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

FORM 10-K

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

For the fiscal year ended **December 31, 2018**
Commission File Number **0-16211**

DENTSPLY SIRONA Inc.

(Exact name of registrant as specified in its charter)

Delaware	**39-1434669**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
221 West Philadelphia Street, York, PA	**17401-2991**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(717) 845-7511**

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

Title of each class	Name of each exchange on which registered
Common Stock, par value $.01 per share	**The Nasdaq Stock Market LLC**

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 x No o

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 o No x

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 x No o

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 x No o

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

Indicate by check mark 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	x	Accelerated Filer o	Non-Accelerated Filer o	Smaller Reporting Company o
Emerging Growth Company o		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. o		

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

The aggregate market value of the voting common stock held by non-affiliates of the registrant computed by reference to the closing price as of the last business day of the registrants most recently completed second quarter June 30, 2018, was $9,706,575,983.

The number of shares of the registrant's common stock outstanding as of the close of business on February 21, 2019 was 223,218,138.

DOCUMENTS INCORPORATED BY REFERENCE

Certain portions of the definitive Proxy Statement of DENTSPLY SIRONA Inc. (the "Proxy Statement") to be used in connection with the 2019 Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K to the extent provided herein. Except as specifically incorporated by reference herein the Proxy Statement is not deemed to be filed as part of this Form 10-K.

DENTSPLY SIRONA Inc.
Table of Contents

PART I

FORWARD-LOOKING STATEMENTS

Information included in or incorporated by reference in this Form 10-K, and other filings with the U.S. Securities and Exchange Commission (the "SEC") and the Company's press releases or other public statements, contains or may contain forward-looking statements. Please refer to a discussion of our forward-looking statements and associated risks in Part I, Item 1 "Business- Forward-Looking Statements and Associated Risks" and Part 1, Item 1A "Risk Factors" of this Form 10-K.

GENERAL

Unless otherwise stated herein, reference throughout this Form 10-K to "Dentsply Sirona", or the "Company," "we," "us" or "our" refers to financial information and transactions of DENTSPLY International Inc. ("DENTSPLY") prior to February 29, 2016 and to financial information and transactions of DENTSPLY SIRONA Inc., thereafter, in each case, with its subsidiaries on a consolidated basis, unless the Company states or the context implies otherwise.

INDUSTRY AND MARKET DATA

Unless indicated otherwise, the information concerning our industry contained in this Annual Report is based on our general knowledge of and expectations concerning the industry. The Company's market position, market share and industry market size are based on estimates using our internal data and estimates, based on data from various industry analyses, its internal research and adjustments and assumptions that it believes to be reasonable. The Company has not independently verified data from industry analyses and cannot guarantee their accuracy or completeness. In addition, we believe that data regarding the industry, market size and its market position and market share within such industry provide general guidance but are inherently imprecise. Further, the Company estimates and assumptions involve risks and uncertainties and are subject to change based on various factors, including those discussed in Part I, Item 1A "Risk Factors" of this form 10-K. These and other factors could cause results to differ materially from those expressed in the estimates and assumptions.

Item 1. Business

History and Overview

Dentsply Sirona is the world's largest manufacturer of professional dental products and technologies, with a 132-year history of innovation and service to the dental industry and patients worldwide. Dentsply Sirona develops, manufactures, and markets a comprehensive solutions offering including dental and oral health products as well as other consumable medical devices under a strong portfolio of world class brands. As The Dental Solutions Company, Dentsply Sirona's products provide innovative, high-quality and effective solutions to advance patient care and deliver better, safer and faster dentistry. Dentsply Sirona's worldwide headquarters is located in York, Pennsylvania. The Company's shares of common stock are listed in the United States on Nasdaq under the symbol XRAY.

Dentsply Sirona dates its history back to 1886. The Company is a designer, developer, manufacturer and marketer of a broad range of consumable dental products and technologically-advanced dental equipment. The Company also manufacturers and markets other consumable medical device products. The Company introduced the first dental electric drill over 130 years ago, the first dental X-ray unit approximately 100 years ago, the first dental computer-aided design/computer-aided manufacturing ("CAD/CAM") system over 30 years ago, and numerous other significant innovations including pioneering ultrasonic scaling to increase the speed, effectiveness and comfort of cleaning and revolutionizing both file and apex locater technology to make root canal procedures easier and safer. Dentsply Sirona continues to make significant investments in research and development ("R&D"), and its track record of innovative and profitable new products continues today.

Dental products and technology and equipment accounted for approximately 91% of both Dentsply Sirona's consolidated net sales and consolidated net sales, excluding precious metal content, for the year ended December 31, 2018. The remaining consolidated net sales, excluding precious metal content, are primarily related to consumable medical device products. The presentation of net sales, excluding precious metal content, is considered a measure not calculated in accordance with accounting principles generally accepted in the United States of America ("US GAAP"), and is therefore considered a non-US GAAP measure. This non-US GAAP measure is discussed further in Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Form 10-K and a reconciliation of net sales to net sales, excluding precious metal content, is provided there.

The Company conducts its business in the United States of America ("U.S."), as well as in over 120 foreign countries, principally through its foreign subsidiaries. Dentsply Sirona has a long-established presence in the European market, particularly in Germany, Sweden, France, the United Kingdom ("UK"), Switzerland and Italy, as well as in Canada. The Company also has a significant market presence in the countries of the Commonwealth of Independent States ("CIS"), Central and South America, the Middle-East region and the Pacific Rim.

Principal Products

The worldwide professional dental industry encompasses the diagnosis, treatment and prevention of disease and ailments of the teeth, gums and supporting bone. Dentsply Sirona's principal dental product categories are dental consumable products, dental laboratory products, dental specialty products and dental equipment. Additionally, the Company's consumable medical device products provide for urological and surgical applications. These products are produced by the Company in the U.S. and internationally and are distributed throughout the world under some of the most well-established brand names and trademarks in these industries, including but not limited to: ANKYLOS, AQUASIL ULTRA, ARTICADENT, ASTRA TECH, ATLANTIS, CALIBRA, CAULK, CAVITRON, CELTRA, CERAMCO, CERCON, CEREC, CEREC MCX, CITANEST, DAC, DELTON, DENTSPLY, DETREY, DYRACT, ESTHET.X, GALILEOS, INLAB, IN-OVATION, INTEGO, LOFRIC, MAILLEFER, MIDWEST, MTM, NUPRO, OMNICAM, ORAQIX, ORIGO, ORTHOPHOS, OSSEOSPEED, PALODENT PLUS, PEPGEN P-15, PORTRAIT, PRIME & BOND, PROFILE, PROGLIDER, PROTAPER, RECIPROC, RINN, SANI-TIP, SCHICK, SENTALLOY, SINIUS, SIROLASER, SIRONA, SLIMLINE, STYLUS, SULTAN, SUREFIL, T1, T2, T3, T4, TENEO, THERMAFIL, TRIODENT, TRUBYTE, VIPI, WAVEONE, WELLSPECT, XENO, XIVE, XYLOCAINE and ZHERMACK.

Consumables Segment

Dental Consumable Products

Dental consumable products consist of value added dental supplies and small equipment used in dental offices for the treatment of patients. It also includes specialized treatment products used within the dental office and laboratory settings including products used in the preparation of dental appliances by dental laboratories. Net sales of dental consumable products accounted for approximately 46%, 44% and 44% of the Company's consolidated net sales for the years ended December 31, 2018, 2017, and 2016, respectively.

Dentsply Sirona's dental supplies include endodontic (root canal) instruments and materials, dental anesthetics, prophylaxis paste, dental sealants, impression materials, restorative materials, tooth whiteners and topical fluoride. Small equipment products include dental handpieces, intraoral curing light systems, dental diagnostic systems and ultrasonic scalers and polishers.

The Company's products used in dental laboratories include dental prosthetics, including artificial teeth, precious metal dental alloys, dental ceramics and crown and bridge materials. Dental laboratory equipment products include amalgamators, mixing machines and porcelain furnaces.

Technologies & Equipment Segment

Dental Technology and Equipment Products

Dental technology products consist of basic and high-tech dental equipment such as treatment centers, imaging equipment and computer aided design and machining CAD/CAM systems equipment for dental practitioners and laboratories. The product category also includes high-tech state-of-art dental implants and related scanning equipment and treatment software, orthodontic appliances for dental practitioners and specialist and dental laboratories. The Company offers the broadest line of products to fully outfit a dental practitioner's office. Net sales of dental technology and equipment products accounted for approximately 45%, 48% and 48% of the Company's consolidated net sales for the years ended December 31, 2018, 2017, and 2016, respectively.

Treatment centers comprise a broad range of products from basic dentist chairs to sophisticated chair-based units with integrated diagnostic, hygiene and ergonomic functionalities, as well as specialist centers used in preventive treatment and for training purposes. Imaging systems consist of a broad range of diagnostic imaging systems for 2D or 3D, panoramic, and intra-oral applications. Dental CAD/CAM Systems are products designed for dental offices and laboratories used for dental restorations, which includes several types of restorations, such as inlays, onlays, veneers, crowns, bridges, copings and bridge frameworks made from ceramic, metal or composite blocks. This product line also includes high-tech CAD/CAM techniques of chairside economical restoration of aesthetic ceramic dentistry, or CEREC, equipment. This equipment allows for in-office application that enables dentists to produce high quality restorations from ceramic material and insert them into the patient's mouth during a single appointment. CEREC has a number of advantages compared to the traditional out-of-mouth pre-shaped restoration method, as CEREC does not require a physical model, restorations can be created in the dentist's office and the procedure can be completed in a single visit. The Company estimates that at December 31, 2018 the market penetration for in-office CAD/CAM systems in the U.S. and Germany was approximately 18%.

Healthcare Consumable Products

Healthcare consumable products consist mainly of urology catheters, medical drills and other non-medical products. Net sales of healthcare consumable products accounted for approximately 9%, 8% and 8% of the Company's consolidated net sales for the years ended December 31, 2018, 2017, and 2016, respectively.

Markets, Sales and Distribution

The Company believes that the market for its products will grow over the long-term based on the following factors:

- increasing worldwide population.
- aging population in developed countries with access to greater amounts of discretionary income will require more dental care.
- natural teeth are being retained longer - individuals with natural teeth are much more likely to visit a dentist in a given year than those without any natural teeth remaining.
- earlier preventive care and a growing demand for aesthetic dentistry - dentistry has evolved from a profession primarily dealing with pain, infections and tooth decay to one with increased emphasis on preventive care and cosmetic dentistry.
- increasing demands for patient comfort and ease of product use and handling.
- increasing demand for more efficiency and better workflow in the dental office, including digital and integrated solutions.
- per capita and discretionary incomes are increasing in emerging markets. As personal incomes continue to rise in emerging economies, healthcare, including dental services, is a growing priority. Many surveys indicate the middle class population will expand significantly within these emerging markets.
- the Company's business is less susceptible than many other industries to general downturns in the economies in which it operates. Many of the products the Company offers relate to dental procedures and health conditions that are considered necessary by patients regardless of the economic environment. Dental specialty products, dental equipment and products that support discretionary dental procedures are the most susceptible to changes in economic conditions.

Dentsply Sirona employs approximately 5,200 highly trained, product-specific sales and technical staff to provide comprehensive marketing and service tailored to the particular sales and technical support requirements of its distributors, dealers and the end-users.

Dental Sales and Distribution

Dentsply Sirona distributes approximately 60% of its dental consumable and technology and equipment products through third-party distributors. Certain highly technical products such as dental technology equipment, dental ceramics, crown and bridge porcelain products, endodontic instruments and materials, orthodontic appliances, dental implants are often sold directly to the dental laboratory or dental professionals in some markets. For the year ended December 31, 2018, one customer, Henry Schein, Inc ("Henry Schein"), accounted for approximately 10% of consolidated net sales. At December 31, 2018, two customers, Henry Schein and Patterson Companies, Inc. ("Patterson"), accounted for approximately 10% and 13%, respectively, of the consolidated accounts receivable balance. For the year ended December 31, 2017, one customer, Henry Schein., accounted for approximately 15% of consolidated net sales. At December 31, 2017, two customers, Henry Schein and Patterson Companies, accounted for approximately 14% and 15%, respectively, of the consolidated accounts receivable balance. For the year ended December 31, 2016, the Company had two customers, Henry Schein, and Patterson, each accounted for approximately 12% of consolidated net sales.

During 2018 the Company continued to be impacted by the transition in distribution strategy with Patterson and Henry Schein. In 2017, the Company signed new distribution agreements with Patterson and Henry Schein for the Company's equipment products. The Company shipped initial stocking orders for the equipment products to Henry Schein under the agreements primarily in the second and third quarters of 2017 which resulted in unfavorable year-over-year sales growth comparisons. Based on the Company's estimate, year-over-year changes in distributor inventories associated with these agreements negatively impacted the Company's reported sales growth for the year ended December 31, 2018 by approximately $127 million. Based on the Company's estimate, distributor inventories increased for the year ended December 31, 2017 by approximately $27 million as compared to a decrease of approximately $100 million for the full year 2018.

