €500 million aggregate principal amount of our 1.414% Euro notes due December 13, 2022 and €500 million aggregate principal amount of our 2.425% Euro notes due December 13, 2026. Interest is payable on each series of Euro notes on December 13 of each year until maturity.

In 2016, we also entered into U.S. Term Loan B and borrowed $750.0 million thereunder to repay outstanding borrowings under a previous multicurrency revolving facility incurred in connection with the acquisition of LDR.

In 2016, we used a portion of the funds received from the above-described note issuances and borrowings to repay other outstanding debt. The repayments resulted in debt extinguishment charges of $53.3 million recorded as part of other expense, net.

We have a revolving credit and term loan agreement (the "2016 Credit Agreement") and a first amendment to our credit agreement executed in 2014 (the "2014 Credit Agreement"). The 2016 Credit Agreement contains the U.S. Term Loan B and a five-year unsecured multicurrency revolving facility of $1.5 billion (the "Multicurrency Revolving Facility"). The Multicurrency Revolving Facility replaced the previous multicurrency revolving facility under the 2014 Credit Agreement and will mature on September 30, 2021, with two available one-year extensions at our discretion. The 2014 Credit Agreement provided for U.S. Term Loan A, which was repaid in full with borrowings under U.S. Term Loan C in December 2018.

Borrowings under the 2018 Credit Agreement bear interest at floating rates based upon, for Eurodollar-indexed loans, LIBOR for the applicable interest period plus a margin of 0.875% per annum, or for non-Eurodollar-indexed loans, an alternate base rate plus a margin of 0.0%. Under the terms of U.S. Term Loan C, the remaining balance is due on the maturity date of December 14, 2020. We have paid $140.0 million in principal under U.S. Term Loan C, resulting in $535.0 million outstanding on the U.S. Term Loan C as of December 31, 2018. The interest rate at December 31, 2018 was 3.4 percent on U.S. Term Loan C. We borrowed an additional $200.0 million under U.S. Term Loan C in January 2019.

Borrowings under the 2014 and 2016 Credit Agreements generally bear interest at floating rates based upon indices determined by the currency of the borrowing, or at an alternate base rate, in each case, plus an applicable margin determined by reference to our senior unsecured long-term credit rating, or, in the case of borrowings under the Multicurrency Revolving Facility only, at a fixed rate determined through a competitive bid process. We pay a facility fee on the aggregate amount of the Multicurrency Revolving Facility at a rate determined by reference to our senior unsecured long-term credit rating.

The 2018 Credit Agreement, the 2016 Credit Agreement and the 2014 Credit Agreement, as amended, contain customary affirmative and negative covenants and events of

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

default for unsecured financing arrangements, including, among other things, limitations on consolidations, mergers and sales of assets. Financial covenants under the 2018, 2016 and 2014 Credit Agreements include a consolidated indebtedness to consolidated EBITDA ratio of no greater than 5.0 to 1.0 through June 30, 2017, and no greater than 4.5 to 1.0 thereafter. If our credit rating falls below investment grade, additional restrictions would result, including restrictions on investments and payment of dividends. We were in compliance with all covenants under the 2018, 2016 and 2014 Credit Agreements as of December 31, 2018. As of December 31, 2018, there were no borrowings outstanding under the Multicurrency Revolving Facility.

We may, at our option, redeem our senior notes, in whole or in part, at any time upon payment of the principal, any applicable make-whole premium, and accrued and unpaid interest to the date of redemption, except that the Floating Rate Notes due 2021 may not be redeemed until on or after March 20, 2019 and such notes do not have any applicable make-whole premium. In addition, we may redeem, at our option, the 2.700% Senior Notes due 2020, the 3.375% Senior Notes due 2021, the 3.150% Senior Notes due 2022, the 3.700% Senior Notes due 2023, the 3.550% Senior Notes due 2025, the 4.250% Senior Notes due 2035 and the 4.450% Senior Notes due 2045 without any make-whole premium at specified dates ranging from one month to six months in advance of the scheduled maturity date.

The estimated fair value of our senior notes as of December 31, 2018, based on quoted prices for the specific securities from transactions in over-the-counter markets (Level 2), was $7,798.9 million. The estimated fair value of Japan Term Loan A and Japan Term Loan B, in the aggregate, as of December 31, 2018, based upon publicly available market yield curves and the terms of the debt (Level 2), was $294.7 million. The carrying values of U.S. Term Loan B and U.S. Term Loan C approximate fair value as they bear interest at short-term variable market rates.

We entered into interest rate swap agreements which we designated as fair value hedges of underlying fixed-rate obligations on our senior notes due 2019 and 2021. These fair value hedges were settled in 2016. In 2016, we entered into various variable-to-fixed interest rate swap agreements that were accounted for as cash flow hedges of U.S. Term Loan B. In 2018, we entered into cross-currency interest rate swaps that we designated as net investment hedges. The excluded component of these net investment hedges is recorded in interest expense, net. See Note 13 for additional information regarding our interest rate swap agreements.

We also have available uncommitted credit facilities totaling $55.0 million.

At December 31, 2018 and 2017, the weighted average interest rate for our borrowings was 3.1 percent and 2.9 percent, respectively. We paid $282.8 million, $317.5 million, and $363.1 million in interest during 2018, 2017, and 2016, respectively.

12. Accumulated Other Comprehensive (Loss) Income

AOCI refers to certain gains and losses that under GAAP are included in comprehensive income but are excluded from net earnings as these amounts are initially recorded as an adjustment to stockholders' equity. Amounts in AOCI may be reclassified to net earnings upon the occurrence of certain events.

Our AOCI is comprised of foreign currency translation adjustments, including unrealized gains and losses on net investment hedges, unrealized gains and losses on cash flow hedges, and amortization of prior service costs and unrecognized gains and losses in actuarial assumptions on our defined benefit plans. Foreign currency translation adjustments are reclassified to net earnings upon sale or upon a complete or substantially complete liquidation of an investment in a foreign entity. Unrealized gains and losses on cash flow hedges are reclassified to net earnings when the hedged item affects net earnings. Amounts related to defined benefit plans that are in AOCI are reclassified over the service periods of employees in the plan. See Note 14 for more information on our defined benefit plans.

The following table shows the changes in the components of AOCI, net of tax (in millions):

	Foreign Currency Translation	Cash Flow Hedges	Defined Benefit Plan Items	Total AOCI
Balance December 31, 2017	$ 121.5	$(66.5)	$(138.2)	$ (83.2)
AOCI before reclassifications	(135.4)	68.2	(29.7)	(96.9)
Reclassifications to retained earnings (Note 2)	(17.4)	(4.4)	(21.1)	(42.9)
Reclassifications	–	23.6	12.0	35.6
Balance December 31, 2018	$ (31.3)	$ 20.9	$(177.0)	$(187.4)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

The following table shows the reclassification adjustments from AOCI (in millions):

	Amount of Gain / (Loss) Reclassified from AOCI			
	For the Years Ended December 31,			
Component of AOCI	2018	2017	2016	Location on Statement of Earnings
Cash flow hedges				
Foreign exchange forward contracts	$(26.2)	$ 5.1	$ 87.7	Cost of products sold
Forward starting interest rate swaps	–	–	(66.4)	Other expense, net
Forward starting interest rate swaps	(0.6)	(0.5)	(1.7)	Interest expense, net
	(26.8)	4.6	19.6	Total before tax
	(3.2)	0.8	(6.2)	Provision (benefit) for income taxes
	$(23.6)	$ 3.8	$ 25.8	Net of tax
Defined benefit plans				
Prior service cost	$ 9.9	$ 10.3	$ 7.8	Other expense, net
Unrecognized actuarial (loss)	(26.2)	(22.1)	(22.9)	Other expense, net
	(16.3)	(11.8)	(15.1)	Total before tax
	(4.3)	(4.5)	(5.2)	Benefit for income taxes
	$(12.0)	$ (7.3)	$ (9.9)	Net of tax
Total reclassifications	$(35.6)	$ (3.5)	$ 15.9	Net of tax

The following table shows the tax effects on each component of AOCI recognized in our consolidated statements of comprehensive income (loss) (in millions):

	For the Years Ended December 31,								
	Before Tax			Tax			Net of Tax		
	2018	2017	2016	2018	2017	2016	2018	2017	2016
Foreign currency cumulative translation adjustments	$(148.7)	$ 396.8	$(128.2)	$(13.3)	$(48.2)	$ 1.8	$(135.4)	$445.0	$(130.0)
Unrealized cash flow hedge gains	81.1	(116.0)	29.7	12.9	(21.0)	1.4	68.2	(95.0)	28.3
Reclassification adjustments on foreign currency hedges	26.8	(4.6)	(19.6)	3.2	(0.8)	6.2	23.6	(3.8)	(25.8)
Unrealized gains on securities	–	–	0.5	–	–	–	–	–	0.5
Adjustments to prior service cost and unrecognized actuarial assumptions	(22.7)	6.6	27.3	(5.0)	2.0	5.3	(17.7)	4.6	22.0
Total Other Comprehensive Income (Loss)	$ (63.5)	$ 282.8	$ (90.3)	$ (2.2)	$(68.0)	$14.7	$ (61.3)	$350.8	$(105.0)

13. Derivative Instruments and Hedging Activities

We are exposed to certain market risks relating to our ongoing business operations, including foreign currency exchange rate risk, commodity price risk, interest rate risk and credit risk. We manage our exposure to these and other market risks through regular operating and financing activities. Currently, the only risks that we manage through the use of derivative instruments are interest rate risk and foreign currency exchange rate risk.

Interest Rate Risk

Derivatives Designated as Fair Value Hedges

In prior years, we entered into various fixed-to-variable interest rate swap agreements that were accounted for as fair value hedges of a portion of our 4.625% Senior Notes due 2019 and all of our 3.375% Senior Notes due 2021. In August 2016, we received cash for these interest rate swap assets by terminating the hedging instruments with the counterparties. The remaining unamortized balance as of December 31, 2018 was $14.6 million, which will be recognized using the effective interest rate method over the remaining maturity period of the hedged notes. As of December 31, 2018 and 2017, the following amounts were recorded on our consolidated balance sheets related to cumulative basis adjustments for fair value hedges (in millions):

	Carrying Amount of the Hedged Liabilities		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of the Hedged Liabilities	
Balance Sheet Line Item	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Long-term debt	$564.4	$572.8	$14.6	$23.1

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

Derivatives Designated as Cash Flow Hedges

In 2014, we entered into forward starting interest rate swaps that were designated as cash flow hedges of the thirty-year tranche of senior notes (the 4.450% Senior Notes due 2045) we expected to issue in 2015. The forward starting interest rate swaps mitigated the risk of changes in interest rates prior to the completion of the notes offering. The interest rate swaps were settled, and the remaining loss to be recognized at December 31, 2018 was $27.1 million, which will be recognized using the effective interest rate method over the remaining maturity period of the hedged notes.

In September 2016, we entered into various variable-to-fixed interest rate swap agreements with a notional amount of $375 million that were accounted for as cash flow hedges of Term Loan B. The interest rate swaps minimize the exposure to changes in the LIBOR interest rates while the variable-rate debt is outstanding. The weighted average fixed interest rate for all of the outstanding interest rate swap agreements is approximately 0.89 percent through September 30, 2019.

Foreign Currency Exchange Rate Risk

We operate on a global basis and are exposed to the risk that our financial condition, results of operations and cash flows could be adversely affected by changes in foreign currency exchange rates. To reduce the potential effects of foreign currency exchange rate movements on net earnings, we enter into derivative financial instruments in the form of foreign currency exchange forward contracts with major financial institutions. We also designated our Euro notes and other foreign currency exchange forward contracts as net investment hedges of investments in foreign subsidiaries. We are primarily exposed to foreign currency exchange rate risk with respect to transactions and net assets denominated in Euros, Swiss Francs, Japanese Yen, British Pounds, Canadian Dollars, Australian Dollars, Korean Won, Swedish Krona, Czech Koruna, Thai Baht, Taiwan Dollars, South African Rand, Russian Rubles, Indian Rupees, Turkish Lira, Polish Zloty, Danish Krone, and Norwegian Krone. We do not use derivative financial instruments for trading or speculative purposes.

Derivatives Designated as Net Investment Hedges

We are exposed to the impact of foreign exchange rate fluctuations in the investments in our wholly-owned foreign subsidiaries that are denominated in currencies other than the U.S. Dollar. In order to mitigate the volatility in foreign exchange rates, we issued Euro notes in December 2016, as discussed in Note 11, and designated 100 percent of the Euro notes to hedge our net investment in certain wholly-owned foreign subsidiaries that have a functional currency of Euro. All changes in the fair value of the hedging instrument designated as a net investment hedge are recorded as a component of AOCI in our consolidated balance sheets.

In 2018, we initiated receive-fixed-rate, pay-fixed-rate cross-currency interest rate swaps with a notional amount of €1,250.0 million. These transactions further hedged our net investment in certain wholly-owned foreign subsidiaries that have a functional currency of Euro. All changes in the fair value of a derivative instrument designated as a net investment hedge are recorded as a component of AOCI in our consolidated balance sheets. The portion of this change related to the excluded component will be amortized into earnings over the life of the derivative while the remainder will be recorded in AOCI until the hedged net investment is sold or substantially liquidated. We recognize the excluded component in interest expense, net on our consolidated statements of earnings. The net cash received related to the receive-fixed-rate, pay-fixed-rate component of the cross-currency interest rate swap is reflected in investing cash flows in our consolidated statements of cash flows. In 2018, we terminated certain of these cross-currency interest rate swaps with a notional amount of €675.0 million and replaced them with new cross-currency interest rate swaps for the same notional amount at the current market rates. We received proceeds of $50.2 million related to the terminated swaps, which are reflected in investing activities in our consolidated statements of cash flows. Accordingly, cross-currency interest rate swaps with a notional amount of €1,250.0 million remained outstanding as of December 31, 2018.