Although many of its dental sales are made to distributors, dealers and importers, Dentsply Sirona focuses much of its marketing efforts on the dentists, dental hygienists, dental assistants, dental laboratories and dental schools which are the end-users of its products. As part of this end-user "pull through" marketing approach, the Company conducts extensive distributor, dealer and end-user marketing programs. Additionally, the Company trains laboratory technicians, dental hygienists, dental assistants and dentists in the proper use of its products and introduces them to the latest technological developments at its educational courses conducted throughout the world. The Company also maintains ongoing consulting and educational relationships with various dental associations and recognized worldwide opinion leaders in the dental field.

As part of the restructuring plan announced in November 2018, the Company is creating more meaningful solutions for dentists built around innovative products and differentiated clinical education. In order to achieve this goal, the Company introduced five key operating principles:

- *Approach customers as one:* Put the customer at the center of how Dentsply Sirona is organized. The Company is creating one integrated approach to customer service, direct and indirect selling, and clinical education to strengthen the relationship with the customer and better serve the customers' needs.

- *Assume greater responsibility for Dentsply Sirona's demand creation:* To better support dealer partners and end-user customers, the Company launched a sales force effectiveness program, with a view to improving returns on sales and marketing investments.

- *Ensure that innovation is substantial and supported:* Create a comprehensive R&D program that prioritizes spending across the entire Company portfolio resulting in more impactful innovations each year.

- *Lead in clinical education:* Dentsply Sirona is investing to further its leadership position through local training events and enhancing online training presence to strengthen the relationship with the dental professionals.

- *Take advantage of scale:* The Company is focused on integrating its dental product portfolios to unlock operational efficiencies, including performance improvements in procurement, logistics, manufacturing, sales force and marketing programs. In addition, Dentsply Sirona is taking significant measures to simplify the business. In combination, these initiatives will improve organizational efficiency and better leverage the Company's selling, general and administrative infrastructure.

Medical Sales and Distribution

The Company's urology products are sold directly in approximately 15 countries throughout Europe and North America, and through distributors in approximately 20 additional markets. The Company's largest markets include the UK, Germany and France. Key customers include urologists, urology nurses, general practitioners and direct-to-patients.

Historical reimbursement levels within Europe have been higher for intermittent catheters which explain a greater penetration of single-use catheter products in that market. In the United States, which the Company considers an important growth market, the reimbursement environment has improved since 2008 as the infection control cost benefits of disposable catheters gain acceptance among payers.

The Company's surgery products are sold directly in approximately 13 countries and through distributors in approximately 20 additional markets. The Company's largest markets include Australia, Norway and the UK. Key customers include surgeons, hospital nurses, physiotherapists, hospital purchasing departments and medical supply distributors.

The Company also maintains ongoing consulting and educational relationships with various medical associations and recognized worldwide opinion leaders in this field.

Product Development

Innovation and successful product development are critical to keeping market leadership position in key product categories and growing market share in other products categories while strengthening the Company's prominence in the dental and medical markets that it serves. While many of Dentsply Sirona's existing products undergo brand extensions, the Company also continues to focus efforts on successfully launching innovative products that have a more significant impact on how dental and clinical professionals treat their patients.

New advances in technology are also anticipated to have a significant influence on future products in dentistry and in select areas of healthcare. As a result, the Company pursues research and development initiatives to support this technological development, including collaborations with external research institutions, dental and medical schools. Through its own internal research centers as well as through its collaborations with external research institutions, dental and medical schools, the Company directly invested in the development of new products, improvement of existing products and advances in technology. The global investment for R&D is impacted by foreign currency translation, which creates reported expense variations. The continued development of these areas is a critical step in meeting the Company's strategic goal as a leader in defining the future of dentistry and in select areas in health care.

In addition to the direct investment in product development and improvement, the Company also invests in these activities through acquisitions, by entering into licensing agreements with third parties, and by purchasing technologies developed by third parties.

Acquisition Activities

Dentsply Sirona believes that the dental consumable and technology products industries continue to experience consolidation with respect to both product manufacturing and distribution, although they remain fragmented thereby creating a number of acquisition opportunities.

The Company views acquisitions as a key part of its growth strategy. These acquisition activities are intended to supplement the Company's core growth and assure ongoing expansion of its business, including new technologies, additional products, organizational strength and geographic breadth. Information regarding the Company's acquisition activity for the years ended December 31, 2018, 2017, and 2016 can be found in Note 4, Business Combinations, in the Notes to the Consolidated Financial Statements in Item 15 of this Form 10-K.

Operating and Technical Expertise

Dentsply Sirona believes that its manufacturing capabilities are important to its success. The manufacturing processes of the Company's products require substantial and varied technical expertise. Complex materials technology and processes are necessary to manufacture the Company's products. The Company endeavors to automate its global manufacturing operations in order to improve quality and customer service and lower costs.

Financing

Information about Dentsply Sirona's working capital, liquidity and capital resources is provided in Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Form 10-K.

Competition

The Company conducts its operations, both domestic and foreign, under highly competitive market conditions. Competition in the dental and healthcare consumable products and dental technology and equipment products industries is based primarily upon product performance, quality, safety and ease of use, as well as price, customer service, innovation and acceptance by clinicians, technicians and patients. Dentsply Sirona believes that its principal strengths include its well-established brand names, its reputation for high quality and innovative products, its leadership in product development and manufacturing, its global sales force, the breadth of its product line and distribution network, its commitment to customer satisfaction and support of the Company's products by dental and medical professionals.

The size and number of the Company's competitors vary by product line and from region to region. There are many companies that produce some, but no company produces all, of the same types of products as those produced by the Company.

Regulation

The development, manufacture, sale and distribution of the Company's products are subject to comprehensive governmental regulation both within and outside the United States. The following sections describe certain, but not all, of the significant regulations that apply to the Company. For a description of the risks related to the regulations that the Company is subject to, please refer to Part I, Item 1A. "Risk Factors" of this Form 10-K.

The majority of the Company's products are classified as medical devices and are subject to restrictions under domestic and foreign laws, rules, regulations, self-regulatory codes, circulars and orders, including, but not limited to, the United States Food, Drug, and Cosmetic Act (the "FDCA"), Council Directive 93/42/EEC on Medical Devices ("MDD") (1993) in the European Union (and implementing and local measures adopted thereunder) and similar international laws and regulations. The FDCA requires these products, when sold in the United States, to be safe and effective for their intended use and to comply with the regulations administered by the United States Food and Drug Administration ("FDA"). Certain medical device products are also regulated by comparable agencies in non-U.S. countries in which they are produced or sold.

Dental and medical devices of the types sold by Dentsply Sirona are generally classified by the FDA into a category that renders them subject to the same controls that apply to all medical devices, including regulations regarding alteration, misbranding, notification, record-keeping and good manufacturing practices. In the European Union, Dentsply Sirona's products are subject to the medical devices laws of the various member states, which are based on a Directive of the European Commission. Such laws generally regulate the safety of the products in a similar way to the FDA regulations. Dentsply Sirona products in Europe bear the CE mark showing that such products comply with European regulations.

All dental amalgam filling materials, including those manufactured and sold by Dentsply Sirona, contain mercury. Various groups have alleged that dental amalgam containing mercury is harmful to human health and have actively lobbied state, federal and foreign lawmakers and regulators to pass laws or adopt regulatory changes restricting the use, or requiring a warning against alleged potential risks, of dental amalgams. The FDA, the National Institutes of Health and the U.S. Public Health Service have each indicated that there are no demonstrated direct adverse health effects due to exposure to dental amalgam. In response to concerns raised by certain consumer groups regarding dental amalgam, the FDA formed an advisory committee in 2006 to review peer-reviewed scientific literature on the safety of dental amalgam. In July 2009, the FDA concluded its review of dental amalgam, confirming its use as a safe and effective restorative material for adults and children ages 6 and above. Also, as a result of this review, the FDA classified amalgam and its component parts, elemental mercury and powder alloy, as a Class II medical device. Previously there was no classification for encapsulated amalgam, and dental mercury (Class II) and alloy (Class II) were classified separately. This new regulation places encapsulated amalgam in the same class of devices as most other restorative materials, including composite and gold fillings, and makes amalgam subject to special controls by the FDA. In that respect, the FDA recommended that certain information about dental amalgam be provided, which includes information indicating that dental amalgam releases low levels of mercury vapor, and that studies on people ages six and over as well as FDA estimated exposures of children under six, have not indicated any adverse health risk associated with the use of dental amalgam. After the FDA issued this regulation, several petitions were filed asking the FDA to reconsider its position. Another advisory panel was established by the FDA to consider these petitions. Hearings of the advisory panel were held in December 2010. The FDA has taken no action indicating a change in its position as of the filing date of this Form 10-K.

In Europe, particularly in Scandinavia and Germany, the contents of mercury in amalgam filling materials have been the subject of public discussion. As a consequence, in 1994 the German health authorities required suppliers of dental amalgam to amend the instructions for use of amalgam filling materials to include a precaution against the use of amalgam for children less than eighteen years of age and to women of childbearing age. Additionally, some groups have asserted that the use of dental amalgam should be prohibited because of concerns about environmental impact from the disposition of mercury within dental amalgam, which has resulted in the sale of mercury containing products being banned in Sweden and severely curtailed in Norway. In the United States, the Environmental Protection Agency proposed in September 2014 certain effluent limitation guidelines and standards under the Clean Water Act to help cut discharges of mercury-containing dental amalgam to the environment. The rule would require affected dentists to use best available technology (amalgam separators) and other best management practices to control mercury discharges to publicly-owned treatment works. Similar regulations exist in Europe and in February 2016, the European Union adopted a ratification package regarding the United Nations Minamata Convention on Mercury, proposing rules restricting the use of dental amalgam to the encapsulated form and requiring the use of separators by dentists. The Company strongly recommends adherence to the American Dental Association's Best Management Practices for Amalgam Waste and includes this in every package of dental amalgam. Dentsply Sirona also manufactures and sells non-amalgam dental filling materials that do not contain mercury.

The Company is also subject to domestic and foreign laws, rules, regulations, self-regulatory codes, circulars and orders regarding anti-bribery and anti-corruption, including, but not limited to, the United States Foreign Corrupt Practices Act ("FCPA"), the U.S. Federal Anti-Kickback Statute ("AKS"), the United Kingdom's Bribery Act 2010 (c.23), Brazil's Clean Company Act 2014 (Law No. 12,846) China's National Health and Family Planning Commission ("NHFPC") circulars No. 40 and No. 50, and similar international laws and regulations. The FCPA and similar anti-bribery and anti-corruption laws applicable in non-United States jurisdictions generally prohibit companies and their intermediaries from improperly offering or paying anything of value to foreign government officials for the purpose of obtaining or retaining business. Some of our customer relationships are with governmental entities and therefore may be subject to such anti-bribery laws. The AKS and similar fraud and abuse laws applicable in non-United States jurisdictions prohibit persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual, or the furnishing or arranging for a good or service, for which payment may be made under a health care program, such as, in the United States, Medicare or Medicaid. In the sale, delivery and servicing of our products to other countries, we must also comply with various domestic and foreign export control and trade embargo laws and regulations, including those administered by the Department of Treasury's Office of Foreign Assets Control ("OFAC"), the Department of Commerce's Bureau of Industry and Security ("BIS") and similar international governmental agencies, which may require licenses or other authorizations for transactions relating to certain countries and/or with certain individuals identified by the respective government. Despite our internal compliance program, our policies and procedures may not always protect us from reckless or criminal acts committed by our employees or agents. Violations of these requirements are punishable by criminal or civil sanctions, including substantial fines and imprisonment.

The Company is subject to domestic and foreign laws, rules, regulations, self-regulatory codes, circulars and orders governing data privacy and transparency, including, but not limited to, the Health Insurance Portability and Accountability Act of 1996 ("HIPAA") as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (the "HITECH Act"), the Physician Payments Sunshine Provisions of the Patient Protection and Affordable Care Act, the EU Directive 2002/58/EC (and implementing and local measures adopted thereunder), France's Data Protection Act of 1978 (rev. 2004) and France's Loi Bertrand, certain rules issued by Denmark's Health and Medicines Authority, and similar international laws and regulations. HIPAA, as amended by the HITECH Act, and similar data-privacy laws applicable in non-United States jurisdictions, restrict the use and disclosure of personal health information, mandate the adoption of standards relating to the privacy and security of individually identifiable health information and require us to report certain breaches of unsecured, individually identifiable health information. The Physician Payments Sunshine Provisions of the Patient Protection and Affordable Care Act require the Company to record all transfers of value to physicians and teaching hospitals and to report this data to the Centers for Medicare and Medicaid Services for public disclosure. Similar reporting requirements have also been enacted in several states, and an increasing number of countries worldwide either have adopted or are considering similar laws requiring transparency of interactions with health care professionals.