In 2016, we also entered into a foreign currency exchange forward contract in anticipation of the Euro notes issuance and designated it as a net investment hedge.

Derivatives Designated as Cash Flow Hedges

Our revenues are generated in various currencies throughout the world. However, a significant amount of our inventory is produced in U.S. Dollars. Therefore, movements in foreign currency exchange rates may have different proportional effects on our revenues compared to our cost of products sold. To minimize the effects of foreign currency exchange rate movements on cash flows, we hedge intercompany sales of inventory expected to occur within the next 30 months with foreign currency exchange forward contracts. We designate these derivative instruments as cash flow hedges.

We perform quarterly assessments of hedge effectiveness by verifying and documenting the critical terms of the hedge instrument and that forecasted transactions have not changed significantly. We also assess on a quarterly basis whether there have been adverse developments regarding the risk of a counterparty default. For derivatives which qualify as hedges of future cash flows, the effective portion of changes in fair value is temporarily recorded in AOCI and then recognized in cost of products sold when the hedged item affects net earnings. On our consolidated statements of cash flows, the settlements of these cash flow hedges are recognized in operating cash flows.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

For foreign currency exchange forward contracts outstanding at December 31, 2018, we had obligations to purchase U.S. Dollars and sell Euros, Japanese Yen, British Pounds, Canadian Dollars, Australian Dollars, Korean Won, Swedish Krona, Czech Koruna, Thai Baht, Taiwan Dollars, South African Rand, Russian Rubles, Indian Rupees, Turkish Lira, Polish Zloty, Danish Krone, and Norwegian Krone and obligations to purchase Swiss Francs and sell U.S. Dollars. These derivatives mature at dates ranging from January 2019 through June 2021. As of December 31, 2018, the notional amounts of outstanding forward contracts entered into with third parties to purchase U.S. Dollars were $1,547.7 million. As of December 31, 2018, the notional amounts of outstanding forward contracts entered into with third parties to purchase Swiss Francs were $267.6 million.

Derivatives Not Designated as Hedging Instruments

We enter into foreign currency forward exchange contracts with terms of one month to manage currency exposures for monetary assets and liabilities denominated in a currency other than an entity's functional currency. As a result, any foreign currency re-measurement gains/losses recognized in earnings are generally offset with gains/losses on the foreign currency forward exchange contracts in the same reporting period. The net amount of these offsetting gains/losses is recorded in Other expense, net. These contracts are settled on the last day of each reporting period. Therefore, there is no outstanding balance related to these contracts recorded on the balance sheet as of the end of the reporting period. The notional amounts of these contracts are typically in a range of $1.5 billion to $2.0 billion per quarter.

Income Statement Presentation

Derivatives Designated as Cash Flow Hedges

Derivative instruments designated as cash flow hedges had the following effects, before taxes, on AOCI and net earnings on our consolidated statements of earnings, consolidated statements of comprehensive income (loss) and consolidated balance sheets (in millions):

	Amount of Gain / (Loss) Recognized in AOCI				Amount of Gain / (Loss) Reclassified from AOCI		
	Years Ended December 31,				Years Ended December 31,		
Derivative Instrument	2018	2017	2016	Location on Statement of Earnings	2018	2017	2016
Foreign exchange forward contracts	$82.8	$(116.5)	$25.7	Cost of products sold	$(26.2)	$ 5.1	$ 87.7
Interest rate swaps	(1.7)	0.5	4.0	Interest expense, net	–	–	–
Forward starting interest rate swaps	–	–	–	Interest expense, net	(0.6)	(0.5)	(1.7)
Forward starting interest rate swaps	–	–	–	Other expense, net	–	–	(66.4)
	$81.1	$(116.0)	$29.7		$(26.8)	$ 4.6	$ 19.6

The fair value of outstanding derivative instruments designated as cash flow hedges and recorded on the balance sheet at December 31, 2018, together with settled derivatives where the hedged item has not yet affected earnings, was a net unrealized gain of $23.4 million, or $20.9 million after taxes, which is deferred in AOCI. A gain of $24.7 million, or $21.0 million after taxes, is expected to be reclassified to earnings in cost of products sold and a loss of $0.6 million, or $0.5 million after taxes, is expected to be reclassified to earnings in interest expense, net over the next twelve months.

The following table presents the effects of fair value, cash flow and net investment hedge accounting on our consolidated statements of earnings (in millions):

	Years Ended December 31,						
	2018		2017		2016		
	Cost of Goods Sold	Interest Expense, Net	Cost of Goods Sold	Interest Expense, Net	Cost of Goods Sold	Other Expense, Net	Interest Expense, Net
Total amounts of income and expense line items presented in the statements of earnings in which the effects of fair value, cash flow and net investment hedges are recorded	$2,271.9	$(289.3)	$2,132.9	$(325.3)	$2,381.8	$(66.5)	$(355.0)
The effects of fair value, cash flow and net investment hedging:							
Gain on fair value hedging relationships							
Discontinued interest rate swaps	–	8.5	–	8.3	–	–	10.7
Gain (loss) on cash flow hedging relationships							
Forward starting interest rate swaps	–	(0.6)	–	(0.5)	–	(66.4)	(1.7)
Foreign exchange forward contracts	(26.2)	–	5.1	–	87.7	–	–
Gain on net investment hedging relationships							
Cross-currency interest rate swaps	–	25.5	–	–	–	–	–

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

Derivatives Not Designated as Hedging Instruments

The following gains/(losses) from these derivative instruments were recognized on our consolidated statements of earnings (in millions):

Derivative Instrument	Location on Statement of Earnings	Years Ended December 31, 2018	2017	2016
Foreign exchange forward contracts	Other expense, net	$24.7	$(62.3)	$2.5

These gains/(losses) do not reflect offsetting losses of $41.2 million and $15.5 million in 2018 and 2016, respectively, and offsetting gains of $45.5 million in 2017 recognized in Other expense, net as a result of foreign currency re-measurement of monetary assets and liabilities denominated in a currency other than an entity's functional currency.

Balance Sheet Presentation

As of December 31, 2018 and December 31, 2017, all derivative instruments designated as fair value hedges and cash flow hedges are recorded at fair value on the balance sheet. On our consolidated balance sheets, we recognize individual forward contracts with the same counterparty on a net asset/liability basis if we have a master netting agreement with the counterparty. Under these master netting agreements, we are able to settle derivative instrument assets and liabilities with the same counterparty in a single transaction, instead of settling each derivative instrument separately. We have master netting agreements with all of our counterparties.

The fair value of derivative instruments on a gross basis is as follows (in millions):

	As of December 31, 2018		As of December 31, 2017	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Asset Derivatives				
Foreign exchange forward contracts	Other current assets	$37.9	Other current assets	$14.5
Foreign exchange forward contracts	Other assets	20.9	Other assets	4.8
Interest rate swaps	Other assets	2.8	Other assets	4.5
Cross-currency interest rate swaps	Other assets	15.1	Other assets	–
Total asset derivatives		$76.7		$23.8
Liability Derivatives				
Foreign exchange forward contracts	Other current liabilities	$ 9.9	Other current liabilities	$45.8
Foreign exchange forward contracts	Other long-term liabilities	3.7	Other long-term liabilities	22.8
Cross-currency interest rate swaps	Other long-term liabilities	2.5	Other long-term liabilities	–
Total liability derivatives		$16.1		$68.6

The table below presents the effects of our master netting agreements on our consolidated balance sheets (in millions):

		As of December 31, 2018			As of December 31, 2017		
Description	Location	Gross Amount	Offset	Net Amount in Balance Sheet	Gross Amount	Offset	Net Amount in Balance Sheet
Asset Derivatives							
Cash flow hedges	Other current assets	$37.9	$9.6	$28.3	$14.5	$13.4	$ 1.1
Cash flow hedges	Other assets	20.9	3.5	17.4	4.8	4.3	0.5
Liability Derivatives							
Cash flow hedges	Other current liabilities	9.9	9.6	0.3	45.8	13.4	32.4
Cash flow hedges	Other long-term liabilities	3.7	3.5	0.2	22.8	4.3	18.5

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

The following net investment hedge gains (losses) were recognized on our consolidated statements of comprehensive income (loss) (in millions):

	Amount of Gain / (Loss) Recognized in AOCI		
	Years Ended December 31,		
Derivative Instrument	2018	2017	2016
Euro Notes	$ 57.6	$(146.0)	$ 9.4
Cross-currency interest rate swaps	62.8	–	–
Foreign exchange forward contracts	–	–	9.4
	$120.4	$(146.0)	$18.8

14. Retirement Benefit Plans

We have defined benefit pension plans covering certain U.S. and Puerto Rico employees. The employees who are not participating in the defined benefit plans receive additional benefits under our defined contribution plans. Plan benefits are primarily based on years of credited service and the participant's average eligible compensation. In addition to the U.S. and Puerto Rico defined benefit pension plans, we sponsor various foreign pension arrangements, including retirement and termination benefit plans required by local law or coordinated with government sponsored plans.

We use a December 31 measurement date for our benefit plans.

Defined Benefit Plans

The components of net pension expense for our defined benefit retirement plans were as follows (in millions):

	For the Years Ended December 31,					
	U.S. and Puerto Rico			Foreign		
	2018	2017	2016	2018	2017	2016
Service cost	$ 8.0	$ 8.7	$ 9.6	$ 20.0	$ 17.7	$ 19.0
Interest cost	14.2	14.0	13.8	8.1	8.4	10.0
Expected return on plan assets	(32.9)	(32.4)	(32.2)	(14.0)	(12.2)	(13.7)
Curtailment gain	–	–	–	–	–	(0.5)
Settlements	1.2	0.4	2.6	0.2	1.1	–
Amortization of prior service cost	(5.7)	(5.9)	(5.9)	(4.2)	(4.4)	(1.9)
Amortization of unrecognized actuarial loss	23.7	17.9	16.5	2.5	4.2	6.4
Net periodic benefit cost	$ 8.5	$ 2.7	$ 4.4	$ 12.6	$ 14.8	$ 19.3

In our consolidated statements of earnings, service cost is reported in the same location as other compensation costs arising from services rendered by the pertinent employees while the other components of net pension expense are reported in other expense, net.

The weighted average actuarial assumptions used to determine net pension expense for our defined benefit retirement plans were as follows:

	For the Years Ended December 31,					
	U.S. and Puerto Rico			Foreign		
	2018	2017	2016	2018	2017	2016
Discount rate	3.79%	4.33%	4.32%	1.18%	1.38%	1.41%
Rate of compensation increase	3.29%	3.29%	3.29%	2.09%	2.20%	2.08%
Expected long-term rate of return on plan assets	7.75%	7.75%	7.75%	2.19%	2.30%	2.40%

The expected long-term rate of return on plan assets is based on the historical and estimated future rates of return on the different asset classes held in the plans. The expected long-term rate of return is the weighted average of the target asset allocation of each individual asset class. We believe that historical asset results approximate expected market returns applicable to the funding of a long-term benefit obligation.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

Discount rates were determined for each of our defined benefit retirement plans at their measurement date to reflect the yield of a portfolio of high quality bonds matched against the timing and amounts of projected future benefit payments.

Changes in projected benefit obligations and plan assets were (in millions):

	For the Years Ended December 31,			
	U.S. and Puerto Rico		Foreign	
	2018	2017	2018	2017
Projected benefit obligation – beginning of year	$420.7	$376.9	$623.6	$568.6
Service cost	8.0	8.7	20.0	17.7
Interest cost	14.2	14.0	8.1	8.4
Plan amendments	–	–	2.2	0.6
Employee contributions	–	–	18.1	17.0
Benefits paid	(20.3)	(14.9)	(36.9)	(34.5)
Actuarial (gain) loss	(21.1)	36.9	6.0	15.6
Expenses paid	–	–	(0.3)	(0.2)
Settlement	(5.5)	(0.9)	–	(0.8)
Translation (loss) gain	–	–	(9.7)	31.2
Projected benefit obligation – end of year	$396.0	$420.7	$631.1	$623.6

	For the Years Ended December 31,			
	U.S. and Puerto Rico		Foreign	
	2018	2017	2018	2017
Plan assets at fair market value – beginning of year	$433.6	$389.4	$574.9	$507.0
Actual return on plan assets	(25.7)	58.2	7.5	42.7
Employer contributions	6.4	1.8	31.7	16.5
Employee contributions	–	–	18.1	17.0
Settlements	(5.5)	(0.9)	–	–
Benefits paid	(20.3)	(14.9)	(36.9)	(34.5)
Expenses paid	–	–	(0.3)	(0.2)
Translation (loss) gain	–	–	(9.2)	26.4
Plan assets at fair market value – end of year	$388.5	$433.6	$585.8	$574.9
Funded status	$ (7.5)	$ 12.9	$(45.3)	$(48.7)

	For the Years Ended December 31,			
	U.S. and Puerto Rico		Foreign	
	2018	2017	2018	2017
Amounts recognized in consolidated balance sheet:				
Prepaid pension	$ –	$22.8	$ 15.3	$ 14.9
Short-term accrued benefit liability	(0.2)	(5.6)	(0.8)	(0.8)
Long-term accrued benefit liability	(7.3)	(4.3)	(59.8)	(62.8)
Net amount recognized	$(7.5)	$12.9	$(45.3)	$(48.7)

We estimate the following amounts recorded as part of AOCI will be recognized as part of our net pension expense during 2019 (in millions):

	U.S. and Puerto Rico	Foreign
Unrecognized prior service cost	$ (3.4)	$ (4.1)
Unrecognized actuarial loss	17.9	2.5
	$14.5	$(1.6)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

The weighted average actuarial assumptions used to determine the projected benefit obligation for our defined benefit retirement plans were as follows:

	For the Years Ended December 31,					
	U.S. and Puerto Rico			Foreign		
	2018	2017	2016	2018	2017	2016
Discount rate	4.38%	3.78%	4.32%	1.41%	1.27%	1.41%
Rate of compensation increase	3.29%	3.29%	3.29%	2.13%	2.19%	2.08%

Plans with projected benefit obligations in excess of plan assets were as follows (in millions):

	As of December 31,			
	U.S. and Puerto Rico		Foreign	
	2018	2017	2018	2017
Projected benefit obligation	$396.0	$55.1	$451.4	$598.8
Plan assets at fair market value	388.5	45.2	394.4	544.2

Total accumulated benefit obligations and plans with accumulated benefit obligations in excess of plan assets were as follows (in millions):

	As of December 31,			
	U.S. and Puerto Rico		Foreign	
	2018	2017	2018	2017
Total accumulated benefit obligations	$392.0	$412.1	$618.0	$609.1
Plans with accumulated benefit obligations in excess of plan assets:				
Accumulated benefit obligation	47.1	54.7	434.8	417.4
Plan assets at fair market value	41.6	45.2	388.8	375.5

The benefits expected to be paid out in each of the next five years and for the five years combined thereafter are as follows (in millions):

For the Years Ending December 31,	U.S. and Puerto Rico	Foreign
2019	$ 18.8	$ 25.0
2020	19.7	25.5
2021	20.8	25.4
2022	21.9	25.8
2023	23.3	26.5
2024-2028	126.1	140.8

The U.S. and Puerto Rico defined benefit retirement plans' overall investment strategy is to balance total returns by emphasizing long-term growth of capital while mitigating risk. We have established target ranges of assets held by the plans of 30 to 65 percent for equity securities, 30 to 50 percent for debt securities and 0 to 15 percent in non-traditional investments. The plans strive to have sufficiently diversified assets so that adverse or unexpected results from one asset class will not have an unduly detrimental impact on the entire portfolio. We regularly review the investments in the plans and we may rebalance them from time-to-time based upon the target asset allocation of the plans.