The Company believes it is in substantial compliance with the laws and regulations that regulate its business.There are, however, significant uncertainties involving the application of various legal requirements, the violation of which could result in, among other things, sanctions. See Part I, Item 1A, "Risk Factors" of this Form 10-K for additional detail.

Sources and Supply of Raw Materials and Finished Goods

The Company manufactures the majority of the products sold by the Company. Most of the raw materials used by the Company in the manufacture of its products are purchased from various suppliers and are typically available from numerous sources. No single supplier accounts for more than 10% of Dentsply Sirona's supply requirements.

Intellectual Property

Products manufactured by Dentsply Sirona are sold primarily under its own tradenames and trademarks. Dentsply Sirona also owns and maintains more than 4,000 patents throughout the world and is licensed under a number of patents owned by others.

Dentsply Sirona's policy is to protect its products and technology through patents and trademark registrations both in the U.S. and in significant international markets. The Company monitors trademark use worldwide and promotes enforcement of its patents and trademarks in a manner that is designed to balance the cost of such protection against obtaining the greatest value for the Company. Dentsply Sirona believes its patents and trademark properties are important and contribute to the Company's marketing position but it does not consider its overall business to be materially dependent upon any individual patent or trademark. Additional information regarding certain risks related to our intellectual property is included in Part I, Item 1A "Risk Factors" of this Form 10-K and is incorporated herein by reference.

Employees

At December 31, 2018, the Company and its subsidiaries employed approximately 16,400 employees. Of these employees, approximately 4,000 were employed in the United States and 12,400 in countries outside of the United States. Some of the Company's employees outside of the United States are covered by collective bargaining, union contract, worker councils, or other similar type programs. The Company believes that it generally has a positive relationship with its employees.

As part of the Company's previously announced restructuring plan in November 2018, the Company anticipates a net reduction in global workforce of approximately 6% to 8%.

Environmental Matters

Dentsply Sirona believes that its operations comply in all material respects with applicable environmental laws and regulations. Maintaining this level of compliance has not had, and is not expected to have, a material effect on the Company's capital expenditures or on its business.

Other Factors Affecting the Business

The Company's business is subject to quarterly fluctuations of consolidated net sales and net income. The Company typically implements most of its price changes in the beginning of the first or fourth quarter. Price changes, other marketing and promotional programs including trade shows, management of inventory levels by distributors and the implementation of strategic initiatives, may impact sales levels in a given period. In addition, major new product introductions may also impact net sales as older products become less desirable compared to the new products. Sales for the industry and the Company are generally strongest in the second and fourth calendar quarters and weaker in the first and third calendar quarters, due to the effects of the items noted above and due to the impact of holidays and vacations, particularly throughout Europe.

The Company tries to maintain short lead times within its manufacturing, as such, the backlog on products is generally not material to the financial statements.

Securities Exchange Act Reports

The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers, including the Company, that file electronically with the SEC. The public can obtain any documents that the Company files with the SEC at http://www.sec.gov. The Company files annual reports, quarterly reports, proxy statements and other documents with the SEC under the Securities Exchange Act of 1934, as amended ("Exchange Act").

Dentsply Sirona also makes available free of charge through its website at www.dentsplysirona.com its annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after such materials are filed with or furnished to the SEC. Information on the Company's website does not constitute part of this document.

Forward-Looking Statements and Associated Risks

Information the Company has included or incorporated by reference in this Form 10-K, and information which may be contained in other filings with the SEC as well as press releases or other public statements, contains or may contain forward-looking statements. These forward-looking statements include, among other things, statements about the Company's plans, objectives, expectations (financial or otherwise) or intentions.

The Company's forward-looking statements involve risks and uncertainties. Actual results may differ significantly from those projected or suggested in any forward-looking statements. The Company does not undertake any obligation to release publicly any revisions to such forward-looking statements to reflect events or circumstances occurring after the date hereof or to reflect the occurrence of unanticipated events. Any number of factors could cause the Company's actual results to differ materially from those contemplated by any forward-looking statements, including, but not limited to, the risks associated with the following:

- the Company's ability to successfully implement its cost reduction and restructuring plans
- the Company's ability to remain profitable in a very competitive marketplace, which depends upon the Company's ability to differentiate its products and services from those of competitors
- the Company's failure to anticipate and appropriately adapt to changes or trends within the rapidly changing dental industry
- the effect of changes in the Company's management and personnel
- changes in applicable laws, rules or regulations, or their interpretation or enforcement, or the enactment of new laws, rules or regulations, which apply to the Company's business practices (past, present or future) or require the Company to spend significant resources for compliance
- a significant failure or disruption in service within the Company's operations or the operations of key distributors
- results in pending and future litigation, investigations or other proceedings which could subject the Company to significant monetary damages or penalties and/or require us to change our business practices, or the costs incurred in connection with such proceedings
- the Company's failure to attract and retain talented employees, or to manage succession and retention for its Chief Executive Officer or other key executives
- the Company's failure to successfully integrate the business operations or achieve the anticipated benefits from any acquired businesses
- the Company's failure to execute on, or other issues arising under, certain key client contracts
- the impact of the Company's debt service obligations on the availability of funds for other business purposes, the terms of and required compliance with covenants relating to the Company's indebtedness and its access to the credit markets in general
- general economic conditions
- other risks described from time to time in the Company's filings with the SEC

You should carefully consider these and other relevant factors, including those risk factors in Part I, Item 1A, “Risk Factors” of this Form 10-K and any other information included or incorporated by reference in this report, and information which may be contained in the Company’s other filings with the SEC, when reviewing any forward-looking statement. Investors should understand it is impossible to predict or identify all such factors or risks. As such, you should not consider either foregoing lists, or the risks identified in the Company’s SEC filings, to be a complete discussion of all potential risks or uncertainties associated with an investment in the Company.

Item 1A. Risk Factors

The following are the significant risk factors that could materially impact Dentsply Sirona's business, financial condition or future results. The order in which these factors appear should not be construed to indicate their relative importance or priority.

The Company may fail to realize the expected benefits of its announced cost reduction and restructuring efforts.

In order to operate more efficiently and control costs, the Company may announce restructuring plans from time to time, including workforce reductions, global facility consolidations and other cost reduction initiatives that are intended to generate operating expense or cost of goods sold savings through direct and indirect overhead expense reductions as well as other savings.

The Company's ability to achieve the anticipated cost savings and other benefits from these initiatives within the expected time frame is subject to many estimates and assumptions and other factors that we may not be able to control. The Company may also incur significant charges related to restructuring plans, which would reduce our profitability in the periods such charges are incurred. Consistent with these efforts, on November 5, 2018, the Board of Directors of the Company approved a plan to restructure the Company's business to support revenue growth and margin expansion and to simplify its organization. The Company expects to incur approximately $275 million in one-time expenditures and charges through 2021. The Company anticipates a net reduction in global workforce of approximately 6% to 8%. There can be no assurance that the cost reductions and results will be achieved.

Due to the complexities inherent in implementing these types of cost reduction and restructuring activities, and the quarterly phasing of related investments, the Company may fail to realize expected efficiencies and benefits or may experience a delay in realizing such efficiencies and benefits, and its operations and business could be disrupted. Company management may be required to divert their focus to managing these disruptions, and implementation may require the agreement of third parties, such as labor unions or works councils. Risks associated with these actions and other workforce management issues include delays in implementation of anticipated workforce reductions, additional unexpected costs, changes in restructuring plans that increase or decrease the number of employees affected, negative impact on the Company's relationship with labor unions or works councils, adverse effects on employee morale, and the failure to meet operational targets due to the loss of employees, any of which may impair the Company's ability to achieve anticipated cost reductions or may otherwise harm its business, and could have a material adverse effect on its competitive position, results of operations, cash flows or financial condition.

The Company recognized substantial goodwill impairment charges in 2017 and 2018 and may be required to recognize additional goodwill and intangible asset impairment charges in the future.

The Company acquires other companies and intangible assets and may not realize all the economic benefit from those acquisitions, which could cause an impairment of goodwill or intangibles. The Company reviews amortizable intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. The Company tests goodwill for impairment at least annually. Events or changes indicating that the carrying value of our goodwill or amortizable intangible assets may not be recoverable include reduced future cash flow estimates, slower growth rates in industry segments in which the Company participates and a decline in our stock price and market capitalization. The Company may be required to record a significant charge in our consolidated financial statements during the period in which any impairment of our goodwill or amortizable intangible assets is determined, negatively affecting the Company's results of operations.

During 2017 and 2018 the Company had recorded an aggregate of $3.3 billion in charges for the impairment of certain financial reporting units:

- In connection with the Company's April 30, 2017 annual goodwill impairment test and the preparation of the financial statements for the quarter ended June 30, 2017, the Company recorded a $1,092.9 million non-cash goodwill impairment charge associated with the CAD/CAM, Imaging and Treatment Center equipment reporting units. In addition, the Company tested the indefinite-lived intangible assets related to the CAD/CAM and Imaging reporting units and determined that certain tradenames and trademarks were impaired, resulting in the recording of an impairment charge of $79.8 million for the three months ended June 30, 2017.

- In preparing the financial statements for the year ended December 31, 2017, the Company identified a triggering event and recorded a $558.0 million non-cash goodwill impairment charge associated with the CAD/CAM, Imaging and Treatment Center equipment reporting units. In addition, the Company tested the indefinite-lived intangible assets related to these reporting units and determined that certain tradenames and trademarks were impaired, resulting in the recording of an impairment charge of $266.9 million for the three months ended December 31, 2017.

- In connection with the Company's April 30, 2018 annual goodwill impairment test and the preparation of the financial statements for the quarter ended June 30, 2018, the Company recorded a $1,085.8 million non-cash goodwill impairment charge associated with the CAD/CAM and Imaging equipment reporting units and the Orthodontics reporting unit. In addition, the Company tested the indefinite-lived intangible assets related to the equipment reporting units and determined that certain tradenames and trademarks were impaired, resulting in the recording of an impairment charge of $179.2 million for the three months ended June 30, 2018.

These charges resulted from changes in the Company's estimates of discounted cash flows which, in turn, resulted from changes in management's assumptions such as future revenue growth rates, operating margins, weighted average cost of capital, and future economic and market conditions affecting the dental and medical device industries. Given the uncertainty in the marketplace and other factors affecting management's assumptions underlying the Company's discounted cash flow model, the Company's current estimates could vary significantly in the future, which may result in a goodwill impairment charge at that time. For example, for the Company's reporting units that were not impaired at April 30, 2018, the Company applied a hypothetical sensitivity analysis. Had the discount rate of each of these reporting units been hypothetically increased by 100 basis points at April 30, 2018, the fair value of one reporting unit, Treatment Centers, would not exceed net book value. If the fair value of each of these reporting units had been hypothetically reduced by 10% at April 30, 2018, the fair value of one reporting unit, Treatment Centers, would not exceed net book value. Goodwill for the Treatment Centers reporting unit totals $292.4 million at December 31, 2018.

Any changes to the assumptions and estimates made by management may cause a change in circumstances indicating that the carrying value of the goodwill and indefinite-lived assets in the Treatment Centers reporting unit may not be recoverable. See Note 9, Goodwill and Intangible Assets, in the Notes to Consolidated Financial Statements in Part IV, Item 15, of this Form 10-K.

The Company's quarterly operating results and market price for the Company's common stock may continue to be volatile.

Dentsply Sirona has experienced in 2018 and may continue to experience significant fluctuations in quarterly sales and earnings due to a number of factors, some of which are substantially outside of the Company's control, including but not limited to:

- the execution of the Company's restructuring plan;
- the complexity of the organization;
- the timing of new product introductions by Dentsply Sirona and its competitors;
- the timing of industry trade shows;
- changes in customer inventory levels;
- developments in government or third party payor reimbursement policies;
- changes in customer preferences and product mix;
- the Company's ability to supply products to meet customer demand;
- fluctuations in manufacturing costs;
- changes in income tax laws and incentives which could create adverse tax consequences;
- competitors' sales promotions;
- fluctuations in currency exchange rates; and
- general economic conditions, as well as those specific to the healthcare industry and related industries.

As a result, the Company may fail to meet the expectations of securities analysts and investors, which could cause its stock price to decline. Quarterly fluctuations generally result in net sales and operating profits historically being higher in the second and fourth quarters. The Company typically implements most of its price changes early in the fourth quarter or beginning of the year. These price changes, other marketing and promotional programs, which are offered to customers from time to time in the ordinary course of business, the management of inventory levels by distributors and the implementation of strategic initiatives, may impact sales levels in a given period. Net sales and operating profits generally have been lower in the first and third quarters, primarily due not only to increased sales in the quarters preceding these quarters, but also due to the impact of holidays and vacations, particularly throughout Europe.

In addition to fluctuations in quarterly earnings, a variety of other factors may have a significant impact on the market price of Dentsply Sirona's common stock causing volatility. These factors include, but are not limited to, the publication of earnings estimates or other reports and speculation in the press or investment community; changes in the Company's industry and competitors; the Company's financial condition and cash flows; any future issuances of Dentsply Sirona's common stock, which may include primary offerings for cash, stock splits, issuances in connection with business acquisitions, restricted stock and the grant or exercise of stock options from time to time; general market and economic conditions; and any outbreak or escalation of hostilities in geographical areas in which the Company does business.

Also, the Nasdaq Stock Market ("Nasdaq") can experience extreme price and volume fluctuations that can be unrelated or disproportionate to the operating performance of the companies listed on the Nasdaq. Broad market and industry factors may negatively affect the market price of the Company's common stock, regardless of actual operating performance.

Dentsply Sirona is dependent upon a limited number of distributors for a significant portion of Dentsply Sirona's revenue, and loss of these key distributors could result in a loss of a significant amount of Dentsply Sirona's revenue.

Historically, a substantial portion of Dentsply Sirona's revenue has come from a limited number of distributors. For example, the Company's two largest distributors accounted for approximately 15% of the annual revenue of Dentsply Sirona for the year ended December 31, 2018. It is anticipated that Patterson and Henry Schein will continue to be the largest distribution contributors to Dentsply Sirona's revenue for the foreseeable future. There can be no assurance that Patterson Companies, Inc. and Henry Schein, Inc. will purchase any specified minimum quantity of products from Dentsply Sirona or that they will continue to purchase any products at all. If Patterson or Henry Schein ceases to purchase a significant volume of products from Dentsply Sirona, it could have a material adverse effect on Dentsply Sirona's results of operations and financial condition. Dentsply Sirona cannot assure that the cessation of exclusivity will not adversely affect the Companys results of operations.

The Company faces the inherent risk of litigation and claims.

The Company faces the risk of purported securities class actions, investigations by governmental agencies, product liability and other types of legal actions or claims, including possible recall actions affecting the Company's products. The primary litigation risks to which the Company is exposed are related to defending against various putative class action suits in federal and state court alleging that the Company and certain of its present and former officers and directors violated U.S. securities laws by allegedly making false and misleading statements in connection with a February 2016 registration statement issued in connection with the merger with former Sirona Dental Systems, Inc. by the entity formerly known as Dentsply International Inc., and in connection with the Company's regular securities filings, and to lawsuits related to the products manufactured by the Company. The Company has insurance policies, including directors and officers' insurance and product liability insurance, covering these risks in amounts that are considered adequate; however, the Company cannot provide assurance that the maintained coverage is sufficient to cover future claims or that the coverage will be available in adequate amounts or at a reasonable cost. Also, other types of claims asserted against the Company may not be covered by insurance. A successful claim brought against the Company in excess of available insurance, or another type of claim which is uninsured or that results in significant adverse publicity against the Company, could harm its business and overall cash flows of the Company.

Various parties, including the Company, own and maintain patents and other intellectual property rights applicable to the dental and medical device fields. Although the Company believes it operates in a manner that does not infringe upon any third party intellectual property rights, it is possible that a party could assert that one or more of the Company's products infringe upon such party's intellectual property and force the Company to pay damages and/or discontinue the sale of certain products.

The Company relies heavily on information and technology to operate its business networks, and any cyber-attacks or other disruption to its technology infrastructure or the Internet could harm the Company's operations.

Due to the global nature of the Company's business and reliance on information systems to provide the Company's services, the Company may use web-enabled and other integrated information systems in delivering the Company's services. As the breadth and complexity of Company's information systems continue to grow, the Company will increasingly be exposed to the risks inherent in the development, integration and ongoing operation of evolving information systems, including:

- disruption, impairment or failure of data centers, telecommunications facilities or other key infrastructure platforms;
- security breaches of, cyberattacks on and other failures or malfunctions in our critical application systems or their associated hardware; and
- excessive costs, excessive delays or other deficiencies in systems development and deployment.

Any disruption to the Internet or to the Company's or its service providers' global technology infrastructure, including malware, insecure coding, "Acts of God," cyber-attacks and other attempts to penetrate networks, data leakage and human error, could pose a threat to the Company's operations. The Company's network and storage applications may be subject to unauthorized access by hackers or breached due to operator error, malfeasance or other system disruptions and the Company may be the victim of cyber-attacks, targeted at the theft of financial assets, intellectual property, personal information of individuals and customers, or other sensitive information. Cyber threats are rapidly evolving and are becoming increasingly sophisticated. Despite the Company's efforts to ensure the integrity of the Company's systems, as cyber threats evolve and become more difficult to detect and successfully defend against, one or more cyber threats might defeat the measures that the Company or our vendors take to anticipate, detect, avoid or mitigate such threats. Certain techniques used to obtain unauthorized access, introduce malicious software, disable or degrade service, or sabotage systems may be designed to remain dormant until a triggering event and the Company may be unable to anticipate these techniques or implement adequate preventative measures since techniques change frequently or are not recognized until launched, and because cyberattacks can originate from a wide variety of sources. These data breaches and any unauthorized access or disclosure of the Company's information could compromise intellectual property and expose sensitive business information. Cyber-attacks could also cause the Company to incur significant remediation costs, disrupt key business operations and divert attention of management and key information technology resources.

The materialization of any of these risks may impede the processing of data and the day-to-day management of the Company's business and could result in the corruption, loss or unauthorized disclosure of proprietary, confidential or other data. Disaster recovery plans, where in place, might not adequately protect the Company in the event of a system failure. Further, the Company currently does not have excess or standby computer processing or network capacity everywhere in the world to avoid disruption in the receipt, processing and delivery of data in the event of a system failure. Despite any precautions the Company take, damage from fire, floods, hurricanes, power loss, telecommunications failures, computer viruses, break-ins and similar events at our various computer facilities could result in interruptions in the flow of data to the Company's servers.

Any of the foregoing incidents could also subject the Company to liability, expose the Company to significant expense, or cause significant harm to the Company's reputation, which could result in lost revenues. While Dentsply Sirona has invested and continues to invest in information technology risk management and disaster recovery plans, these measures cannot fully insulate the Company from cyber-attacks, technology disruptions or data loss and the resulting adverse effect on the Company's operations and financial results.

Inadequate levels of reimbursement from governmental or other third-party payors for procedures using Dentsply Sirona's products may cause Dentsply Sirona's revenue to decline.

Third-party payors, including government health administration authorities, private health care insurers and other organizations regulate the reimbursement of fees related to certain diagnostic procedures or medical treatments. Third-party payors are increasingly challenging the price and cost-effectiveness of medical products and services. While Dentsply Sirona cannot predict what effect the policies of government entities and other third-party payors will have on future sales of our products, there can be no assurance that such policies would not cause Dentsply Sirona's revenue to decline.

Due to the Company's international operations, the Company is exposed to the risk of changes in foreign exchange rates.

Due to the international nature of Dentsply Sirona's business, movements in foreign exchange rates may impact the consolidated statements of operations, consolidated balance sheets and cash flows of the Company. With approximately two-thirds of the Company's sales located in regions outside the U.S., the Company's consolidated net sales are impacted negatively by the strengthening or positively by the weakening of the U.S. dollar as compared to certain foreign currencies. Additionally, movements in certain foreign exchange rates may unfavorably or favorably impact the Company's results of operations, financial condition and liquidity as a number of the Company's manufacturing and distribution operations are located outside of the U.S. Changes in exchange rates may have a negative effect on the Company's customers' access to credit as well as on the underlying strength of particular economies and dental markets. Although the Company currently uses and may in the future use certain financial instruments to attempt to mitigate market fluctuations in foreign exchange rates, there can be no assurance that such measures will be effective or that they will not create additional financial obligations on the Company. Additionally, as a result of Brexit or other similar future actions in the EU, global markets and foreign currencies may be adversely impacted. Volatility in foreign currencies compared to the U.S. dollar could have a negative effect on our business, financial condition and results of operations.

Changes in the Company's credit ratings or macroeconomic impacts on credit markets may increase our cost of capital and limit financing options.

On August 8, 2018, S&P Global Ratings lowered its long-term issuer credit rating on the Company to 'BBB' from 'BBB+'. The Company utilizes the short and long-term debt markets to obtain capital from time to time. Adverse changes in our credit ratings or disruptions in the credit markets may result in increased borrowing costs for future long-term debt or short-term borrowing facilities which may in turn limit financing options, including our access to the unsecured borrowing market. We may also be subject to additional restrictive covenants that would reduce our flexibility. In addition, macroeconomic conditions, such as continued or increased volatility or disruption in the credit markets, would adversely affect our ability to refinance existing debt or obtain additional financing to support operations or to fund new acquisitions or capital-intensive internal initiatives.

Changes in or interpretations of tax rules, operating structures, country profitability mix and regulations may adversely affect the Company's effective tax rates.

The Company is a U.S. based multinational company subject to tax in multiple U.S. and foreign tax jurisdictions. Unanticipated changes in the Company's tax rates could affect its future results of operations. The Company's future effective tax rates could be unfavorably affected by factors such as changes in, or interpretation of, tax rules and regulations in the jurisdictions in which the Company does business, by structural changes in the Company's businesses, by unanticipated decreases in the amount of revenue or earnings in countries with low statutory tax rates, or by changes in the valuation of the Company's deferred tax assets and liabilities. On December 22, 2017, the U.S. government enacted legislation referred to as the Tax Cuts and Jobs Act, which significantly revises the Internal Revenue Code of 1986, as amended. This law may have a significant impact on the Company's U.S. tax liabilities, particularly as a result of certain complex international provisions contained in the law in light of the Company's extensive international operations. The U.S. Treasury Department and the Internal Revenue Service ("IRS") began to issue major proposed regulations related to this law during the second half of 2018 and are expected to continue issuing such regulations through spring of 2019. The proposed regulations are generally subject to comment before being finalized. While there can be no assurance as to the impact of any additional guidance by the IRS, or of any guidance that may be issued by the SEC or the Financial Accounting Standards Board relating to the Tax Cuts and Jobs Act, the Company has recorded a provisional amount of income tax to reflect the impact of the law change based on management's current interpretation of the new legislation. The ultimate impact of U.S. tax reform could be materially different from current estimates based on the Company's actual results and further analysis of the new law. In addition, it is uncertain if and to what extent various states will conform to the newly enacted federal tax law.

Product warranty claims exposure could be significant.

Dentsply Sirona generally warrants each of Dentsply Sirona's products against defects in materials and workmanship for a period of one year from the date of shipment plus any extended warranty period purchased by the customer. The future costs associated with providing product warranties could be material. Successful product warranty claims brought against Dentsply Sirona could reduce Dentsply Sirona's profits and/or impair our financial condition, and damage Dentsply Sirona's reputation.

Dentsply Sirona's failure to obtain issued patents and, consequently, to protect Dentsply Sirona's proprietary technology could hurt Dentsply Sirona's competitive position.

Dentsply Sirona's success will depend in part on Dentsply Sirona's ability to obtain and enforce claims in our patents directed to Dentsply Sirona's products, technologies and processes, both in the United States and in other countries. Risks and uncertainties that Dentsply Sirona faces with respect to Dentsply Sirona's patents and patent applications include the following:

- the pending patent applications that Dentsply Sirona has filed, or to which Dentsply Sirona has exclusive rights, may not result in issued patents or may take longer than Dentsply Sirona expects to result in issued patents;
- the allowed claims of any patents that are issued may not provide meaningful protection;
- Dentsply Sirona may be unable to develop additional proprietary technologies that are patentable;
- the patents licensed or issued to Dentsply Sirona may not provide a competitive advantage;
- other companies may challenge patents licensed or issued to Dentsply Sirona;
- disputes may arise regarding inventions and corresponding ownership rights in inventions and know-how resulting from the joint creation or use of intellectual property by Dentsply Sirona and Dentsply Sirona's respective licensors; and
- other companies may design around the technologies patented by Dentsply Sirona.

Dentsply Sirona's profitability could suffer if third parties infringe upon Dentsply Sirona's intellectual property rights or if Dentsply Sirona's products are found to infringe upon the intellectual property rights of others.