For the U.S. and Puerto Rico plans, we maintain an investment policy statement that guides the investment allocation in the plans. The investment policy statement describes the target asset allocation positions described above. Our benefits committee, along with our investment advisor, monitor compliance with and administer the investment policy statement and the plans' assets and oversee the general investment strategy and objectives of the plans. Our benefits committee generally meets quarterly to review performance.

The investment strategies of foreign based plans vary according to the plan provisions and local laws. The majority of the assets in foreign based plans are located in Switzerland-based plans. These assets are held in trusts and are commingled with the assets of other Swiss companies with representatives of all the companies making the investment decisions. The overall strategy is to maximize total returns while avoiding risk. The trustees of the assets have established target ranges of assets held by the plans of 30 to 50 percent in debt securities, 20 to 37 percent in equity securities, 15 to 24 percent in real estate, 3 to 15 percent in cash funds and 0 to 12 percent in other funds.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

The fair value of our U.S. and Puerto Rico pension plan assets by asset category was as follows (in millions):

	As of December 31, 2018			
		Fair Value Measurements at Reporting Date Using:		
Asset Category	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash and cash equivalents	$ 3.1	$3.1	$ –	$ –
Equity securities	231.7	–	231.7	–
Intermediate fixed income securities	153.7	–	153.7	–
Total	$388.5	$3.1	$385.4	$ –

	As of December 31, 2017			
		Fair Value Measurements at Reporting Date Using:		
Asset Category	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash and cash equivalents	$ 1.3	$1.3	$ –	$ –
Equity securities	287.1	–	287.1	–
Intermediate fixed income securities	145.2	–	145.2	–
Total	$433.6	$1.3	$432.3	$ –

The fair value of our foreign pension plan assets was as follows (in millions):

	As of December 31, 2018			
		Fair Value Measurements at Reporting Date Using:		
Asset Category	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash and cash equivalents	$ 14.6	$ 14.6	$ –	$ –
Equity securities	138.6	109.3	29.3	–
Fixed income securities	226.9	–	226.9	–
Other types of investments	96.8	–	96.8	–
Real estate	108.9	–	–	108.9
Total	$585.8	$123.9	$353.0	$108.9

	As of December 31, 2017			
		Fair Value Measurements at Reporting Date Using:		
Asset Category	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash and cash equivalents	$ 31.8	$ 31.8	$ –	$ –
Equity securities	161.6	157.6	4.0	–
Fixed income securities	219.5	–	219.5	–
Other types of investments	60.4	–	60.4	–
Real estate	101.6	–	10.6	91.0
Total	$574.9	$189.4	$294.5	$91.0

As of December 31, 2018 and 2017, our defined benefit pension plans' assets did not hold any direct investment in Zimmer Biomet Holdings common stock.

Equity securities are valued using a market approach, based on quoted prices for the specific security from transactions in active exchange markets (Level 1), or in some cases where we are invested in mutual or collective funds, based upon the net asset value per unit of the fund which is determined from quoted market prices of the underlying securities in the fund's portfolio (Level 2). Fixed income securities are valued using a market approach, based upon quoted prices for the specific security or from institutional bid evaluations. Real estate is valued by discounting to present value the cash flows expected to be generated by the specific properties.

The following table provides a reconciliation of the beginning and ending balances of our foreign pension plan assets measured at fair value that used significant unobservable inputs (Level 3) (in millions):

	December 31, 2018
Beginning Balance	$ 91.0
Loss on assets sold	(0.4)
Change in fair value of assets	6.9
Net purchases and sales	11.7
Translation loss	(0.3)
Ending Balance	$108.9

We expect that we will have minimal legally required funding requirements in 2019 for the qualified U.S. and Puerto Rico defined benefit retirement plans, and we do not expect to voluntarily contribute to these plans during 2019. Contributions to foreign defined benefit plans are estimated to be $18.7 million in 2019. We do not expect the assets in any of our plans to be returned to us in the next year.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

Defined Contribution Plans

We also sponsor defined contribution plans for substantially all of the U.S. and Puerto Rico employees and certain employees in other countries. The benefits offered under these plans are reflective of local customs and practices in the countries concerned. We expensed $48.9 million, $47.9 million and $42.5 million related to these plans for the years ended December 31, 2018, 2017 and 2016, respectively.

15. Income Taxes

The 2017 Tax Act was enacted on December 22, 2017 and contained several key provisions including, among other things:

- a one-time tax on the mandatory deemed repatriation of post-1986 untaxed foreign earnings and profits ("E&P"), referred to as the toll charge;
- a reduction in the corporate income tax rate from 35 percent to 21 percent for tax years beginning after December 31, 2017;
- the introduction of a new U.S. tax on certain off-shore earnings referred to as global intangible low-taxed income ("GILTI") at an effective tax rate of 10.5 percent for tax years beginning after December 31, 2017 (increasing to 13.125 percent for tax years beginning after December 31, 2025), with a partial offset by foreign tax credits; and
- the introduction of a territorial tax system beginning in 2018 by providing a 100 percent dividend received deduction on certain qualified dividends from foreign subsidiaries.

In March 2018, the FASB issued ASU 2018-05, "Income Taxes - Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118." The guidance provided for a provisional one-year measurement period for entities to finalize their accounting for certain tax effects related to the 2017 Tax Act. In 2017, we recorded a $1,272.4 million income tax benefit related to provisional amounts for which the accounting had not been finalized. In 2018, we completed our calculation of the post-1986 E&P and related foreign taxes of our foreign subsidiaries, as well as the classification of the E&P as cash or non-cash and the finalization of all provisional items. Based on the completed calculations related to the effects of the 2017 Tax Act, and consideration of proposed regulations and other guidance issued during 2018, we recorded additional income tax expense of $8.3 million. The additional $8.3 million of tax expense consists of an adjustment to the toll charge or transition tax provision of $11.3 million and a benefit of $3.0 million related to the remeasurement of our deferred tax assets and liabilities.

The 2017 Tax Act created a provision known as GILTI that imposes a U.S. tax on certain earnings of foreign subsidiaries that are subject to foreign tax below a certain threshold. The Company has made an accounting policy election to reflect GILTI taxes, if any, as a current income tax expense in the period incurred.

The components of earnings (loss) before income taxes consisted of the following (in millions):

	For the Years Ended December 31,		
	2018	2017	2016
United States operations	$(382.8)	$(114.0)	$(251.8)
Foreign operations	111.7	578.6	651.4
Total	$(271.1)	$ 464.6	$ 399.6

The provision/(benefit) for income taxes and the income taxes paid consisted of the following (in millions):

Current:			
Federal	$(46.2)	$ 438.5	$ 134.2
State	24.4	2.4	12.4
Foreign	116.6	(13.7)	101.6
	94.8	427.2	248.2
Deferred:			
Federal	37.9	(1,728.5)	(108.5)
State	(8.8)	(95.5)	2.3
Foreign	(15.7)	48.0	(47.0)
	13.4	(1,776.0)	(153.2)
Provision (benefit) for income taxes	$108.2	$(1,348.8)	$ 95.0
Net income taxes paid	$237.1	$ 266.9	$ 269.6

A reconciliation of the U.S. statutory income tax rate to our effective tax rate is as follows:

	For the Years Ended December 31,		
	2018	2017	2016
U.S. statutory income tax rate	21.0%	35.0%	35.0%
State taxes, net of federal deduction	(2.5)	1.8	2.0
Tax impact of foreign operations, including U.S. taxes on international income and foreign tax credits	54.3	(32.0)	(11.0)
Change in valuation allowance	(4.9)	0.8	–
Non-deductible expenses	1.7	2.7	0.9
Goodwill impairment	(75.2)	22.5	–
Tax rate change	(12.2)	(24.0)	–
Tax impact of certain significant transactions	–	–	1.6
Tax benefit relating to foreign derived intangible income and U.S. manufacturer's deduction	(0.2)	(1.7)	(4.7)
R&D tax credit	6.0	(1.2)	(1.9)
Share-based compensation	0.1	(2.6)	(2.9)
Net uncertain tax positions, including interest and penalties	(25.5)	(17.0)	4.2
U.S. tax reform	(3.1)	(273.8)	–
Other	0.6	(0.8)	0.6
Effective income tax rate	(39.9)%	(290.3)%	23.8%

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

Our operations in Puerto Rico and Switzerland benefit from various tax incentive grants. These grants expire between fiscal years 2019 and 2029.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Valuation allowances are recorded to reduce deferred income tax assets when it is more likely than not that an income tax benefit will not be realized.

The components of deferred taxes consisted of the following (in millions):

	As of December 31,	
	2018	2017
Deferred tax assets:		
Inventory	$ 271.5	$ 246.8
Net operating loss carryover	374.3	165.1
Tax credit carryover	29.2	163.8
Capital loss carryover	7.9	6.9
Product liability and litigation	92.6	55.9
Accrued liabilities	35.3	46.6
Share-based compensation	27.3	26.8
Accounts receivable	15.2	17.3
Other	48.8	84.9
Total deferred tax assets	902.1	814.1
Less: Valuation allowances	(390.9)	(140.6)
Total deferred tax assets after valuation allowances	511.2	673.5
Deferred tax liabilities:		
Fixed assets	$ 94.4	$ 85.6
Intangible assets	1,301.3	1,423.0
Other	14.1	18.2
Total deferred tax liabilities	1,409.8	1,526.8
Total net deferred income taxes	$ (898.6)	$ (853.3)

Net operating loss carryovers are available to reduce future federal, state and foreign taxable earnings. At December 31, 2018, $240.3 million of these net operating loss carryovers expire within a period of 1 to 20 years and $134.0 million of these net operating loss carryovers have an indefinite life. Valuation allowances for net operating loss carryovers have been established in the amount of $348.9 million and $105.0 million at December 31, 2018 and 2017, respectively.

Deferred tax assets related to tax credit carryovers are available to offset future federal and state tax liabilities. At December 31, 2018, $29.2 million of these tax credit carryovers generally expire within a period of 2 to 16 years. Valuation allowances for certain tax credit carryovers have been established in the amount of $25.2 million and $18.5 million at December 31, 2018 and 2017, respectively.

Deferred tax assets related to capital loss carryovers are also available to reduce future federal and foreign capital gains. At December 31, 2018, $1.5 million of these capital loss carryovers expire within 1 year and $6.4 million of these capital loss carryovers have an indefinite life. Valuation allowances for certain capital loss carryovers have been established in the amount of $7.9 million and $5.5 million at December 31, 2018 and 2017, respectively. The remaining valuation allowances booked against deferred tax assets of $8.9 million and $11.6 million at December 31, 2018 and 2017, respectively, relate primarily to accrued liabilities and intangible assets that management believes, more likely than not, will not be realized.

Many of our operations are conducted outside the United States. Under the 2017 Tax Act, a company's post-1986 previously untaxed foreign E&P are mandatorily deemed to be repatriated and taxed, which is also referred to as the toll charge. We intend to repatriate at least $5.1 billion of unremitted earnings and any tax cost related to the remittance of these earnings has been accounted for in the financial statements as of December 31, 2018. We have an estimated $2.6 billion of cash and intercompany notes available to repatriate and the remainder is invested in the operations of our foreign entities. The remaining amounts earned overseas are expected to be permanently reinvested outside of the United States, and therefore, no accrual for U.S. taxes has been recorded. It is not practical for us to determine the additional tax related to remitting the earnings in excess of $5.1 billion. A portion of these earnings has already been taxed as toll tax or GILTI and is not subject to further U.S. federal tax. Some of the additional tax would be offset by the allowable foreign tax credits.