Dentsply Sirona's profitability could suffer if third parties infringe upon Dentsply Sirona's intellectual property rights or misappropriate Dentsply Sirona's technologies and trademarks for their own businesses. To protect Dentsply Sirona's rights to Dentsply Sirona's intellectual property, Dentsply Sirona relies on a combination of patent and trademark law, trade secret protection, confidentiality agreements and contractual arrangements with Dentsply Sirona's employees, strategic partners and others. Dentsply Sirona cannot assure you that any of Dentsply Sirona's patents, any of the patents of which Dentsply Sirona are a licensee or any patents which may be issued to Dentsply Sirona or which we may license in the future, will provide Dentsply Sirona with a competitive advantage or afford Dentsply Sirona protection against infringement by others, or that the patents will not be successfully challenged or circumvented by third parties, including Dentsply Sirona's competitors. The protective steps we have taken may be inadequate to deter misappropriation of Dentsply Sirona's proprietary information. Dentsply Sirona may be unable to detect the unauthorized use of, or take appropriate steps to enforce, Dentsply Sirona's intellectual property rights. Effective patent, trademark and trade secret protection may not be available in every country in which Dentsply Sirona will offer, or intend to offer, Dentsply Sirona's products. Any failure to adequately protect Dentsply Sirona's intellectual property could devalue Dentsply Sirona's proprietary content and impair Dentsply Sirona's ability to compete effectively. Further, defending Dentsply Sirona's intellectual property rights could result in the expenditure of significant financial and managerial resources.

Litigation may also be necessary to enforce Dentsply Sirona's intellectual property rights or to defend against any claims of infringement of rights owned by third parties that are asserted against Dentsply Sirona. In addition, Dentsply Sirona may have to participate in one or more interference proceedings declared by the United States Patent and Trademark Office, the European Patent Office or other foreign patent governing authorities, to determine the priority of inventions, which could result in substantial costs. Acquisitions by Dentsply Sirona of products or businesses that are found to infringe upon the intellectual property rights of others and the resulting changes to the competitive landscape of the industry could further increase this risk.

If Dentsply Sirona becomes involved in litigation or interference proceedings, Dentsply Sirona may incur substantial expense, and the proceedings may divert the attention of Dentsply Sirona's technical and management personnel, even if Dentsply Sirona ultimately prevails. An adverse determination in proceedings of this type could subject us to significant liabilities, allow Dentsply Sirona's competitors to market competitive products without obtaining a license from Dentsply Sirona, prohibit Dentsply Sirona from marketing Dentsply Sirona's products or require us to seek licenses from third parties that may not be available on commercially reasonable terms, if at all. If Dentsply Sirona cannot obtain such licenses, Dentsply Sirona may be restricted or prevented from commercializing Dentsply Sirona's products.

The enforcement, defense and prosecution of intellectual property rights, including the United States Patent and Trademark Office's, the European Patent Office's and other foreign patent offices' interference proceedings, and related legal and administrative proceedings in the United States and elsewhere, involve complex legal and factual questions. As a result, these proceedings are costly and time-consuming, and their outcome is uncertain. Litigation may be necessary to:

- assert against others or defend Dentsply Sirona against claims of patent or trademark infringement;
- enforce patents owned by, or licensed to Dentsply Sirona from, another party;
- protect Dentsply Sirona's trade secrets or know-how; or
- determine the enforceability, scope and validity of Dentsply Sirona's proprietary rights or the proprietary rights of others.

Due to the international nature of our business, including increasing exposure to markets outside of the U.S. and Europe, political or economic changes or other factors could harm our business and financial performance.

Approximately two-thirds of the Company's sales are located in regions outside the United States. In addition, we anticipate that sales outside of the U.S. and Europe will continue to expand and account for a significant portion of Dentsply Sirona's revenue. Operating internationally is subject to a number of uncertainties, including, but not limited to, the following:

- economic and political instability;
- import or export licensing requirements;
- additional compliance-related risks;
- trade restrictions and tariffs;
- product registration requirements;
- longer payment cycles;
- changes in regulatory requirements and tariffs;

- fluctuations in currency exchange rates;
- potentially adverse tax consequences; and
- potentially weak protection of intellectual property rights.

Certain of these risks may be heightened as a result of changing political climates, both of which may lead to changes in areas such as trade restrictions and tariffs, regulatory requirements and exchange rate fluctuations, which may adversely affect our business and financial performance.

A large number of the Company's products are manufactured or obtained from sole source manufacturing facilities and a significant portion of the Company's raw materials are purchased from a limited number of suppliers.

Although the Company maintains multiple manufacturing facilities, a large number of the products manufactured by the Company are manufactured in facilities that are the sole source of such products. As there are a limited number of alternative suppliers for these products, any disruption at a particular Company manufacturing facility could lead to delays, increased expenses, and may damage the Company's business and results of operations.

Additionally, a significant portion of the Company's injectable anesthetic products, orthodontic products, certain dental cutting instruments, catheters, nickel titanium products and certain other products and raw materials are purchased from a limited number of suppliers and in certain cases single source suppliers pursuant to agreements that are subject to periodic renewal, some of which may also compete with the Company. As there are a limited number of suppliers for these products, there can be no assurance that the Company will be able to obtain an adequate supply of these products and raw materials in the future. Any delays in delivery of or shortages in these products could interrupt and delay manufacturing of the Company's products and result in the cancellation of orders for these products. In addition, these suppliers could discontinue the manufacture or supply of these products to the Company at any time or supply products to competitors. Dentsply Sirona may not be able to identify and integrate alternative sources of supply in a timely fashion or at all. Any transition to alternate suppliers may result in delays in shipment and increased expenses and may limit the Company's ability to deliver products to customers. If the Company is unable to develop reasonably priced alternative sources in a timely manner, or if the Company encounters delays or other difficulties in the supply or manufacturing of such products and other materials internally or from third parties, the Company's business and results of operations may be harmed.

Certain of the Company's products are dependent on consumer discretionary spending.

Certain dental specialty products, dental equipment and products that support discretionary dental procedures may be susceptible to unfavorable changes in economic conditions. Decreases in consumer discretionary spending could negatively affect the Company's business and result in a decline in sales and financial performance.

Dentsply Sirona has a significant amount of indebtedness. A breach of the covenants under Dentsply Sirona's debt instruments outstanding from time to time could result in an event of default under the applicable agreement.

The Company has debt securities outstanding of approximately $1.6 billion. Dentsply Sirona also has the ability to incur up to $700.0 million of indebtedness under the revolving credit facility, as discussed below, and may incur significantly more indebtedness in the future.

Dentsply Sirona's level of indebtedness and related debt service obligations could have negative consequences including:

- making it more difficult for the Company to satisfy its obligations with respect to its indebtedness;
- requiring Dentsply Sirona to dedicate significant cash flow from operations to the payment of principal and interest on its indebtedness, which would reduce the funds the Company has available for other purposes, including working capital, capital expenditures and acquisitions; and
- reducing Dentsply Sirona's flexibility in planning for or reacting to changes in its business and market conditions.

Dentsply Sirona's current debt agreements contain a number of covenants and financial ratios, which the Company is required to satisfy. Under the Note Purchase Agreement dated December 11, 2015, the Company will be required to maintain ratios of debt outstanding to total capital not to exceed the ratio of 0.6 to 1.0, and operating income excluding depreciation and amortization to interest expense of not less than 3.0 times, in each case, as such terms are defined in the Note Purchase Agreement. All of the Company's outstanding debt agreements have been amended to reflect these covenants. The Company may need to reduce the amount of its indebtedness outstanding from time to time in order to comply with such ratios, though no assurance can be given that Dentsply Sirona will be able to do so. Dentsply Sirona's failure to maintain such ratios or a breach of the other covenants under its debt agreements outstanding from time to time could result in an event of default under the applicable agreement. Such a default may allow the creditors to accelerate the related indebtedness and may result in the acceleration of any other indebtedness.

The Company may not be able to repay its outstanding debt in the event that cross default provisions are triggered due to a breach of loan covenants.

Dentsply Sirona's existing borrowing documentation contains a number of covenants and financial ratios, which it is required to satisfy. Any breach of any such covenants or restrictions, the most restrictive of which pertain to asset dispositions, maintenance of certain levels of net worth, and prescribed ratios of indebtedness to total capital and operating income excluding depreciation and amortization of interest expense, would result in a default under the existing borrowing documentation that would permit the lenders to declare all borrowings under such documentation to be immediately due and payable and, through cross default provisions, would entitle Dentsply Sirona's other lenders to accelerate their loans. Dentsply Sirona may not be able to meet its obligations under its outstanding indebtedness in the event that any cross default provisions are triggered or to the extent that no other parties are willing to extend financing.

The Company may not generate sufficient cash flow to service its debt, pay its contractual obligations and operate the business.

Dentsply Sirona's ability to make payments on its indebtedness and contractual obligations, and to fund its operations depends on its future performance and financial results, which, to a certain extent, are subject to general economic, financial, competitive, regulatory and other factors and the interest rate environment that are beyond its control. Although senior management believes that the Company has and will continue to have sufficient liquidity, there can be no assurance that Dentsply Sirona's business will generate sufficient cash flow from operations in the future to service its debt, pay its contractual obligations and operate its business.

Certain provisions in the Company's governing documents, and of Delaware law, may make it more difficult for a third party to acquire Dentsply Sirona.

Certain provisions of Dentsply Sirona's Certificate of Incorporation and By-laws and of Delaware law could have the effect of making it difficult for a third party to acquire control of Dentsply Sirona. Such provisions include, among others, a provision allowing the Board of Directors to issue preferred stock having rights senior to those of the common stock and certain requirements which make it difficult for stockholders to amend Dentsply Sirona's By-laws and prevent them from calling special meetings of stockholders. Delaware law imposes some restrictions on mergers and other business combinations between the Company and any "interested stockholder" with beneficial ownership of 15% or more of the Company's outstanding common stock.

Dentsply Sirona's ability to prevent fraud while growing, restructuring and managing the business is dependent on the management of the Company's financial reporting and internal controls.

The Company's implementation of its business plans, restructuring plans and compliance with regulations requires that Dentsply Sirona effectively manage it's financial reporting and internal controls. During this period of restructuring and other organizational changes, the Company continues to focus on maintaining effective internal controls so as to provide continued assurance with respect to the Company's financial reports and to effectively prevent fraud. Dentsply Sirona's operating results could be harmed if Dentsply Sirona cannot provide reasonable assurance with respect to Dentsply Sirona's financial reports and effectively prevent fraud. The Sarbanes-Oxley Act of 2002 requires Dentsply Sirona to furnish a report by management on internal control over financial reporting, including managements' assessment of the effectiveness of such control. Internal control over financial reporting may not prevent or detect misstatements because of its certain limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud. As a result, even effective internal controls may not provide reasonable assurances with respect to the preparation and presentation of financial statements. In addition, projections of any evaluation of effectiveness of internal control over financial reporting to future periods are subject to the risk that the control may become either obsolete or inadequate as a result of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. If Dentsply Sirona fails to maintain adequate internal controls, including any failure to implement required new or improved controls, or if Dentsply Sirona experiences difficulties in implementing new or revised controls, Dentsply Sirona's business and operating results could be harmed and Dentsply Sirona could fail to meet Dentsply Sirona's reporting obligations.

If we fail to comply with laws and regulations relating to health care fraud, we could suffer penalties or be required to make significant changes to Dentsply Sirona's operations, which could adversely affect Dentsply Sirona's business.

Dentsply Sirona is subject to federal, state, local and foreign laws, rules, regulations, self-regulatory codes, circulars and orders relating to health care fraud, including, but not limited to, the U.S. Federal Anti-Kickback Statute, the United Kingdom's Bribery Act 2010 (c.23), Brazil's Clean Company Act 2014 (Law No. 12,846) and China's National Health and Family Planning Commission ("NHFPC") circulars No. 49 and No. 50. Some of these laws, referred to as "false claims laws," prohibit the submission or causing the submission of false or fraudulent claims for reimbursement to federal, state and other health care payors and programs. Other laws, referred to as "anti-kickback laws," prohibit soliciting, offering, receiving or paying remuneration in order to induce the referral of a patient or ordering, purchasing, leasing or arranging for or recommending ordering, purchasing or leasing, of items or services that are paid for by federal, state and other health care payors and programs.

The U.S. government has expressed concerns about financial relationships between suppliers on the one hand and physicians and dentists on the other. As a result, we regularly review and revise Dentsply Sirona's marketing practices as necessary to facilitate compliance. In addition, under the reporting and disclosure obligations of the U.S.Physician Payment Sunshine Act and similar foreign laws, rules, regulations, self-regulatory codes, circulars and orders, such as France's Loi Bertrand and rules issued by Denmark's Health and Medicines Authority, the general public and government officials will be provided with access to detailed information with regard to payments or other transfers of value to certain practitioners (including physicians, dentists and teaching hospitals) by applicable drug and device manufacturers subject to such reporting and disclosure obligations, which includes us. This information may lead to greater scrutiny, which may result in modifications to established practices and additional costs.

Failure to comply with health care fraud laws, rules, regulations, self-regulatory codes, circulars and orders could result in significant civil and criminal penalties and costs, including the loss of licenses and the ability to participate in federal and state health care programs, and could have a material adverse impact on Dentsply Sirona's business. Also, these laws may be interpreted or applied by a prosecutorial, regulatory or judicial authority in a manner that could require Dentsply Sirona to make changes in Dentsply Sirona's operations or incur substantial defense and settlement expenses. Even unsuccessful challenges by regulatory authorities or private relators could result in reputational harm and the incurring of substantial costs. In addition, many of these laws are vague or indefinite and have not been interpreted by the courts, and have been subject to frequent modification and varied interpretation by prosecutorial, regulatory authorities, increasing compliance risks.

We cannot predict whether changes in applicable laws, rules, regulations, self-regulatory codes, circulars and orders, or the interpretation thereof, or changes in Dentsply Sirona's services or marketing practices in response, could adversely affect Dentsply Sirona's business.

The success of our business depends in part on achieving our strategic objectives, including through acquisitions and dispositions.

With respect to acquisitions and dispositions of assets and businesses, the Company may not achieve expected returns and other benefits associated with business combinations as a result of various factors, including integration and collaboration challenges, such as personnel and technology. In addition, the Company may not achieve anticipated synergies from related integration activities. Further, acquisitions or dispositions may distract the Company's management's time and attention and disrupt our ongoing business operations or relationships with customers, employees, suppliers or other parties. However, the Company continues to evaluate the potential disposition of assets and businesses that may no longer help the Company achieve its strategic objectives, and to view acquisitions as a key part of its growth strategy.

After reaching an agreement with a buyer or seller for the acquisition or disposition of a business, the transaction may remain subject to necessary regulatory and governmental approvals on acceptable terms as well as the satisfaction of pre-closing conditions, which may prevent the Company from completing the transaction in a timely manner, or at all. From a workforce perspective, risks associated with acquisitions and dispositions include, among others, delays in anticipated workforce reductions, additional unexpected costs, changes in restructuring plans that increase or decrease the number of employees affected, negative impacts on the Company's relationship with labor unions, adverse effects on employee morale, and the failure to meet operational targets due to the loss of employees, any of which may impair the Company's ability to achieve anticipated cost reductions or may otherwise harm its business, and could have a material adverse effect on its competitive position, results of operations, cash flows or financial condition.

When the Company decides to sell assets or a business, the Company may encounter difficulty in finding buyers or executing alternative exit strategies on acceptable terms in a timely manner, which could delay the accomplishment of its strategic objectives. Alternatively, the Company may dispose of a business at a price or on terms that are less than the Company had anticipated, or with the exclusion of assets that must be divested or run off separately. Dispositions may also involve continued financial involvement in a divested business, such as through continuing equity ownership, transition service agreements, guarantees, indemnities or other current or contingent financial obligations. Under these arrangements, performance by the acquired or divested business, or other conditions outside the Company's control, could affect its future financial results.

In the context of acquisitions, there can be no assurance that the Company will achieve any of the benefits that it might anticipate from such an acquisition and the attention and effort devoted to the integration of an acquired business could divert management's attention from normal business operations. The Company may not achieve the full revenue and cost synergies anticipated to result from an acquisition. If the Company makes acquisitions, it may incur debt, assume contingent liabilities and/or additional risks, or create additional expenses, any of which might adversely affect its financial results. Any financing that the Company might need for acquisitions may only be available on terms that restrict its business or that impose additional costs that reduce its operating results.

Inventories maintained by the Company's customers may fluctuate from time to time.

The Company relies in part on its dealer and customer relationships and predictions of dealer and customer inventory levels in projecting future demand levels and financial results. These inventory levels may fluctuate, and may differ from the Company's predictions, resulting in the Company's projections of future results being different than expected. These changes may be influenced by changing relationships with the dealers and customers, economic conditions and customer preference for particular products. There can be no assurance that the Company's dealers and customers will maintain levels of inventory in accordance with the Company's predictions or past history, or that the timing of customers' inventory build or liquidation will be in accordance with the Company's predictions or past history.

Dentsply Sirona hedging and cash management transactions may expose Dentsply Sirona to loss or limit Dentsply Sirona's potential gains.

As part of Dentsply Sirona's risk management program, we use foreign currency exchange forward contracts. While intended to reduce the effects of exchange rate fluctuations, these transactions may limit Dentsply Sirona's potential gains or expose Dentsply Sirona to loss. Should Dentsply Sirona's counterparties to such transactions or the sponsors of the exchanges through which these transactions are offered fail to honor their obligations due to financial distress or otherwise, we would be exposed to potential losses or the inability to recover anticipated gains from these transactions.

We enter into foreign currency exchange forward contracts as economic hedges of trade commitments or anticipated commitments denominated in currencies other than the functional currency to mitigate the effects of changes in currency rates. Although we do not enter into these instruments for trading purposes or speculation, and although Dentsply Sirona's management believes all of these instruments are economically effective for accounting purposes as hedges of underlying physical transactions, these foreign exchange commitments are dependent on timely performance by Dentsply Sirona's counterparties. Their failure to perform could result in Dentsply Sirona having to close these hedges without the anticipated underlying transaction and could result in losses if foreign currency exchange rates have changed.

We enter into interest rate swap agreements from time to time to manage some of Dentsply Sirona's exposure to interest rate volatility. These swap agreements involve risks, such as the risk that counterparties may fail to honor their obligations under these arrangements. In addition, these arrangements may not be effective in reducing Dentsply Sirona's exposure to changes in interest rates. If such events occur, Dentsply Sirona's results of operations may be adversely affected.

Most of Dentsply Sirona's cash deposited with banks is not insured and would be subject to the risk of bank failure. Dentsply Sirona's total liquidity also depends in part on the availability of funds under Dentsply Sirona's multi-currency revolving credit facility. The failure of any bank in which we deposit Dentsply Sirona's funds or that is part of Dentsply Sirona's multi-currency revolving credit facility could reduce the amount of cash we have available for operations and additional investments in Dentsply Sirona's business.

The Company may be unable to develop innovative products or obtain regulatory approval for new products or maintain approvals for existing products.

The worldwide markets for dental and medical products is highly competitive and is driven by rapid and significant technological change, new intellectual property associated with that technological change, evolving industry standards, and new product introductions. Additionally, some markets for products, such as orthodontics, are also subject to significant negative price pressures. Dentsply Sirona's patent portfolio continues to change with patents expiring through the normal course of their life. There can be no assurance that Dentsply Sirona's products will not lose their competitive advantage or become noncompetitive or obsolete as a result of such factors, or that we will be able to generate any economic return on the Company's investment in product development. If the Company's products or technologies lose their competitive advantage or become noncompetitive or obsolete, Dentsply Sirona's business could be negatively affected.

The size and number of the Company's competitors vary by product line and from region to region. Certain of Dentsply Sirona's competitors may have greater resources than the Company. In addition, the Company is exposed to the risk that its competitors or its customers may introduce private label, generic, or low cost products that compete with the Company's products at lower price points. If these competitors' products capture significant market share or result in a decrease in market prices overall, this could have a negative impact on the Company's results of operations and financial condition.

Dentsply Sirona has identified new products as an important part of its growth opportunities. There can be no assurance that Dentsply Sirona will be able to continue to develop innovative products or that regulatory approval of any new products will be obtained from applicable U.S. or international government or regulatory authorities, or that if such approvals are obtained, such products will be favorably accepted in the marketplace. Additionally, there is no assurance that entirely new technology or approaches to dental treatment or competitors' new products will not be introduced that could render the Company's products obsolete.

The Company's products will need to be certified under the European Medical Directive that has been revised to become the Medical Device Regulation ("MDR"). Dentsply Sirona as well as all medical device manufacturers have to perform significant upgrades to quality systems and processes including technical documentation and subject them to new certification under MDR in order to continue to sell those products in the European Union ("EU"). The new regulations become effective in May 2020, which will require the Company to have all products it markets and sells in Europe certified before this date. The Company is in the process of certification. Failure to have the certification completed by May 2020 could unfavorably impact the Company's sales and financial condition.

Additionally, the United Kingdom ("UK") is currently negotiating exit from the EU, "Brexit". Terms of the Brexit agreement could impact the UK's ability to certify medical devices for sale in the EU. The Company has been working on alternative plans for the impacted products. The inability to certify the Company's products for sale in the EU could unfavorable impact the Company's sales.

Dentsply Sirona's business is subject to extensive, complex and changing domestic and foreign laws, rules, regulations, self-regulatory codes, directives, circulars and orders that failure to comply with could subject us to civil or criminal penalties or other liabilities.

Dentsply Sirona is subject to extensive domestic and foreign laws, rules, regulations, self-regulatory codes, circulars and orders which are administered by various international, federal and state governmental authorities, including, among others, the FDA, the Office of Foreign Assets Control of the United States Department of the Treasury ("OFAC"), the Bureau of Industry and Security of the United States Department of Commerce ("BIS"), the United States Federal Trade Commission, the United States Department of Justice, the Environmental Protection Agency ("EPA"), and other similar domestic and foreign authorities. These laws, rules, regulations, self-regulatory codes, circulars and orders include, but are not limited to, the United States Food, Drug and Cosmetic Act, the European Council Directive 93/42/EEC on Medical Devices ("MDD") (1993) (and implementing and local measures adopted thereunder), the Federal Health Information Technology for Economic and Clinical Health Act ("HITECH Act"), the Federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), France's Data Protection Act of 1978 (rev. 2004), the U.S. Foreign Corrupt Practices Act (the "FCPA"), the U.S. Federal Anti-Kickback Statute and similar international anti-bribery and anti-corruption laws, the Physician Payments Sunshine Act, regulations concerning the supply of conflict minerals, various environmental regulations such as the Federal Water Pollution Control Act (the "Clean Water Act"), the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act (the "Health Care Reform Law"), and regulations relating to trade, import and export controls and economic sanctions. Such laws, rules, regulations, self-regulatory codes, circulars and orders are complex and are subject to change. For example, since a significant proportion of the regulatory framework in the United Kingdom is derived from EU directives and regulations, Brexit could materially affect the regulatory regime applicable to our operations and customers with operations connected to the United Kingdom. Any such changes to the regulatory regime could have a material adverse effect on the Company's business and results of operations.

The Health Care Reform Law contains many provisions designed to generate the revenues necessary to fund the coverage expansions and to reduce costs of Medicare and Medicaid. One such provision that began in 2013 imposed a 2.3% excise tax on domestic sales of many medical devices by manufacturers and importers. This provision was temporarily suspended through December 31, 2017, and recently suspended again through December 31, 2019 by the U.S. Tax Cuts and Jobs Act of 2017. If this provision delaying the excise tax is not repealed or further suspended, it may adversely affect sales and cost of goods sold thereafter if not repealed. The Health Care Reform Law may also adversely affect payors by increasing their medical cost trends, which could have an effect on the industry and potentially impact our business and revenue as payors seek to offset these increases by reducing costs in other areas, although the extent of this impact is currently unknown. Additionally, further federal and state proposals for health care reform are uncertain at this time, and the Health Care Reform Law may be invalidated, in whole or in part, or it may be repealed. We cannot predict what further reform proposals, if any, will be adopted, when they may be adopted, or what impact they may have on us.

Compliance with the numerous applicable existing and new laws, rules, regulations, self-regulatory codes, circulars and orders could require us to incur substantial regulatory compliance costs. There can be no assurance that governmental authorities will not raise compliance concerns or perform audits to confirm compliance with such laws, rules, regulations, self-regulatory codes, circulars and orders. Failure to comply with applicable laws, rules, regulations, self-regulatory codes, circulars or orders could result in a range of governmental enforcement actions, including fines or penalties, injunctions and/or criminal or other civil proceedings. Any such actions could result in higher than anticipated costs or lower than anticipated revenue and could have a material adverse effect on the Company's reputation, business, financial condition and results of operations.

Dentsply Sirona may be unable to obtain necessary product approvals and marketing clearances.

Dentsply Sirona must obtain certain approvals by, and marketing clearances from, governmental authorities, including the FDA and similar health authorities in foreign countries to market and sell Dentsply Sirona's products in those countries. These agencies regulate the marketing, manufacturing, labeling, packaging, advertising, sale and distribution of medical devices. The FDA enforces additional regulations regarding the safety of X-ray emitting devices. Dentsply Sirona's products are currently regulated by such authorities and certain of Dentsply Sirona's new products will require approval by, or marketing clearance from, various governmental authorities, including the FDA. Various states also impose similar regulations.