The following is a tabular reconciliation of the total amounts of unrecognized tax benefits (in millions):

	For the Years Ended December 31,		
	2018	2017	2016
Balance at January 1	$626.8	$ 649.3	$591.9
Increases related to business combinations	4.5	70.2	70.2
Increases related to prior periods	34.6	172.8	36.7
Decreases related to prior periods	(14.4)	(262.2)	(94.7)
Increases related to current period	41.9	24.8	53.0
Decreases related to settlements with taxing authorities	(3.8)	(21.7)	(3.2)
Decreases related to lapse of statute of limitations	(4.1)	(6.4)	(4.6)
Balance at December 31	$685.5	$ 626.8	$649.3
Amounts impacting effective tax rate, if recognized balance at December 31	$549.1	$ 499.6	$511.5

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

We recognize accrued interest and penalties related to unrecognized tax benefits as income tax expense. During 2018, we accrued interest and penalties of $18.5 million, and as of December 31, 2018, had a recognized liability for interest and penalties of $94.2 million.

During 2017, we released interest and penalties of $38.3 million, and as of December 31, 2017, had a recognized liability for interest and penalties of $75.7 million, which included $3.0 million of increase related to the Biomet merger. During 2016, we accrued interest and penalties of $19.3 million, and as of December 31, 2016, had a recognized liability for interest and penalties of $110.8 million, which included an $8.6 million increase from December 31, 2015 related to the Biomet merger.

We operate on a global basis and are subject to numerous and complex tax laws and regulations. Additionally, tax laws have and continue to undergo rapid changes in both application and interpretation by various countries, including state aid interpretations and the Organization for Economic Cooperation and Development led initiatives. Our income tax filings are subject to examinations by taxing authorities throughout the world. Income tax audits may require an extended period of time to reach resolution and may result in significant income tax adjustments when interpretation of tax laws or allocation of company profits is disputed. Although ultimate timing is uncertain, the net amount of tax liability for unrecognized tax benefits may change within the next twelve months due to changes in audit status, expiration of statutes of limitations, settlements of tax assessments and other events. Management's best estimate of such change is within the range of a $125 million decrease to a $25 million increase.

Our U.S. Federal income tax returns have been audited through 2012 and are currently under audit for years 2013-2015. The IRS has proposed adjustments for years 2005-2012, primarily related to reallocating profits between certain of our U.S. and foreign subsidiaries. We have disputed these adjustments and intend to continue to vigorously defend our positions. For years 2005-2007, we have filed a petition with the U.S. Tax Court. For years 2008-2009, we will be filing a petition with the U.S. Tax Court. For years 2010-2012, we are pursuing resolution through the IRS Administrative Appeals Process.

State income tax returns are generally subject to examination for a period of 3 to 5 years after filing of the respective return. The state impact of any federal changes generally remains subject to examination by various states for a period of up to one year after formal notification to the states. We have various state income tax return positions in the process of examination, administrative appeals or litigation.

In other major jurisdictions, open years are generally 2011 or later.

16. Capital Stock and Earnings per Share

We are authorized to issue 250.0 million shares of preferred stock, none of which were issued or outstanding as of December 31, 2018.

The numerator for both basic and diluted earnings per share is net earnings available to common stockholders. The denominator for basic earnings per share is the weighted average number of common shares outstanding during the period. The denominator for diluted earnings per share is weighted average shares outstanding adjusted for the effect of dilutive stock options and other equity awards. The following is a reconciliation of weighted average shares for the basic and diluted share computations (in millions):

	For the Years Ended December 31,		
	2018	2017	2016
Weighted average shares outstanding for basic net earnings per share	203.5	201.9	200.0
Effect of dilutive stock options and other equity awards	–	1.8	2.4
Weighted average shares outstanding for diluted net earnings per share	203.5	203.7	202.4

Since we incurred a net loss in the year ended December 31, 2018, no dilutive stock options or other equity awards were included as diluted shares. For the years ended December 31, 2017 and 2016, an average of 1.0 million and 0.9 million options, respectively, to purchase shares of common stock were not included in the computation of diluted earnings per share as the exercise prices of these options were greater than the average market price of the common stock.

During 2016, we repurchased 4.2 million shares of our common stock at an average price of $98.50 per share for a total cash outlay of $415.5 million, including commissions.

17. Segment Data

We design, manufacture and market orthopedic reconstructive products; sports medicine, biologics, extremities and trauma products; spine, craniomaxillofacial and thoracic products ("CMF"); office based technologies; dental implants; and related surgical products. Our chief operating decision maker ("CODM") allocates resources to achieve our operating profit goals through seven operating segments. Our operating segments are comprised of both geographic and product category business units. The geographic operating segments are the Americas, which is comprised principally of the U.S. and includes other North, Central and South American markets; EMEA, which is comprised principally of Europe and includes the Middle East and African markets; and Asia Pacific, which is comprised primarily of Japan, China and Australia and includes other Asian and Pacific markets. The product category operating

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

segments are Spine, Office Based Technologies, CMF and Dental. The geographic operating segments include results from all of our product categories except those in the product category operating segments. The Office Based Technologies, CMF and Dental product category operating segments reflect those respective product category results from all regions, whereas the Spine product category operating segment includes all spine product results excluding those from Asia Pacific.

As it relates to the geographic operating segments, our CODM evaluates performance based upon segment operating profit exclusive of operating expenses pertaining to inventory and manufacturing-related charges, intangible asset amortization, goodwill and intangible asset impairment, acquisition, integration and related, quality remediation, litigation, certain European Union Medical Device Regulation expenses, other charges, and global operations and corporate functions. Global operations and corporate functions include research, development engineering, medical education, brand management, corporate legal, finance and human resource functions, manufacturing operations and logistics and share-based payment expense. As it relates to each product category operating segment, research, development engineering, medical education, brand management and other various costs that are specific to the product category operating segment's operations are reflected in its operating profit results. Due to these additional costs included in the product category operating segments, profitability metrics among the geographic operating segments and product category operating segments are not comparable. Intercompany transactions have been eliminated from segment operating profit.

Our CODM does not review asset information by operating segment. Instead, our CODM reviews cash flow and other financial ratios by operating segment.

These seven operating segments are the basis for our reportable segment information provided below. The four product category operating segments are individually insignificant to our consolidated results and therefore do not constitute a reporting segment either individually or combined. For presentation purposes, these product category operating segments have been aggregated. Prior period reportable segment financial information has been restated to reflect the impact of the adoption of ASU 2017-07 and ASU 2014-09, as described in Note 2.

In November 2018 we hired a new Group President, Orthopedics. This new position has different responsibilities than any previous leadership team member. As of December 31, 2018, our operating segments have not changed. However, it is likely in 2019 that there will be changes in either our operating segments or the composition of operating profit in our current operating segments. We cannot determine at this time what those changes may be.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

Net sales and other information by segment is as follows (in millions):

	Americas	EMEA	Asia Pacific	Immaterial Product Category Operating Segments	Global Operations and Corporate Functions	Total
For the Year Ended December 31, 2018						
Net sales	$3,932.6	$1,576.1	$1,236.9	$1,187.3	$ –	$7,932.9
Depreciation and amortization	120.4	70.3	66.6	45.0	738.2	1,040.5
Segment operating profit	2,055.9	478.4	427.3	208.6	(959.9)	2,210.3
Inventory and manufacturing-related charges						(32.5)
Intangible asset amortization						(595.9)
Goodwill and intangible asset impairment						(979.7)
Acquisition, integration and related						(133.7)
Quality remediation						(165.4)
Litigation						(186.0)
European Union Medical Device Regulation						(3.7)
Other charges						(79.6)
Operating profit						33.8
For the Year Ended December 31, 2017						
Net sales	$3,928.9	$1,523.4	$1,158.3	$1,192.7	$ –	$7,803.3
Depreciation and amortization	127.6	71.7	60.2	45.7	757.5	1,062.7
Segment operating profit	2,126.8	478.3	417.6	262.9	(860.0)	2,425.6
Inventory and manufacturing-related charges						(70.8)
Intangible asset amortization						(603.9)
Goodwill and intangible asset impairment						(331.5)
Acquisition, integration and related						(279.8)
Quality remediation						(195.1)
Litigation						(104.0)
Other charges						(41.2)
Operating profit						799.3
For the Year Ended December 31, 2016						
Net sales	$3,927.9	$1,512.7	$1,095.6	$1,132.2	$ –	$7,668.4
Depreciation and amortization	135.5	69.6	53.3	38.1	742.8	1,039.3
Segment operating profit	2,133.3	498.2	431.8	272.6	(811.1)	2,524.8
Inventory and manufacturing-related charges						(468.3)
Intangible asset amortization						(565.9)
Intangible asset impairment						(31.1)
Acquisition, integration and related						(504.9)
Quality remediation						(54.3)
Litigation						(33.3)
Other charges						(45.9)
Operating profit						821.1

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

We conduct business in the following countries that hold 10 percent or more of our total consolidated Property, plant and equipment, net (in millions):

	As of December 31,	
	2018	2017
United States	$1,235.1	$1,151.6
Other countries	780.3	887.0
Property, plant and equipment, net	$2,015.4	$2,038.6

U.S. sales were $4,560.0 million, $4,582.2 million, and $4,525.8 million for the years ended December 31, 2018, 2017 and 2016, respectively. Sales within any other individual country were less than 10 percent of our consolidated sales in each of those years. Sales are attributable to a country based upon the customer's country of domicile.

18. Leases

Total rent expense for the years ended December 31, 2018, 2017 and 2016 aggregated $72.2 million, $87.2 million, and $74.0 million, respectively.

Future minimum rental commitments under non-cancelable operating leases in effect as of December 31, 2018 were (in millions):

For the Years Ending December 31,	
2019	$67.1
2020	56.9
2021	44.1
2022	32.2
2023	27.7
Thereafter	81.6

19. Commitments and Contingencies

On a quarterly and annual basis, we review relevant information with respect to loss contingencies and update our accruals, disclosures and estimates of reasonably possible losses or ranges of loss based on such reviews. We establish liabilities for loss contingencies when it is probable that a loss has been incurred and the amount of the loss can be reasonably estimated. For matters where a loss is believed to be reasonably possible, but not probable, no accrual has been made.

Litigation

Durom Cup-related claims: On July 22, 2008, we temporarily suspended marketing and distribution of the Durom Cup in the U.S. Subsequently, a number of product liability lawsuits were filed against us in various U.S. and foreign jurisdictions. The plaintiffs seek damages for personal injury, and they generally allege that the Durom Cup contains defects that result in complications and premature revision of the device. We have settled the majority of these claims and others are still pending. The majority of the pending U.S. lawsuits are currently in an MDL in the District of New Jersey (*In Re: Zimmer Durom Hip Cup Products Liability Litigation*). Litigation activity in the MDL is stayed pending finalization of the U.S. Durom Cup Settlement Program, an extrajudicial program created to resolve actions and claims of eligible U.S. plaintiffs and claimants. Other lawsuits are pending in various domestic and foreign jurisdictions, and additional claims may be asserted in the future. The majority of claims outside the U.S. are pending in Canada, Germany, Netherlands, Italy and the UK. A Canadian class settlement was approved in late 2016, and the period for class members to submit a claim for compensation under the settlement closed in September 2017. All claims under the Canadian class settlement have been paid. The majority of claims in the UK, which were consolidated in a Group Litigation Order, were recently discontinued.

In 2018, we lowered our estimate of the number of Durom Cup-related claims we expect to settle. Therefore, we recognized a $37.2 million gain in SG&A expense in the year ended December 31, 2018. We recognized $10.3 million in expense for Durom Cup-related claims in 2017, with no expense recorded in 2016. Since 2008, we have recognized net expense of $452.5 million for Durom Cup-related claims.

We maintain insurance for product liability claims, subject to self-insurance retention requirements. We have recovered insurance proceeds from certain of our insurance carriers for Durom Cup-related claims. While we may recover additional insurance proceeds in the future for Durom Cup-related claims, we do not have a receivable recorded on our consolidated balance sheet as of December 31, 2018 for any possible future insurance recoveries for these claims.

Our estimate as of December 31, 2018 of the remaining liability for all Durom Cup-related claims is $91.6 million, of which $19.5 million is classified as short-term in "Other current liabilities" and $72.1 million is classified as long-term in "Other long-term liabilities" on our consolidated balance sheet. We expect to pay the majority of the Durom Cup-related claims within the next few years.

Our understanding of clinical outcomes with the Durom Cup and other large diameter hip cups continues to evolve. We rely on significant estimates in determining the provisions for Durom Cup-related claims, including our estimate of the number of claims that we will receive and the average amount we will pay per claim. The actual number of claims and the actual amount we pay per claim may differ from our estimates. Among other factors, since our understanding of the clinical outcomes is still evolving, we cannot reasonably estimate the possible loss or range of loss that may result from Durom Cup-related claims in excess of the losses we have accrued. Although we are vigorously defending these lawsuits, their ultimate resolution is uncertain.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

NexGen Knee System claims: Following a wide-spread advertising campaign conducted by certain law firms beginning in 2010, a number of product liability lawsuits have been filed against us in various jurisdictions. The plaintiffs seek damages for personal injury, alleging that certain products within the NexGen Knee System, specifically the NexGen Flex Femoral Components and MIS Stemmed Tibial Component, suffer from defects that cause them to loosen prematurely. The majority of the cases are currently pending in an MDL in the Northern District of Illinois (*In Re: Zimmer NexGen Knee Implant Products Liability Litigation*). Other cases are pending in various state courts, and additional lawsuits may be filed. Thus far, all cases decided by the MDL court or a jury on the merits have involved NexGen Flex Femoral Components, which represent the majority of cases in the MDL. The initial bellwether trial took place in October 2015 and resulted in a defense verdict. The next scheduled bellwether trial, which was set to commence in November 2016, was dismissed following the court's grant of summary judgment in our favor in October 2016. That decision was appealed by the plaintiff and subsequently affirmed by the Seventh Circuit Court of Appeals in March 2018. The second bellwether trial took place in January 2017 and resulted in a defense verdict. The parties attended a court-ordered mediation in January 2018, at which a settlement in principle was reached that would resolve all MDL cases and all state court cases that involved MDL products. On February 11, 2019, we informed the MDL court of our intention to consummate a confidential settlement that resolves 273 of the remaining 279 cases.