The FDA review process typically requires extended proceedings pertaining to the safety and efficacy of new products. A 510(k) application is required in order to market a new or modified medical device. If specifically required by the FDA, a pre-market approval, or PMA, may be necessary. Such proceedings, which must be completed prior to marketing a new medical device, are potentially expensive and time consuming. They may delay or hinder a product's timely entry into the marketplace. Moreover, there can be no assurance that the review or approval process for these products by the FDA or any other applicable governmental authority will occur in a timely fashion, if at all, or that additional regulations will not be adopted or current regulations amended in such a manner as will adversely affect us. The FDA also oversees the content of advertising and marketing materials relating to medical devices which have received FDA clearance. Failure to comply with the FDA's advertising guidelines may result in the imposition of penalties.

We are also subject to other federal, state and local laws, regulations and recommendations relating to safe working conditions, laboratory and manufacturing practices. The extent of government regulation that might result from any future legislation or administrative action cannot be accurately predicted.

Similar to the FDA review process, the EU review process typically requires extended proceedings pertaining to the safety and efficacy of new products. Such proceedings, which must be completed prior to marketing a new medical device, are potentially expensive and time consuming and may delay or prevent a product's entry into the marketplace.

Failure to comply with these rules, regulations, self-regulatory codes, circulars and orders could result in significant civil and criminal penalties and costs, including the loss of licenses and the ability to participate in federal and state health care programs, and could have a material adverse impact on Dentsply Sirona's business. Also, these regulations may be interpreted or applied by a prosecutorial, regulatory or judicial authority in a manner that could require Dentsply Sirona to make changes in Dentsply Sirona's operations or incur substantial defense and settlement expenses. Even unsuccessful challenges by regulatory authorities or private relators could result in reputational harm and the incurring of substantial costs. In addition, many of these laws are vague or indefinite and have not been interpreted by the courts, and have been subject to frequent modification and varied interpretation by prosecutorial, regulatory authorities, increasing compliance risks.

Challenges may be asserted against the Company's products due to real or perceived quality, health or environmental issues.

The Company manufactures and sells a wide portfolio of dental and medical device products. While the Company endeavors to ensure that its products are safe and effective, there can be no assurance that there may not be challenges from time to time regarding the real or perceived quality, health or environmental impact of the Company's products or certain raw material components of the Company's products. All dental amalgam filling materials, including those manufactured and sold by Dentsply Sirona, contain mercury. Some groups have asserted that amalgam should be discontinued because of its mercury content and/or that disposal of mercury containing products may be harmful to the environment. In the United States, the EPA proposed in September 2014 certain effluent limitation guidelines and standards under the Clean Water Act to help cut discharges of mercury-containing dental amalgam to the environment. The rule would require affected dentists to use best available technology (amalgam separators) and other best management practices to control mercury discharges to publicly-owned treatment works. Similar regulations exist in Europe and in February 2016, the European Union adopted a ratification package regarding the United Nations Minamata Convention on Mercury, proposing rules restricting the use of dental amalgam to the encapsulated form and requiring the use of separators by dentists. If governmental authorities elect to place restrictions or significant regulations on the sale and/or disposal of dental amalgam, that could have an adverse impact on the Company's sales of dental amalgam. Dentsply Sirona also manufactures and sells non-amalgam dental filling materials that do not contain mercury but that may contain bisphenol-A, commonly called BPA. BPA is found in many everyday items, such as plastic bottles, foods, detergents and toys, and may be found in certain dental composite materials or sealants either as a by-product of other ingredients that have degraded, or as a trace material left over from the manufacture of other ingredients used in such composites or sealants. The FDA currently allows the use of BPA in dental materials, medical devices, and food packaging. Nevertheless, public reports and concerns regarding the potential hazards of dental amalgam or of BPA could contribute to a perceived safety risk for the Company's products that contain mercury or BPA. Adverse publicity about the quality or safety of our products, whether or not ultimately based on fact, may have an adverse effect on our brand, reputation and operating results and legal and regulatory developments in this area may lead to litigation and/or product limitations or discontinuation.

The Company's results could be negatively impacted by a natural disaster or similar event.

The Company operates in more than 120 countries and its and its suppliers' manufacturing facilities are located in multiple locations around the world. Any natural or other disaster in such a location could result in serious harm to the Company's business and consolidated results of operations. Any insurance maintained by the Company may not be adequate to cover our losses resulting from such disasters or other business interruptions, and our emergency response plans may not be effective in preventing or minimizing losses in the future.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

The following is a listing of Dentsply Sirona's principal manufacturing and distribution locations:

Location	Function	Leased or Owned
United States:		
Milford, Delaware (2)	Manufacture of dental consumable products	Owned
Sarasota, Florida (2)	Manufacture of orthodontic accessory products	Owned
Waltham, Massachusetts (1)	Manufacture and distribution of dental implant products	Leased
Long Island City, New York (1)	Manufacture of dental equipment products	Leased
Charlotte, North Carolina (1)	Distribution of dental equipment products	Leased
Lancaster, Pennsylvania (3)	Distribution of dental products	Leased
York, Pennsylvania (1) (2)	Manufacture of small dental equipment, bone grafting products, and preventive dental products	Owned
Johnson City, Tennessee (2)	Manufacture and distribution of endodontic instruments and materials	Leased
Richardson, Texas (2)	Manufacture of orthodontic products	Leased
Foreign:		
Pirassununga, Brazil (1)	Manufacture and distribution of artificial teeth	Owned
Bensheim, Germany (1)	Manufacture and distribution of dental equipment	Owned
Hanau, Germany (1)	Manufacture and distribution of precious metal dental alloys, dental ceramics and dental implant products	Owned
Konstanz, Germany (2)	Manufacture and distribution of dental consumable products	Owned
Mannheim, Germany (1)	Manufacture and distribution of dental implant products	Owned/Leased
Munich, Germany (2)	Manufacture and distribution of endodontic instruments and materials	Owned
Radolfzell, Germany (3)	Distribution of dental products	Leased
Bar Lev Industrial Park, Israel (1)	Manufacture and distribution of dental implant products	Owned/Leased
Badia Polesine, Italy (2)	Manufacture and distribution of dental consumable products	Owned/Leased
Otawara, Japan (1) (2)	Manufacture and distribution of precious metal dental alloys, dental consumable products and orthodontic products	Owned
Venlo, Netherlands (3)	Distribution of dental consumable products	Leased
Mölndal, Sweden (1)	Manufacture and distribution of dental implant products and healthcare consumable products	Owned
Ballaigues, Switzerland (2)	Manufacture and distribution of endodontic instruments, plastic components and packaging material	Owned
Ankara, Turkey (1)	Manufacture and distribution of healthcare consumable products	Owned

1 These properties are included in the Technologies & Equipment segment.
2 These properties are included in the Consumables segment.
3 This property is a distribution warehouse not managed by named segments.

In addition, the Company maintains sales and distribution offices at certain of its foreign and domestic manufacturing facilities, as well as at various other U.S. and international locations. Most of these sites around the world that are used exclusively for sales and distribution are leased. Dentsply Sirona believes that its properties and facilities are well maintained and are generally suitable and adequate for the purposes for which they are used.

The Company also owns its worldwide headquarters located in York, Pennsylvania.

Item 3. Legal Proceedings

The Company is, from time to time, subject to a variety of litigation and similar proceedings incidental to its business. These legal matters primarily involve claims for damages arising out of the use of the Company's products and services and claims relating to intellectual property matters including patent infringement, employment matters, tax matters, commercial disputes, competition and sales and trading practices, personal injury and insurance coverage. The Company may also become subject to lawsuits as a result of past or future acquisitions or as a result of liabilities retained from, or representations, warranties or indemnities provided in connection with, divested businesses. Some of these lawsuits may include claims for punitive and consequential, as well as compensatory damages. Based upon the Company's experience, current information and applicable law, it does not believe that these proceedings and claims will have a material adverse effect on its consolidated results of operations, financial position or liquidity. However, in the event of unexpected further developments, it is possible that the ultimate resolution of these matters, or other similar matters, if unfavorable, may be materially adverse to the Company's business, financial condition, results of operations or liquidity. For additional details, see Part II, Item 8, Note 19, Commitments and Contingencies - "Litigation", in the Notes to Consolidated Financial Statements in Item 15 of this Form 10-K, which is incorporated by reference.

Item 4. Mine Safety Disclosure

Not Applicable.

PART II

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

The Company's common stock is traded on the Nasdaq National Market under the symbol "XRAY." Approximately 95,375 holders of the Company's common stock are "street name" or beneficial holders, whose shares are held of record by banks, brokers and other financial institutions. In addition, the Company estimates, based on information supplied by its transfer agent, that there are 268 holders of record of the Company's common stock.

Stock Repurchase Program

During the year ended December 31, 2018, the Board of Directors of the Company approved an increase in the authorized number of shares of common stock that may be repurchased under the share repurchase program for a total authorization of $1.0 billion. Share repurchases will be made through open market purchases, Rule 10b5-1 plans, accelerated share repurchases, privately negotiated transactions or other transactions in such amounts and at such times as the Company deems appropriate based upon prevailing market and business conditions and other factors.

During the quarter ended December 31, 2018, the Company had no repurchases of common shares under the stock repurchase program.

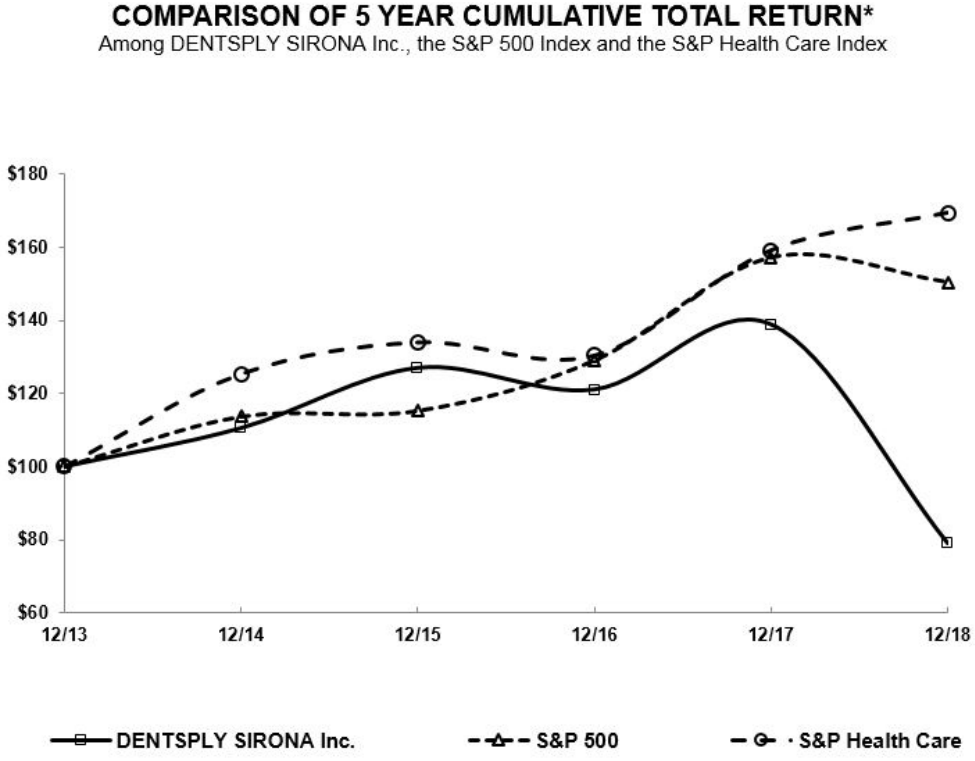
For the year ended December 31, 2018, the Company purchased approximately 5.4 million shares at a cost of $250.2 million for an average price of $45.92, thus, at December 31, 2018, the Company has remaining authorization to repurchase $749.8 million worth of common stock.

Stock Authorized for Issuance Under Equity Compensation Plans

The information required under this item is set forth in the 2019 Proxy Statement, which is incorporated herein by reference.

Performance Graph

The graph below compares DENTSPLY SIRONA Inc.'s cumulative 5-year total shareholder return on common stock with the cumulative total returns of the S&P 500 index and the S&P Health Care index. The graph tracks the performance of a $100 investment in DENTSPLY SIRONA's common stock and in each index (with the reinvestment of all dividends) from December 31, 2013 to December 31, 2018. The S&P 500 Stock Index and the S&P Health Care Index are included for comparative purposes only. They do not necessarily reflect management's opinion that such indices are an appropriate measure of the relative performance of the stock involved, and they are not intended to forecast or be indicative of possible future performance of the Company's common stock.



*$100 invested on 12/31/13 in common stock or S&P index, including reinvestment of dividends.
Fiscal year ending December 31.