Zimmer M/L Taper, M/L Taper with Kinectiv Technology, and Versys Femoral Head-related claims: We are a defendant in a number of product liability lawsuits relating to our M/L Taper and M/L Taper with Kinectiv Technology hip stems, and Versys Femoral Head implants. The plaintiffs seek damages for personal injury, alleging that defects in the products lead to corrosion at the head/stem junction resulting in, among other things, pain, inflammation and revision surgery. The majority of the cases are consolidated in an MDL in the United States District Court for the Southern District of New York (*In Re: Zimmer M/L Taper Hip Prosthesis or M/L Taper Hip Prosthesis with Kinectiv Technology and Versys Femoral Head Products Liability Litigation*). Other related cases are pending in various state courts, with the majority of state court cases pending in Oregon, New Mexico, Indiana and Florida. Additional lawsuits are likely to be filed. Although we are vigorously defending these lawsuits, their ultimate resolution is uncertain.

Biomet metal-on-metal hip implant claims: Biomet is a defendant in a number of product liability lawsuits relating to metal-on-metal hip implants, most of which involve the M2a-Magnum hip system. The majority of the cases are currently consolidated in an MDL in the U.S. District Court for the Northern District of Indiana *(In Re: Biomet M2a Magnum Hip Implant Product Liability Litigation)*. Other cases are pending in various state and foreign courts, with the majority of domestic state court cases pending in Indiana and Florida.

On February 3, 2014, Biomet announced the settlement of the MDL. Lawsuits filed in the MDL by April 15, 2014 were eligible to participate in the settlement. Those claims that did not settle via the MDL settlement program have re-commenced litigation in the MDL under a new case management plan, or are in the process of being remanded to their originating jurisdictions. The settlement does not affect certain other claims relating to Biomet's metal-on-metal hip products that are pending in various state and foreign courts, or other claims that may be filed in the future. In light of recent litigation developments, our estimate as of December 31, 2018 of the remaining liability for all Biomet metal-on-metal hip implant claims has increased to $70.4 million.

Biomet has exhausted the self-insured retention in its insurance program and has been reimbursed for claims related to its metal-on-metal products up to its policy limits in the program. Zimmer Biomet is responsible for any amounts by which the ultimate losses exceed the amount of Biomet's third-party insurance coverage. As of December 31, 2018, Biomet had received all of the insurance proceeds it expects to recover under the excess policies. Although we are vigorously defending these lawsuits, their ultimate resolution is uncertain.

Heraeus trade secret misappropriation lawsuits: In December 2008, Heraeus Kulzer GmbH (together with its affiliates, "Heraeus") initiated legal proceedings in Germany against Biomet, Inc., Biomet Europe BV, certain other entities and certain employees alleging that the defendants misappropriated Heraeus trade secrets when developing Biomet Europe's Refobacin and Biomet Bone Cement line of cements ("European Cements"). The lawsuit sought to preclude the defendants from producing, marketing and offering for sale their current line of European Cements and to compensate Heraeus for any damages incurred.

Germany: On June 5, 2014, the German appeals court in Frankfurt (i) enjoined Biomet, Inc., Biomet Europe BV and Biomet Deutschland GmbH from manufacturing, selling or offering the European Cements to the extent they contain certain raw materials in particular specifications; (ii) held the defendants jointly and severally liable to Heraeus for any damages from the sale of European Cements since 2005; and (iii) ruled that no further review may be sought (the "Frankfurt Decision"). The Heraeus and Biomet parties both sought appeal against the Frankfurt Decision. In a decision dated June 16, 2016, the German Supreme Court dismissed the parties' appeals without reaching the merits, rendering that decision final.

In December 2016, Heraeus filed papers to restart proceedings against Biomet Orthopaedics Switzerland GmbH, seeking to require that entity to relinquish its CE certificates for the European Cements. In January 2017, Heraeus notified Biomet it had filed a claim for damages in the amount of €121.9 million for sales in Germany, which it later increased to €125.9 million. In September 2017, Heraeus filed an

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

enforcement action in the Darmstadt court against Biomet Europe, requesting that a fine be imposed against Biomet Europe for failure to disclose the amount of the European Cements which Biomet Orthopaedics Switzerland had ordered to be manufactured in Germany (e.g., for the Chinese market). In June 2018, the Darmstadt court dismissed Heraeus' request. Heraeus appealed the decision. Also in September 2017, Heraeus filed suit against Zimmer Biomet Deutschland in the court of first instance in Freiberg concerning the sale of the European Cements with certain changed raw materials. Heraeus seeks an injunction on the basis that the continued use of the product names for the European Cements is misleading for customers and thus an act of unfair competition. On June 29, 2018, the court in Freiberg, Germany dismissed Heraeus' request for an injunction prohibiting the marketing of the European Cements under their current names on the grounds that the same request had already been decided upon by the Frankfurt Decision which became final and binding. Heraeus has appealed this decision to the Court of Appeals in Karlsruhe, Germany.

United States: On September 8, 2014, Heraeus filed a complaint against a Biomet supplier, Esschem, Inc. ("Esschem"), in the U.S. District Court for the Eastern District of Pennsylvania. The lawsuit contained allegations that focused on two copolymer compounds that Esschem sells to Biomet, which Biomet incorporates into certain bone cement products that compete with Heraeus' bone cement products. The complaint alleged that Biomet helped Esschem to develop these copolymers, using Heraeus trade secrets that Biomet allegedly misappropriated. The complaint asserted a claim under the Pennsylvania Uniform Trade Secrets Act, as well as other various common law tort claims, all based upon the same trade secret misappropriation theory. Heraeus sought to enjoin Esschem from supplying the copolymers to any third party and actual damages. The complaint also sought punitive damages, costs and attorneys' fees. Although Biomet was not a party to this lawsuit, Biomet agreed, at Esschem's request and subject to certain limitations, to indemnify Esschem for any liability, damages and legal costs related to this matter. On November 3, 2014, the court entered an order denying Heraeus' motion for a temporary restraining order. On June 30, 2016, the court entered an order denying Heraeus' request to give preclusive effect to the factual findings in the Frankfurt Decision. On June 6, 2017, the court entered an order denying Heraeus' motion to add Biomet as a party to the lawsuit. On January 26, 2018, the court entered an order granting Esschem's motion for summary judgment and dismissed all of Heraeus' claims with prejudice. On February 21, 2018, Heraeus filed a notice of appeal to the U.S. Court of Appeals for the Third Circuit, which heard oral argument on the appeal on October 23, 2018.

On December 7, 2017, Heraeus filed a complaint against Zimmer Biomet Holdings, Inc. and Biomet, Inc. in the U.S. District Court for the Eastern District of Pennsylvania alleging a single claim of trade secret misappropriation under the Pennsylvania Uniform Trade Secrets Act based on the same factual allegations as the Esschem litigation. On March 5, 2018, Heraeus filed an amended complaint adding a second claim of trade secret misappropriation under Pennsylvania common law. Heraeus seeks to enjoin the Zimmer Biomet parties from future use of the allegedly misappropriated trade secrets and recovery of unspecified damages for alleged past use. On April 18, 2018, the Zimmer Biomet parties filed a motion to dismiss both claims.

Other European Countries: Heraeus continues to pursue other related legal proceedings in Europe seeking various forms of relief, including injunctive relief and damages, against Biomet-related entities relating to the European Cements. On October 2, 2018, the Belgian Court of Appeal of Mons issued a judgment in favor of Heraeus relating to its request for past damages caused by the alleged misappropriation of its trade secrets, and an injunction preventing future sales of certain European Cements in Belgium (the "Belgian Decision"). We have appealed this judgment to the Belgian Supreme Court. Heraeus subsequently filed a suit in Belgium concerning the continued sale of the European Cements with certain changed materials. Like its suit in Germany, Heraeus seeks an injunction on the basis that the continued use of the product names for the European Cements is misleading for customers and thus an act of unfair competition.

On February 13, 2019, a Norwegian court of first instance issued a judgment in favor of Heraeus on its claim for misappropriation of trade secrets. The court awarded damages of 19,500,000 NOK or approximately $2.3 million plus attorneys' fees, and issued an injunction, which is not final and thus not currently being enforced, preventing Zimmer Biomet Norway from marketing in Norway bone cements identified with the current product names and bone cements making use of the trade secrets which were acknowledged in the Frankfurt Decision. We intend to appeal this judgment.

Heraeus is pursuing damages and injunctive relief in France in an effort to prevent us from manufacturing, marketing and selling the European Cements (the "France Litigation"). The European Cements are manufactured at our facility in Valence, France. On December 11, 2018, a hearing was held in the France Litigation before the commercial court in Romans-sur-Isère, and the court's decision in this matter is expected in the second quarter of 2019. Although we are vigorously defending the France Litigation, the ultimate outcome is uncertain. An adverse ruling in the France Litigation could have a material adverse effect on our business, financial condition and results of operations.

We have accrued an estimated loss relating to the collective European trade secret litigation, including estimated legal costs to defend. Damages relating to the Frankfurt Decision are subject to separate proceedings, and the Belgian court appointed an expert to determine the amount of damages related to the Belgian Decision. Thus, it is reasonably possible that our estimate of the loss we may incur may change in the future. Although we are vigorously defending these lawsuits, their ultimate resolution is uncertain.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

Stryker patent infringement lawsuit: On December 10, 2010, Stryker Corporation and related entities ("Stryker") filed suit against us in the U.S. District Court for the Western District of Michigan, alleging that certain of our Pulsavac® Plus Wound Debridement Products infringe three U.S. patents assigned to Stryker. The case was tried beginning on January 15, 2013, and on February 5, 2013, the jury found that we infringed certain claims of the subject patents. The jury awarded $70.0 million in monetary damages for lost profits. The jury also found that we willfully infringed the subject patents. We filed multiple post-trial motions, including a motion seeking a new trial. On August 7, 2013, the trial court issued a ruling denying all of our motions and awarded treble damages and attorneys' fees to Stryker. We filed a notice of appeal to the Court of Appeals for the Federal Circuit to seek reversal of both the jury's verdict and the trial court's rulings on our post-trial motions. Oral argument before the Court of Appeals for the Federal Circuit took place on September 8, 2014. On December 19, 2014, the Federal Circuit issued a decision affirming the $70.0 million lost profits award but reversed the willfulness finding, vacating the treble damages award and vacating and remanding the attorneys' fees award. We accrued an estimated loss of $70.0 million related to this matter in the three month period ended December 31, 2014. On January 20, 2015, Stryker filed a motion with the Federal Circuit for a rehearing *en banc*. On March 23, 2015, the Federal Circuit denied Stryker's petition. Stryker subsequently filed a petition for certiorari to the U.S. Supreme Court. In July 2015, we paid the final lost profits award of $90.3 million, which includes the original $70.0 million plus pre- and post-judgment interest and damages for sales that occurred post-trial but prior to our entry into a license agreement with Stryker. On October 19, 2015, the U.S. Supreme Court granted Stryker's petition for certiorari. Oral argument took place on February 23, 2016. On June 13, 2016, the U.S. Supreme Court issued its decision, vacating the judgment of the Federal Circuit and remanding the case for further proceedings related to the willfulness issue. On September 12, 2016, the Federal Circuit issued an opinion affirming the jury's willfulness finding and vacating and remanding the trial court's award of treble damages, its finding that this was an exceptional case and its award of attorneys' fees. The case was remanded back to the trial court. Oral argument on Stryker's renewed consolidated motion for enhanced damages and attorneys' fees took place on June 28, 2017. On July 12, 2017, the trial court issued an order reaffirming its award of treble damages, its finding that this was an exceptional case and its award of attorneys' fees. On July 24, 2017, we appealed the ruling to the Federal Circuit and obtained a supersedeas bond staying enforcement of the judgment pending appeal. Oral argument before the Federal Circuit took place on December 3, 2018 and the Federal Circuit affirmed the trial court's ruling in full on December 10, 2018. Although we filed a petition with the Federal Circuit for a rehearing *en banc* which remains pending, it is probable that we will be required to pay approximately $168 million related to the award of treble damages and attorneys' fees in 2019, and we accrued an estimated loss of this amount in the three month period ended December 31, 2018.

Putative Securities Class Action: On December 2, 2016, a complaint was filed in the U.S. District Court for the Northern District of Indiana (*Shah v. Zimmer Biomet Holdings, Inc. et al.)*, naming us, one of our officers and two of our now former officers as defendants. On June 28, 2017, the plaintiffs filed a corrected amended complaint, naming as defendants, in addition to those previously named, current and former members of our Board of Directors, one additional officer, and the underwriters in connection with secondary offerings of our common stock by certain selling stockholders in 2016. On October 6, 2017, the plaintiffs voluntarily dismissed the underwriters without prejudice. On October 8, 2017, the plaintiffs filed a second amended complaint, naming as defendants, in addition to those current and former officers and Board members previously named, certain former stockholders of ours who sold shares of our common stock in secondary public offerings in 2016. We and our current and former officers and Board members named as defendants are sometimes hereinafter referred to as the "Zimmer Biomet Defendant group". The former stockholders of ours who sold shares of our common stock in secondary public offerings in 2016 are sometimes hereinafter referred to as the "Private Equity Fund Defendant group". The second amended complaint relates to a putative class action on behalf of persons who purchased our common stock between June 7, 2016 and November 7, 2016. The second amended complaint generally alleges that the defendants violated federal securities laws by making materially false and/or misleading statements and/or omissions about our compliance with FDA regulations and our ability to continue to accelerate our organic revenue growth rate in the second half of 2016. The defendants filed their respective motions to dismiss on December 20, 2017, plaintiffs filed their omnibus response to the motions to dismiss on March 13, 2018 and the defendants filed their respective reply briefs on May 18, 2018. On September 27, 2018, the court denied the Zimmer Biomet Defendant group's motion to dismiss in its entirety. The court granted the Private Equity Fund Defendant group's motion to dismiss, without prejudice. On October 9, 2018, the Zimmer Biomet Defendant group filed a motion to amend the court's order on the motion to certify two issues for interlocutory appeal, and a motion to stay proceedings pending appeal. That motion remains pending. The plaintiffs seek unspecified damages and interest, attorneys' fees, costs and other relief. We believe this lawsuit is without merit, and we and the individual defendants are defending it vigorously.

Regulatory Matters, Government Investigations and Other Matters

FDA warning letters: In August 2018, we received a warning letter from the FDA related to observed non-conformities with current good manufacturing practice requirements of the QSR at our Warsaw North Campus facility.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

In May 2016, we received a warning letter from the FDA related to observed non-conformities with current good manufacturing practice requirements of the QSR at our facility in Montreal, Quebec, Canada. In September 2012, we received a warning letter from the FDA citing concerns relating to certain processes pertaining to products manufactured at our Ponce, Puerto Rico manufacturing facility. We have provided detailed responses to the FDA as to our corrective actions and will continue to work expeditiously to address the issues identified by the FDA during inspections in Warsaw, Montreal and Ponce. As of February 15, 2019, these warning letters remained pending. Until the violations cited in the pending warning letters are corrected, we may be subject to additional regulatory action by the FDA, as described more fully below. Additionally, requests for Certificates to Foreign Governments related to products manufactured at certain of our facilities may not be granted and premarket approval applications for Class III devices to which the QSR deviations at these facilities are reasonably related will not be approved until the violations have been corrected. In addition to responding to the warning letters described above, we are in the process of addressing various FDA Form 483 inspectional observations at certain of our manufacturing facilities, including at both the legacy Zimmer and the legacy Biomet manufacturing facilities in Warsaw, Indiana. The ultimate outcome of these matters is presently uncertain. Among other available regulatory actions, the FDA may impose operating restrictions, including a ceasing of operations, at one or more facilities, enjoining and restraining certain violations of applicable law pertaining to medical devices and assessing civil or criminal penalties against our officers, employees or us. The FDA could also issue a corporate warning letter, a recidivist warning letter or a consent decree of permanent injunction. The FDA may also recommend prosecution by the DOJ. Any adverse regulatory action, depending on its magnitude, may restrict us from effectively manufacturing, marketing and selling our products and could have a material adverse effect on our business, financial condition and results of operations.

DPA relating to FCPA matters: On January 12, 2017, we resolved previously-disclosed FCPA matters involving Biomet and certain of its subsidiaries. As part of the settlement, (i) Biomet resolved matters with the SEC through an administrative cease-and-desist order (the "Order"); (ii) we entered into a DPA with the DOJ; and (iii) JERDS Luxembourg Holding S.à r.l. ("JERDS"), the direct parent company of Biomet 3i Mexico SA de CV and an indirect, wholly-owned subsidiary of Biomet, entered into a plea agreement (the "Plea Agreement") with the DOJ. The conduct underlying these resolutions occurred prior to our acquisition of Biomet.

Pursuant to the terms of the Order, Biomet resolved claims with the SEC related to violations of the books and records, internal controls and anti-bribery provisions of the FCPA by disgorging profits to the U.S. government in an aggregate amount of approximately $6.5 million, inclusive of pre-judgment interest, and paying a civil penalty in the amount of $6.5 million (collectively, the "Civil Settlement Payments"). We also agreed to pay a criminal penalty of approximately $17.5 million (together with the Civil Settlement Payments, the "Settlement Payments") to the U.S. government pursuant to the terms of the DPA. We made the Settlement Payments in January 2017 and, as previously disclosed, had accrued, as of June 24, 2015, the closing date of the Biomet merger, an amount sufficient to cover this matter.

Under the DPA, which has a term of three years, the DOJ agreed to defer criminal prosecution of us in connection with the charged violation of the internal controls provision of the FCPA as long as we comply with the terms of the DPA. In addition, we are subject to oversight by an independent compliance monitor. The monitor, who was appointed effective as of July 2017, will focus on legacy Biomet operations as integrated into our operations. If we remain in compliance with the DPA during its term, the charges against us will be dismissed with prejudice. The term of the DPA may be extended for up to one additional year at the DOJ's discretion. In addition, under its Plea Agreement with the DOJ, JERDS pleaded guilty on January 13, 2017 to aiding and abetting a violation of the books and records provision of the FCPA. In light of the DPA we entered into, JERDS paid only a nominal assessment and no criminal penalty.

If we do not comply with the terms of the DPA, we could be subject to prosecution for violating the internal controls provisions of the FCPA and the conduct of Biomet and its subsidiaries described in the DPA, which conduct pre-dated our acquisition of Biomet, as well as any new or continuing violations. We could also be subject to exclusion by OIG-HHS from participation in federal healthcare programs, including Medicaid and Medicare. Any of these events could have a material adverse effect on our business, financial condition, results of operations and cash flows.

OIG subpoena: In June 2017, we received a subpoena from the OIG. The subpoena requests that we produce a variety of records primarily related to our healthcare professional consulting arrangements (including in the areas of medical education, product development, and clinical research) for the period spanning January 1, 2010 to the present. The subpoena does not indicate the nature of the OIG's investigation beyond reference to possible false or otherwise improper claims submitted for payment. We are in the process of responding to the subpoena. We cannot currently predict the outcome of this investigation.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Continued)*

20. Quarterly Financial Information (Unaudited)

(in millions, except per share data)

	2018 Quarter Ended				2017 Quarter Ended			
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
Net sales	$2,017.6	$2,007.6	$1,836.7	$2,071.0	$1,972.4	$1,949.5	$1,813.1	$2,068.3
Gross profit	1,291.0	1,274.4	1,160.1	1,339.6	1,307.5	1,274.1	1,159.5	1,325.4
Net earnings (loss) of Zimmer Biomet Holdings, Inc.	174.7	185.0	162.2	(901.1)	299.4	184.2	98.8	1,231.4
Earnings (loss) per common share								
Basic	0.86	0.91	0.80	(4.42)	1.49	0.91	0.49	6.08
Diluted	0.85	0.90	0.79	(4.42)	1.47	0.90	0.48	6.03

In the three month period ended December 31, 2018, we recorded goodwill impairment charges of $975.9 million.

In the three month period ended December 31, 2017, we recognized a $1,272.4 million income tax benefit related to the 2017 Tax Act. The benefit was partially offset by a $272.0 million goodwill impairment charge related to our Spine reporting unit.

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

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) that are designed to provide reasonable assurance that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosures. Because of inherent limitations, disclosure controls and procedures, no matter how well designed and operated, can provide only reasonable, and not absolute, assurance that the objectives of disclosure controls and procedures are met.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that as of December 31, 2018, the end of the period covered by this report, our disclosure controls and procedures were effective at a reasonable assurance level.

Management's Annual Report on Internal Control over Financial Reporting

The management of Zimmer Biomet Holdings, Inc. is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act, as a process designed by, or under the supervision of, the Company's principal executive and principal financial officers, or persons performing similar functions, and effected by the Company's board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- 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.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2018. In making this assessment, the Company's management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework* (2013).

Based on their assessment, management has concluded that, as of December 31, 2018, the Company's internal control over financial reporting is effective based on those criteria.

The Company's independent registered public accounting firm, PricewaterhouseCoopers LLP, has audited the effectiveness of the Company's internal control over financial reporting as of December 31, 2018, as stated in its report which appears in Item 8 of this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

During the fourth quarter of 2018, the Audit Committee of our Board of Directors was not asked to, and did not, approve the engagement of PricewaterhouseCoopers LLP, our independent registered public accounting firm, to perform any non-audit services. This disclosure is made pursuant to Section 10A(i)(2) of the Exchange Act.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information required by this item is incorporated by reference from our definitive Proxy Statement for the annual meeting of stockholders to be held on May 10, 2019 (the "2019 Proxy Statement").

We have adopted the Zimmer Biomet Code of Ethics for Chief Executive Officer and Senior Financial Officers (the "finance code of ethics"), a code of ethics that applies to our Chief Executive Officer, Chief Financial Officer, Chief Accounting Officer and Corporate Controller, and other finance organization senior employees. The finance code of ethics is publicly available in the Investor Relations section of our website, which may be accessed from our homepage at www.zimmerbiomet.com or directly at http://investor.zimmerbiomet.com. If we make any substantive amendments to the finance code of ethics or grant any waiver, including any implicit waiver, from a provision of the code to our Chief Executive Officer, Chief Financial Officer, or Chief Accounting Officer and Corporate Controller, we will disclose the nature of that amendment in the Investor Relations section of our website.

Item 11. Executive Compensation

Information required by this item is incorporated by reference from our 2019 Proxy Statement.

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

Information required by this item is incorporated by reference from our 2019 Proxy Statement.

Item 13. Certain Relationships and Related Transactions and Director Independence

Information required by this item is incorporated by reference from our 2019 Proxy Statement.

Item 14. Principal Accountant Fees and Services

Information required by this item is incorporated by reference from of our 2019 Proxy Statement.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) 1. Financial Statements

The following consolidated financial statements of Zimmer Biomet Holdings, Inc. and its subsidiaries are set forth in Part II, Item 8.

Report of Independent Registered Public Accounting Firm

Consolidated Statements of Earnings for the Years Ended December 31, 2018, 2017 and 2016

Consolidated Statements of Comprehensive Income (Loss) for the Years Ended December 31, 2018, 2017 and 2016

Consolidated Balance Sheets as of December 31, 2018 and 2017

Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2018, 2017 and 2016

Consolidated Statements of Cash Flows for the Years Ended December 31, 2018, 2017 and 2016

Notes to Consolidated Financial Statements

2. Financial Statement Schedule

Schedule II. Valuation and Qualifying Accounts

Description	Balance at Beginning of Period	Additions Charged (Credited) to Expense	Deductions / Other Additions to Reserve	Effects of Foreign Currency	Acquired Allowances	Balance at End of Period
Allowance for Doubtful Accounts:						
Year Ended December 31, 2016	$ 34.1	$22.3	$ (4.5)	$(0.3)	$ –	$ 51.6
Year Ended December 31, 2017	51.6	13.6	(5.1)	0.1	–	60.2
Year Ended December 31, 2018	60.2	10.7	(3.6)	(1.6)	–	65.7
Deferred Tax Asset Valuation Allowances:						
Year Ended December 31, 2016	$ 72.7	$24.8	$(12.4)	$(1.1)	$ 4.3	$ 88.3
Year Ended December 31, 2017	88.3	41.3	(10.3)	2.8	18.5	140.6
Year Ended December 31, 2018	140.6	48.2	206.2[1]	(4.1)	–	390.9

(1) Primarily relate to amounts generated by tax rate changes or current year activity which have offsetting changes to the associated attribute and therefore there is no resulting impact on tax expense in the consolidated financial statements.

Other financial statement schedules are omitted because they are not applicable or the required information is shown in the financial statements or the notes thereto.

3. Exhibits

INDEX TO EXHIBITS

Exhibit No	Description†
3.1	Restated Certificate of Incorporation of Zimmer Biomet Holdings, Inc., dated June 24, 2015 (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed June 26, 2015)
3.2	Restated By-Laws of Zimmer Biomet Holdings, Inc., effective June 24, 2015 (incorporated by reference to Exhibit 3.3 to the Registrant's Current Report on Form 8-K filed June 26, 2015)
4.1	Specimen Common Stock certificate (incorporated by reference to Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q filed August 10, 2015)
4.2	Indenture dated as of November 17, 2009 between Zimmer Holdings, Inc. (now known as Zimmer Biomet Holdings, Inc.) and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed December 13, 2016)
4.3	First Supplemental Indenture to the Indenture dated as of November 17, 2009 between Zimmer Holdings, Inc. and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed November 17, 2009)
4.4	Form of 4.625% Note due 2019 (incorporated by reference to Exhibit 4.3 above)
4.5	Form of 5.750% Note due 2039 (incorporated by reference to Exhibit 4.3 above)
4.6	Second Supplemental Indenture dated as of November 10, 2011, to the Indenture dated as of November 17, 2009 between Zimmer Holdings, Inc. and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed November 10, 2011)
4.7	Form of 3.375% Note due 2021 (incorporated by reference to Exhibit 4.6 above)
4.8	Third Supplemental Indenture, dated as of March 19, 2015, to the Indenture dated as of November 17, 2009 between Zimmer Holdings, Inc. and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed March 19, 2015)
4.9	Form of 2.700% Notes due 2020 (incorporated by reference to Exhibit 4.8 above)
4.10	Form of 3.150% Notes due 2022 (incorporated by reference to Exhibit 4.8 above)
4.11	Form of 3.550% Notes due 2025 (incorporated by reference to Exhibit 4.8 above)
4.12	Form of 4.250% Notes due 2035 (incorporated by reference to Exhibit 4.8 above)
4.13	Form of 4.450% Notes due 2045 (incorporated by reference to Exhibit 4.8 above)
4.14	Fourth Supplemental Indenture, dated as of December 13, 2016, between Zimmer Biomet Holdings, Inc. and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed December 13, 2016)
4.15	Form of 1.414% Notes due 2022 (incorporated by reference to Exhibit 4.14 above)
4.16	Form of 2.425% Notes due 2026 (incorporated by reference to Exhibit 4.14 above)
4.17	Agency Agreement, dated as of December 13, 2016, by and among Zimmer Biomet Holdings, Inc., as issuer, Elavon Financial Services DAC, UK Branch, as paying agent, Elavon Financial Services DAC, as registrar and transfer agent, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.3 to the Registrant's Current Report on Form 8-K filed December 13, 2016)
4.18	Amendment No. 1, dated as of January 4, 2017, to the Agency Agreement dated as of December 13, 2016, by and among Zimmer Biomet Holdings, Inc., as issuer, Elavon Financial Services DAC, UK Branch, as paying agent, Elavon Financial Services DAC, as original registrar and original transfer agent, U.S. Bank National Association, as successor registrar and successor transfer agent, and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.4 to the Registrant's Registration Statement on Form 8-A filed January 4, 2017)
4.19	Fifth Supplemental Indenture, dated as of March 19, 2018, between Zimmer Biomet Holdings, Inc. and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed March 19, 2018)
4.20	Form of Floating Rate Notes due 2021 (incorporated by reference to Exhibit 4.19 above)
4.21	Form of 3.700% Notes due 2023 (incorporated by reference to Exhibit 4.19 above)
10.1*	Zimmer Biomet Holdings, Inc. Executive Performance Incentive Plan, as amended May 7, 2013 and further amended as of June 24, 2015 (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q filed November 9, 2015)

Exhibit No	Description†
10.2*	Amendment to Zimmer Biomet Holdings, Inc. Executive Performance Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed January 7, 2016)
10.3*	Zimmer Biomet Deferred Compensation Plan (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed January 7, 2016)
10.4*	Restated Zimmer Biomet Holdings, Inc. Long Term Disability Income Plan for Highly Compensated Employees (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed January 7, 2016)
10.5*	Restated Benefit Equalization Plan of Zimmer Holdings, Inc. and Its Subsidiary or Affiliated Corporations Participating in the Zimmer Holdings, Inc. Savings and Investment Program (incorporated by reference to Exhibit 10.16 to the Registrant's Annual Report on Form 10-K filed February 27, 2009)
10.6*	First Amendment to the Restated Benefit Equalization Plan of Zimmer Holdings, Inc. and its Subsidiary or Affiliated Corporations Participating in the Zimmer Holdings, Inc. Savings and Investment Program (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed January 7, 2016)
10.7*	Offer Letter, dated as of December 18, 2017, by and between Zimmer Biomet Holdings, Inc. and Bryan C. Hanson (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed December 21, 2017)
10.8*	Change in Control Severance Agreement with Bryan C. Hanson (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed December 21, 2017)
10.9*	Chief Executive Officer Confidentiality, Intellectual Property, Non-Competition and Non-Solicitation Agreement with Bryan C. Hanson (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed December 21, 2017)
10.10*	Offer Letter by and between Zimmer Biomet Holdings, Inc. and Ivan Tornos dated as of October 11, 2018
10.11*	Form of Change in Control Severance Agreement with Ivan Tornos
10.12*	Form of Confidentiality, Non-Competition and Non-Solicitation Agreement with Ivan Tornos
10.13*	Swiss Employment Agreement by and between Zimmer GmbH and Didier Deltort dated as of June 28, 2018 (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed November 1, 2018)
10.14*	Offer Letter by and between Zimmer Biomet Holdings, Inc. and Didier Deltort dated as of June 28, 2018 (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed November 1, 2018)
10.15*	Change in Control Severance Agreement by and between Zimmer GmbH and Didier Deltort dated as of October 9, 2018 (incorporated by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q filed November 1, 2018)
10.16*	Confidentiality, Non-Competition and Non-Solicitation Agreement by and between Zimmer GmbH and Didier Deltort dated as of June 28, 2018 (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q filed November 1, 2018)
10.17*	Form of Change in Control Severance Agreement with Daniel P. Florin (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed August 10, 2015)
10.18*	Change in Control Severance Agreement with Sang Yi (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed November 9, 2015)
10.19*	Form of Change in Control Severance Agreement with Chad F. Phipps (incorporated by reference to Exhibit 10.13 to the Registrant's Annual Report on Form 10-K filed February 27, 2009)
10.20*	Form of Change in Control Severance Agreement with Aure Bruneau (incorporated by reference to Exhibit 10.11 to the Registrant's Annual Report on Form 10-K filed February 27, 2018)
10.21*	Form of Confidentiality, Non-Competition and Non-Solicitation Agreement with Daniel P. Florin (incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q filed November 6, 2017)
10.22*	Confidentiality, Non-Competition and Non-Solicitation Agreement with Sang Yi (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q filed November 9, 2015)
10.23*	Form of Confidentiality, Non-Competition and Non-Solicitation Agreement with Chad F. Phipps (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed June 26, 2015)
10.24*	Form of Confidentiality, Non-Competition and Non-Solicitation Agreement with Aure Bruneau (incorporated by reference to Exhibit 10.18 to the Registrant's Annual Report on Form 10-K filed February 27, 2018)
10.25*	Zimmer Biomet Holdings, Inc. Amended Stock Plan for Non-Employee Directors, as amended May 5, 2015 and further amended as of June 24, 2015 (incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q filed November 9, 2015)

Exhibit No	Description†
10.26*	Form of Nonqualified Stock Option Award Letter under the Zimmer Biomet Holdings, Inc. Stock Plan for Non-Employee Directors (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed April 5, 2005)
10.27*	Form of Restricted Stock Unit Award Letter under the Zimmer Biomet Holdings, Inc. Stock Plan for Non-Employee Directors (incorporated by reference to Exhibit 10.23 to the Registrant's Annual Report on Form 10-K filed February 29, 2016)
10.28*	Amended and Restated Zimmer Biomet Holdings, Inc. Deferred Compensation Plan for Non-Employee Directors, as amended May 5, 2015 and further amended as of June 24, 2015 (incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q filed November 9, 2015)
10.29*	Form of Indemnification Agreement with Non-Employee Directors and Officers (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed July 31, 2008)
10.30*	Restated Zimmer Biomet Holdings, Inc. Executive Severance Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed August 6, 2018)
10.31*	Zimmer Biomet Holdings, Inc. 2009 Stock Incentive Plan (As Amended on May 3, 2016) (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed May 9, 2016)
10.32*	Form of Nonqualified Stock Option Award Agreement (four-year vesting) under the Zimmer Biomet Holdings, Inc. 2009 Stock Incentive Plan
10.33*	Form of Nonqualified Stock Option Award Agreement (two-year vesting) under the Zimmer Biomet Holdings, Inc. 2009 Stock Incentive Plan (incorporated by reference to Exhibit 10.37 to the Registrant's Annual Report on Form 10-K filed February 27, 2018)
10.34*	Form of Performance-Based Restricted Stock Unit Award Agreement under the Zimmer Biomet Holdings, Inc. 2009 Stock Incentive Plan (incorporated by reference to Exhibit 10.31 to the Registrant's Annual Report on Form 10-K filed February 29, 2016)
10.35*	Form of Performance-Based Restricted Stock Unit Award Agreement (2018) under the Zimmer Biomet Holdings, Inc. 2009 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q filed May 8, 2018)
10.36*	Form of Performance-Based Restricted Stock Unit Award Agreement (2019) under the Zimmer Biomet Holdings, Inc. 2009 Stock Incentive Plan
10.37*	Form of Restricted Stock Unit Award Agreement (four-year vesting) under the Zimmer Biomet Holdings, Inc. 2009 Stock Incentive Plan
10.38*	Form of Restricted Stock Unit Award Agreement (two-year cliff vesting) under the Zimmer Biomet Holdings, Inc. 2009 Stock Incentive Plan (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed August 6, 2018)
10.39*	Form of Nonqualified Stock Option Award Agreement (Hanson one-time award) under the Zimmer Biomet Holdings, Inc. 2009 Stock Incentive Plan (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed December 21, 2017)
10.40*	Form of Performance-Based Restricted Stock Unit Award Agreement (Hanson one-time award) under the Zimmer Biomet Holdings, Inc. 2009 Stock Incentive Plan (incorporated by reference to Exhibit 10.5 to the Registrant's Current Report on Form 8-K filed December 21, 2017)
10.41*	Form of Restricted Stock Unit Award Agreement (Hanson one-time award) under the Zimmer Biomet Holdings, Inc. 2009 Stock Incentive Plan (incorporated by reference to Exhibit 10.6 to the Registrant's Current Report on Form 8-K filed December 21, 2017)
10.42*	Form of Restricted Stock Unit Award Agreement (Florin one-time award) under the Zimmer Biomet Holdings, Inc. 2009 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed July 11, 2017)
10.43*	Form of Restricted Stock Unit Award Agreement (Tornos one-time award) under the Zimmer Biomet Holdings, Inc. 2009 Stock Incentive Plan
10.44*	Zimmer Holdings, Inc. 2006 Stock Incentive Plan, as amended (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed December 13, 2006)
10.45*	Form of Nonqualified Stock Option Award Agreement under the Zimmer Holdings, Inc. 2006 Stock Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed December 13, 2006)

Exhibit No	Description†
10.46*	Aircraft Time Sharing Agreement by and between Zimmer, Inc. and Bryan C. Hanson (incorporated by reference to Exhibit 10.40 to the Registrant's Annual Report on Form 10-K filed February 27, 2018)
10.47*	Zimmer Biomet Holdings, Inc. Executive Physical Sub Plan
10.48	Credit Agreement, dated as of September 30, 2016, among Zimmer Biomet Holdings, Inc., Zimmer Biomet G.K., ZB Investment Luxembourg S.à r.l., the borrowing subsidiaries referred to therein, JPMorgan Chase Bank, N.A., as General Administrative Agent, JPMorgan Chase Bank, N.A., Tokyo Branch, as Japanese Administrative Agent, J.P. Morgan Europe Limited, as European Administrative Agent, and the lenders named therein (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed October 5, 2016)
10.49	Credit Agreement, dated as of May 29, 2014, among Zimmer Holdings, Inc., Zimmer K.K., Zimmer Investment Luxembourg S.à r.l., the borrowing subsidiaries referred to therein, JPMorgan Chase Bank, N.A., as General Administrative Agent, JPMorgan Chase Bank, N.A., Tokyo Branch, as Japanese Administrative Agent, J. P. Morgan Europe Limited, as European Administrative Agent, and the lenders named therein (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed June 4, 2014)
10.50	First Amendment, dated as of September 30, 2016, to the Credit Agreement dated as of May 29, 2014 among Zimmer Biomet Holdings, Inc., Zimmer Biomet G.K., ZB Investment Luxembourg S.à r.l., the borrowing subsidiaries from time to time party thereto, JPMorgan Chase Bank, N.A., as General Administrative Agent, JPMorgan Chase Bank, N.A., Tokyo Branch, as Japanese Administrative Agent, and J.P. Morgan Europe Limited, as European Administrative Agent, and the lenders from time to time party thereto (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed October 5, 2016)
10.51	Assumption Agreement, dated as of October 29, 2018, by and among Zimmer Biomet Holdings, Inc., Zimmer Luxembourg II S.à.r.l. and JPMorgan Chase Bank, N.A., as General Administrative Agents
10.52	Term Loan Agreement ¥21,300,000,000, dated as of September 22, 2017, between Zimmer Biomet G.K. and Sumitomo Mitsui Banking Corporation (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed September 28, 2017)
10.53	Amended and Restated Term Loan Agreement ¥11,700,000,000, dated as of September 22, 2017, between Zimmer Biomet G.K. and Sumitomo Mitsui Banking Corporation (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed September 28, 2017)
10.54	Amended and Restated Letter of Guarantee, dated as of September 22, 2017, made by Zimmer Biomet Holdings, Inc. in favor of Sumitomo Mitsui Banking Corporation (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed September 28, 2017)
10.55	Credit Agreement, dated as of December 14, 2018, among Zimmer Biomet Holdings, Inc., Bank of America, N.A., as Administrative Agent, and the lenders from time to time party thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed December 20, 2018)
10.56	Deferred Prosecution Agreement, dated as of January 12, 2017, between Zimmer Biomet Holdings, Inc. and the U.S. Department of Justice, Criminal Division, Fraud Section (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed January 18, 2017)
10.57	Order Instituting Cease-and-Desist Proceedings Pursuant to Section 21C of the Securities and Exchange Act of 1934, Making Findings and Imposing a Cease-and-Desist Order against Biomet, Inc., dated January 12, 2017 (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed January 18, 2017)
10.58	Plea Agreement, dated as of January 12, 2017, between JERDS Luxembourg Holding S.à r.l. and the U.S. Department of Justice, Criminal Division, Fraud Section (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed January 18, 2017)
21	List of Subsidiaries of Zimmer Biomet Holdings, Inc.
23	Consent of PricewaterhouseCoopers LLP
31.1	Certification pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934 of the Chief Executive Officer, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934 of the Chief Financial Officer, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document

Exhibit No	Description†
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document

† Unless otherwise indicated, exhibits incorporated by reference herein were originally filed under SEC File No. 001-16407.

* Management contract or compensatory plan or arrangement.

Item 16. 10-K Summary

None

SIGNATURES

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

ZIMMER BIOMET HOLDINGS, INC.

By: /s/ Bryan C. Hanson
Bryan C. Hanson
President and Chief Executive Officer

Dated: February 26, 2019

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

SIGNATURE	TITLE	DATE
/s/ Bryan C. Hanson Bryan C. Hanson	President, Chief Executive Officer and Director (Principal Executive Officer)	February 26, 2019
/s/ Daniel P. Florin Daniel P. Florin	Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	February 26, 2019
/s/ Christopher B. Begley Christopher B. Begley	Director	February 26, 2019
/s/ Betsy J. Bernard Betsy J. Bernard	Director	February 26, 2019
/s/ Gail K. Boudreaux Gail K. Boudreaux	Director	February 26, 2019
/s/ Michael J. Farrell Michael J. Farrell	Director	February 26, 2019
/s/ Larry C. Glasscock Larry C. Glasscock	Director	February 26, 2019
/s/ Robert A. Hagemann Robert A. Hagemann	Director	February 26, 2019
/s/ Arthur J. Higgins Arthur J. Higgins	Director	February 26, 2019
/s/ Maria Teresa Hilado Maria Teresa Hilado	Director	February 26, 2019
/s/ Syed Jafry Syed Jafry	Director	February 26, 2019
/s/ Michael W. Michelson Michael W. Michelson	Director	February 26, 2019

ZIMMER BIOMET HOLDINGS, INC.
RECONCILIATION OF OPERATING PROFIT TO ADJUSTED OPERATING PROFIT
FOR THE YEARS ENDED DECEMBER 31, 2018, 2017, 2016, 2015 and 2014
(in millions, unaudited)

	For the Years Ended December 31,				
	2018	2017	2016	2015[1]	2014[1]
Operating Profit	$ 33.8	$ 799.3	$ 821.1	$ 467.3	$1,037.3
Inventory step-up and other inventory and manufacturing related charges[2]	32.5	70.8	468.3	348.8	36.3
Intangible asset amortization[2]	595.9	603.9	565.9	337.4	92.5
Goodwill and intangible asset impairment[2]	979.7	331.5	31.1	–	–
Acquisition, integration and related[2]	133.7	279.8	504.9	–	–
Quality remediation[2]	165.4	195.1	54.3	–	–
Litigation[2]	186.0	104.0	33.3	–	–
European Union Medical Device Regulation[2]	3.7	–	–	–	–
Other charges[2]	79.6	41.2	(11.0)	–	–
Certain claims	–	–	–	7.7	21.5
Special items	–	–	–	831.8	341.1
Adjusted Operating Profit	$2,210.3	$2,425.6	$2,467.9	$1,993.0	$1,528.7

(1) In 2018, we reclassified expenses that were previously recognized in a financial statement line item labeled "Acquisition, quality remediation and other" (and prior to that, labeled "Special items") to the financial statement line items of "Research and development," "Selling, general and administrative," "Goodwill and intangible asset impairment," "Acquisition, integration and related" and "Quality remediation". We reclassified 2017 and 2016 to conform to the current year presentation, however, 2015 and 2014 were not reclassified. We made this change to provide additional transparency and better reflect the nature of these expenses.

(2) Please refer to pages 28 and 29 of this annual report for detailed explanations of each adjustment.

ZIMMER BIOMET HOLDINGS, INC.
RECONCILIATION OF OPERATING PROFIT MARGIN TO ADJUSTED OPERATING PROFIT MARGIN FOR THE YEARS ENDED DECEMBER 31, 2018, 2017, 2016, 2015 and 2014
(in millions, unaudited)

	For the Years Ended December 31,				
	2018	2017	2016	2015[1]	2014[1]
Operating Profit	0.4%	10.2%	10.7%	7.8%	22.2%
Inventory step-up and other inventory and manufacturing related charges[2]	0.4	0.9	6.1	5.8	0.8
Intangible asset amortization[2]	7.5	7.7	7.4	5.6	2.0
Goodwill and intangible asset impairment[2]	12.4	4.2	0.4	–	–
Acquisition, integration and related[2]	1.7	3.6	6.6	–	–
Quality remediation[2]	2.1	2.5	0.7	–	–
Litigation[2]	2.3	1.3	0.4	–	–
European Union Medical Device Regulation[2]	–	–	–	–	–
Other charges[2]	1.1	0.7	(0.1)	–	–
Certain claims	–	–	–	0.1	0.5
Special items	–	–	–	13.9	7.2
Adjusted Operating Profit	27.9%	31.1%	32.2%	33.2%	32.7%

(1) In 2018, we reclassified expenses that were previously recognized in a financial statement line item labeled "Acquisition, quality remediation and other" (and prior to that, labeled "Special items") to the financial statement line items of "Research and development," "Selling, general and administrative," "Goodwill and intangible asset impairment," "Acquisition, integration and related" and "Quality remediation". We reclassified 2017 and 2016 to conform to the current year presentation, however, 2015 and 2014 were not reclassified. We made this change to provide additional transparency and better reflect the nature of these expenses.

(2) Please refer to pages 28 and 29 of this annual report for detailed explanations of each adjustment.

ZIMMER BIOMET HOLDINGS, INC.
RECONCILIATION OF DILUTED EPS TO ADJUSTED DILUTED EPS
FOR THE YEARS ENDED DECEMBER 31, 2018, 2017, 2016, 2015 and 2014
(unaudited)

	For the Years Ended December 31,				
	2018	2017	2016	2015[1]	2014[1]
Diluted (Loss) Earnings per share	$(1.86)	$ 8.90	$ 1.51	$ 0.77	$ 4.20
Inventory step-up and other inventory and manufacturing related charges[2]	0.16	0.35	2.32	1.84	0.21
Intangible asset amortization[2]	2.93	2.96	2.80	1.78	0.54
Goodwill and intangible asset impairment[2]	4.81	1.63	0.15	–	–
Acquisition, integration and related[2]	0.66	1.37	2.49	–	–
Quality remediation[2]	0.81	0.96	0.27	–	–
Litigation[2]	0.91	0.51	0.16	–	–
European Union Medical Device Regulation[2]	0.02	–	–	–	–
Other charges[2]	0.41	0.22	(0.03)	–	–
Certain claims	–	–	–	0.04	0.13
Special items	–	–	–	4.38	1.99
Merger-related and other expense in other (expense) income, net[2]	–	–	–	–	0.23
Debt extinguishment cost	–	–	0.26	0.12	–
Interest expense on Biomet merger financing[2]	–	–	–	0.37	–
Taxes on above items[2]	(1.18)	(2.07)	(2.22)	(2.57)	(0.90)
Biomet merger-related measurement period tax adjustments[2]	–	–	0.26	–	–
U.S. tax reform[2]	0.04	(6.25)	–	–	–
Other certain tax adjustments[2]	(0.02)	(0.55)	(0.01)	0.17	–
Effect of dilutive shares assuming net earnings[2]	(0.05)	–	–	–	–
Adjusted Diluted EPS	$ 7.64	$ 8.03	$ 7.96	$ 6.90	$ 6.40

(1) In 2018, we reclassified expenses that were previously recognized in a financial statement line item labeled "Acquisition, quality remediation and other" (and prior to that, labeled "Special items") to the financial statement line items of "Research and development," "Selling, general and administrative," "Goodwill and intangible asset impairment," "Acquisition, integration and related" and "Quality remediation". We reclassified 2017 and 2016 to conform to the current year presentation, however, 2015 and 2014 were not reclassified. We made this change to provide additional transparency and better reflect the nature of these expenses.

(2) Please refer to pages 28 and 29 of this annual report for detailed explanations of each adjustment.

ZIMMER BIOMET HOLDINGS, INC.
RECONCILIATION OF SALES GROWTH RATE TO CONSTANT CURRENCY SALES GROWTH RATE FOR THE YEAR ENDED DECEMBER 31, 2018
(unaudited)

	For the Year Ended December 31, 2018		
	Reported % Growth	Foreign Exchange Impact	Constant Currency % Growth
Geographic Segment			
Americas	–%	–%	–%
EMEA	3	3	–
Asia Pacific	7	1	6
Consolidated	2	1	1
Product Category			
Knees	1	–	1
Hips	3	1	2
S.E.T.	3	1	2
Dental	(2)	1	(3)
Spine & CMF	1	1	–
Other	(3)	–	(3)
Consolidated	2	1	1

Leadership (As of March 20, 2019)

Board of Directors

Christopher B. Begley
Retired Executive Chairman and Chief Executive Officer, Hospira, Inc.

Betsy J. Bernard
Retired President, AT&T Corp.

Gail K. Boudreaux
President and Chief Executive Officer, Anthem, Inc.

Michael J. Farrell
Chief Executive Officer, ResMed Inc.

Larry C. Glasscock
Chairman of the Board of Zimmer Biomet Holdings, Inc. and Retired Chairman, President and Chief Executive Officer, Anthem, Inc.

Robert A. Hagemann
Retired Senior Vice President and Chief Financial Officer, Quest Diagnostics Incorporated

Bryan C. Hanson
President and Chief Executive Officer, Zimmer Biomet Holdings, Inc.

Arthur J. Higgins
President and Chief Executive Officer, Assertio Therapeutics, Inc.

Maria Teresa Hilado
Retired Executive Vice President and Chief Financial Officer, Allergan plc

Syed Jafry
Senior Vice President and President, Asia Pacific, EMEA and Emerging Markets, Thermo Fisher Scientific, Inc.

Michael W. Michelson
Senior Advisory Partner, KKR Management LLC, the general partner of KKR & Co. L.P.

Management Team

Bryan C. Hanson
President and Chief Executive Officer

Aure Bruneau
Group President, Spine, CMF, Thoracic and Surgery Assisting Technology

Tony Collins
Group Chief Financial Officer, Orthopedics

Derek Davis
Vice President, Global Integration

Didier Deltort
President, Europe, Middle East and Africa

Rachel Ellingson
Senior Vice President, Strategy

Daniel P. Florin
Executive Vice President and Chief Financial Officer

Monica Kendrick
Vice President, External Communications

David J. Kunz
Senior Vice President, Global Quality and Regulatory Affairs

Coleman (Cole) N. Lannum, CFA
Senior Vice President, Investor Relations

Angela Main
Senior Vice President, Global Chief Compliance Officer and Associate General Counsel, Asia Pacific

Pedro Malha
President, Dental

Chad Phipps
Senior Vice President, General Counsel and Secretary

Pamela Puryear, PhD
Senior Vice President, Chief Human Resources Officer

Zeeshan Tariq
Vice President and Chief Information Officer

Ivan Tornos
Group President, Orthopedics

Kenneth R. Tripp
Senior Vice President, Global Operations and Logistics

Sang Yi
President, Asia Pacific

Forward-Looking Statements

This 2018 Annual Report includes forward-looking statements that are subject to significant risks, uncertainties and changes in circumstances that could cause actual results to differ materially from the forward-looking statements. See "Cautionary Note About Forward-Looking Statements" immediately following the cover page of our Annual Report on Form 10-K included herein.

Corporate Information (As of March 20, 2019)

Shareholder Information

Headquarters
Zimmer Biomet Holdings, Inc.
345 East Main Street
Warsaw, IN 46580, U.S.A.
+1-574-267-6131
www.zimmerbiomet.com

Stock Listing
Zimmer Biomet is listed on the New York Stock Exchange and the SIX Swiss Exchange under the symbol ZBH.

Independent Auditors
PricewaterhouseCoopers LLP
Chicago, IL, U.S.A.

Transfer Agent
Communications concerning stock transfer requirements, loss of certificates and change of address should be directed to Zimmer Biomet's Transfer Agent:

American Stock Transfer
& Trust Company, LLC
6201 15th Avenue
Brooklyn, NY 11219
+1-888-552-8493 (domestic)
+1-718-921-8124 (international)
Email: zimmer@astfinancial.com
Website: http://www.astfinancial.com

Investor Relations
Zimmer Biomet invites shareholders, security analysts, portfolio managers and other interested parties to contact:

Coleman N. Lannum
Senior Vice President,
Investor Relations
+1-574-371-9480
cole.lannum@zimmerbiomet.com

Barbara Goslee
Director, Investor Relations
+1-574-371-9449
barb.goslee@zimmerbiomet.com

Dividend Reinvestment and Stock Purchase Plan

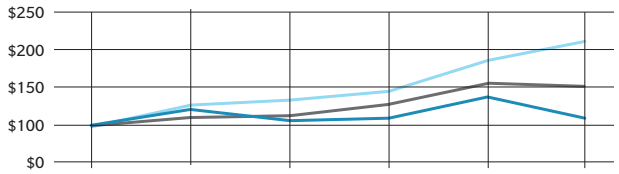
American Stock Transfer & Trust Company, LLC administers the Investors Choice Dividend Reinvestment and Stock Purchase Plan, which allows registered shareholders to purchase additional shares of Zimmer Biomet common stock through the automatic investment of dividends. The plan also allows registered shareholders to purchase shares with optional cash investments of at least $25, either by check or by automatic deductions from checking or savings accounts. The maximum optional cash investment is $10,000 per transaction. Please direct inquiries concerning the plan to: Zimmer Biomet Holdings, Inc., c/o American Stock Transfer & Trust Company, LLC, P.O. Box 922, Wall Street Station, New York, NY 10269-0560, +1-888-552-8493 (domestic), +1-718-921-8124 (international)

ZBH LISTED NYSE SIX SWISS EXCHANGE

Stock Performance Graph

Comparison of Cumulative Total Return for years ended December 31

Assumes $100 was invested on December 31, 2013 in Zimmer Biomet common stock and each index and that dividends were reinvested. Returns over the indicated period should not be considered indicative of future returns.



	Baseline	2014	2015	2016	2017	2018
Zimmer Biomet Holdings, Inc.	$100	$123	$112	$114	$134	$116
S&P 500 Stock Index	$100	$114	$115	$129	$157	$150
S&P 500 Health Care Equipment Index	$100	$126	$134	$143	$187	$217

To obtain a free copy of Zimmer Biomet's annual report on form 10-K, quarterly reports on form 10-Q, news releases, earnings releases, proxy statements, or to obtain Zimmer Biomet's financial calendar, access SEC filings, listen to earnings calls, or to look up Zimmer Biomet stock quotes, please visit http://investor.zimmerbiomet.com.

ZIMMER BIOMET

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Zimmer Biomet Holdings, Inc., 345 East Main Street, P.O. Box 708, Warsaw, IN 46580, U.S.A.