	12/13	12/14	12/15	12/16	12/17	12/18
DENTSPLY SIRONA Inc.	**100.00**	**110.49**	**126.89**	**121.00**	**138.47**	**79.09**
S&P 500	**100.00**	**113.69**	**115.26**	**129.05**	**157.22**	**150.33**
S&P Health Care	**100.00**	**125.34**	**133.97**	**130.37**	**159.15**	**169.44**

Item 6. Selected Financial Data

DENTSPLY SIRONA INC. AND SUBSIDIARIES
SELECTED FINANCIAL DATA
(in millions, except per share amounts, days and percentages)

The following selected financial data is qualified by reference to, and should be read in conjunction with, the Consolidated Financial Statements, including the notes thereto, and Management's Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this Form 10-K.

	Year ended December 31,				
	2018 (e)	2017	2016 (a)	2015	2014
Statements of Operations Data:					
Net sales	$ 3,986.3	$ 3,993.4	$ 3,745.3	$ 2,674.3	$ 2,922.6
Net sales, excluding precious metal content (b)	3,949.1	3,952.9	3,681.0	2,581.5	2,792.7
Gross profit	2,067.8	2,188.5	2,000.9	1,517.2	1,599.8
Goodwill impairment	1,085.8	1,650.9	—	—	—
Restructuring and other costs	221.0	425.2	23.2	64.7	11.1
Operating (loss) income	(958.1)	(1,562.3)	454.7	375.2	445.6
(Loss) income before income taxes	(958.4)	(1,603.5)	440.9	329.7	404.4
Net (loss) income	(1,010.9)	(1,550.3)	431.4	251.1	322.9
Net (loss) income attributable to Dentsply Sirona	$ (1,011.0)	$ (1,550.0)	$ 429.9	$ 251.2	$ 322.9
Net (loss) income per common share attributable to Dentsply Sirona:					
Basic	(4.51)	(6.76)	1.97	1.79	2.28
Diluted	(4.51)	(6.76)	1.94	1.76	2.24
Cash dividends declared per common share	0.350	0.350	0.310	0.290	0.265
Weighted Average Common Shares Outstanding:					
Basic	224.3	229.4	218.0	140.0	141.7
Diluted	224.3	229.4	221.6	142.5	144.2
Balance Sheet Data:					
Cash and cash equivalents	309.6	320.6	383.9	284.6	151.6
Property, plant and equipment, net	870.6	876.0	799.8	558.8	588.8
Goodwill and other intangibles, net	5,851.6	7,339.9	8,909.6	2,588.3	2,760.1
Total assets	8,687.0	10,374.5	11,555.8	4,402.9	4,646.5
Total long term debt, current and long-term portions (c)	1,575.5	1,620.8	1,522.1	1,150.2	1,259.9
Equity	5,133.0	6,627.9	8,125.9	2,339.4	2,322.2
Return on average equity	NM	NM	8.2%	10.8%	13.2%
Total net debt to total capitalization (d)	20.8%	16.6%	12.4%	27.1%	32.3%
Other Data:					
Depreciation and amortization	$ 330.8	$ 316.4	$ 271.7	$ 122.9	$ 129.1
Cash flows from operating activities	499.8	601.9	563.4	497.4	560.4
Capital expenditures	182.5	144.3	125.0	72.0	99.6
Interest expense (income), net	35.2	35.9	33.9	53.7	41.3
Inventory days	124	131	113	110	113
Receivable days	59	61	58	54	55
Effective tax rate	NM	3.3%	2.2%	23.4%	20.1%

NM - Not meaningful
(a) Includes the results of the Sirona merger from February 29, 2016 through December 31, 2016. Information prior to February 29, 2016 refers to DENTSPLY International Inc only.
(b) The presentation of net sales, excluding precious metal content, is considered a measure not calculated in accordance with US GAAP, and is therefore considered a non-US GAAP measure.
(c) Total debt amounts shown are net of deferred financing costs, including capital leases.
(d) The Company defines net debt as total debt, including current and long-term portions less deferred financing costs, less cash and cash equivalents and total capitalization as the sum of net debt plus equity.
(e) The Company adopted Accounting Standard Codification Topic 606, "*Revenue from Contracts with Customers*" ("ASC 606") effective January 1, 2018, using the modified retrospective method to contracts which were not completed as of December 31, 2017. Results for the years ended December 31, 2017, 2016, 2015, and 2014 are accounted for in accordance with the accounting standards in effect during those years.

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

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

OVERVIEW

The following Management's Discussion and Analysis of Financial Conditions and Results of Operations ("MD&A") is intended to help the reader understand the Company's operations and business environment. MD&A is provided as a supplement to, and should be read in conjunction with, the Consolidated Financial Statements and Notes to Consolidated Financial Statements contained in Items 8 and 15 of this Form 10-K. The following discussion includes forward-looking statements that involve certain risks and uncertainties. See Part I, Item 1, "Business- Forward-Looking Statements and Associated Risks" in the beginning of this Form 10-K. The MD&A includes the following sections:

- Business - a general description of Dentsply Sirona's business and how performance is measured;
- Results of Operations - an analysis of the Company's consolidated results of operations for the three years presented in the Consolidated Financial Statements;
- Critical Accounting Estimates - a discussion of accounting policies that require critical judgments and estimates; and
- Liquidity and Capital Resources - an analysis of cash flows; debt and other obligations; off-balance sheet arrangements; and aggregate contractual obligations.

On February 29, 2016, DENTSPLY International Inc. merged with Sirona Dental Systems, Inc. ("Sirona") to form Dentsply Sirona Inc. (the "Merger"). The accompanying financial information for the Company for the year ended December 31, 2016, include the results of operations for Sirona for the period February 29, 2016 to December 31, 2016.

References to the "combined business" or the "combined businesses" are included below to provide comparisons of net sales performance from year to year as if the businesses were combined on January 1, 2016.

2018 Operational Highlights

- For the year ended December 31, 2018, net sales decreased 0.2% compared to the year ended December 31, 2017. Net sales, excluding precious metal content, decreased 0.1% compared to the prior year. Net sales decreased 1.3% on a constant currency basis including a benefit of 0.5% from net acquisitions. Net sales, excluding precious metal content, were favorably impacted by approximately 1.3% due to the weakening of the U.S. dollar over the prior period.

- For the year ended December 31, 2018, the Company reported a net loss attributable to Dentsply Sirona of $1,011.0 million as compared to the net loss attributable to Dentsply Sirona of $1,550.0 million for the year ended December 31, 2017. The Company reported a net loss per share of $4.51 per share compared to a net loss per share of $6.76 in the prior year. On an adjusted basis (a non-US GAAP measure as defined under the heading "Net Income attributable to Dentsply Sirona"), full year 2018 net income decreased by $163.7 million or 26.5% compared to the prior year and earnings per diluted share declined 24.3% to $2.01 from $2.66 in the prior year.

- On November 5, 2018, the Board of Directors of the Company approved a plan to restructure the Company's business to support revenue growth and margin expansion and to simplify its organization. The Company expects to incur approximately $275 million in one-time expenditures and charges.

BUSINESS

The Company operates in two reporting segments, Technologies & Equipment and Consumables.

The Technologies & Equipment segment is responsible for the worldwide design, manufacture, sales and distribution of the Company's Dental Technology & Equipment Products and Healthcare Consumable Products. These products include dental implants, laboratory dental products, CAD/CAM systems, imaging systems, treatment centers as well as consumable medical device products.

The Consumables segment includes responsibility for the worldwide design, manufacture, sales and distribution of the Company's Dental Consumable Products which include preventive, restorative, endodontic and orthodontic dental products, dental handpieces, and instruments.

Principal Measurements

The principal measurements used by the Company in evaluating its business are: (1) constant currency sales growth by segment and geographic region; (2) internal sales growth by segment and geographic region; and (3) adjusted operating income and margins of each reportable segment, which excludes the impacts of purchase accounting, corporate expenses, and certain other items to enhance the comparability of results period to period. These principal measurements are not calculated in accordance with accounting principles generally accepted in the United States; therefore, these items represent non-US GAAP measures. These non-US GAAP measures may differ from other companies and should not be considered in isolation from, or as a substitute for, measures of financial performance prepared in accordance with US GAAP.

The Company defines "constant currency" sales growth as the increase or decrease in net sales from period to period excluding precious metal content and the impact of changes in foreign currency exchange rates. This impact is calculated by comparing current-period revenues to prior-period revenues, with both periods converted at the U.S. dollar to local currency foreign exchange rate for each month of the prior period, for the currencies in which the Company does business. The Company defines "internal" sales growth as constant currency sales growth excluding the impacts of net acquisitions and divestitures, Merger accounting impacts and discontinued products.

Business Drivers

The primary drivers of internal growth include macroeconomic factors, global dental market growth, innovation and new product launches by the Company, as well as continued investments in sales and marketing resources, including clinical education. Management believes that the Company's ability to execute its strategies should allow it to grow faster than the underlying dental market over time. On a short term basis, changes in strategy or distributor inventory levels can impact internal growth.

The Company has a focus on maximizing operational efficiencies on a global basis. The Company has expanded the use of technology as well as process improvement initiatives to enhance global efficiency. In addition, management continues to evaluate the consolidation of operations and functions, as part of integration activities, to further reduce costs. While the current period results continue to reflect the unfavorable impact of incomplete integration related activities, the Company believes that the future benefits from these global efficiency and integration initiatives will improve its cost structure. In 2017, the Company targeted a cost reduction initiative of approximately $100 million expected to be achieved over the next several years as the benefits of these initiatives, net of related investments, are realized over time. For the year ended December 31, 2018, the Company achieved cost savings of approximately $50 million related to this target. The Company expects to realize the remainder of the cost savings through the restructuring plan noted below.

On November 5, 2018, the Board of Directors of the Company approved a plan to restructure the Company's business to support revenue growth and margin expansion and to simplify its organization, with the understanding that such restructuring plan may continue to evolve as the Company progresses through the continued planning and execution of the plan. The plan includes a restructuring of the business through streamlining the Company's organization and consolidating functions. The restructuring plan anticipates a net reduction in the Company's global workforce of approximately 6% to 8%, and the Company will consult with employee representation in connection with the execution of the restructuring plan where required. The Company anticipates that the restructuring will result in annualized topline growth of 3% to 4%, an adjusted operating income margin of 20% by the end of the year 2020, an adjusted operating income margin of 22% by the year 2022 and approximately $225 million in net annual cost savings by 2021. The Company expects to incur approximately $275 million in one-time expenditures and charges through 2021. There can be no assurance that the cost reductions and results will be achieved.

As part of this restructuring plan, the Company is creating more meaningful solutions for dentists built around innovative products and differentiated clinical education. In order to achieve this goal, the Company introduced five key operating principles:

- *Approach customers as one:* Put the customer at the center of how Dentsply Sirona is organized. The Company is creating one integrated approach to customer service, direct and indirect selling, and clinical education to strengthen the relationship with the customer and better serve the customers' needs.

- *Assume greater responsibility for Dentsply Sirona's demand creation:* To better support dealer partners and end-user customers, the Company launched a sales force effectiveness program, with a view to improving returns on sales and marketing investments.

- *Ensure that innovation is substantial and supported:* Create a comprehensive R&D program that prioritizes spending across the entire Company portfolio resulting in more impactful innovations each year.

- *Lead in clinical education:* Dentsply Sirona is investing to further its leadership position through local training events and enhancing online training presence to strengthen the relationship with the dental professionals.

- *Take advantage of scale:* The Company is focused on integrating its dental product portfolios to unlock operational efficiencies, including performance improvements in procurement, logistics, manufacturing, sales force and marketing programs. In addition, Dentsply Sirona is taking significant measures to simplify the business. In combination, these initiatives will improve organizational efficiency and better leverage the Company's selling, general and administrative infrastructure.

Product innovation is a key component of the Company's overall growth strategy. New advances in technology are anticipated to have a significant influence on future products in the dentistry and consumable medical device markets in which the Company operates. As a result, the Company continues to pursue research and development initiatives to support technological development, including collaborations with various research institutions and dental schools. In addition, the Company licenses and purchases technologies developed by third parties. Although the Company believes these activities will lead to new innovative dental, healthcare consumable and dental technology products, they involve new technologies and there can be no assurance that commercialized products will be developed.

The Company will continue to pursue opportunities to expand the Company's product offerings, technologies and sales and service infrastructure through partnerships and acquisitions. Although the professional dental and the consumable medical device markets in which the Company operates have experienced consolidation, they remain fragmented. Management believes that there will continue to be adequate opportunities to participate as a consolidator in the industry for the foreseeable future.

The Company's business is subject to quarterly fluctuations of consolidated net sales and net income. Price increases, promotional activities as well as changes in inventory levels at distributors contribute to this fluctuation. The Company typically implements most of its price increases in October or January of a given year across most of its businesses. Distributor inventory levels tend to increase in the period leading up to a price increase and decline in the period following the implementation of a price increase. Required minimum purchase commitments under agreements with key distributors may increase inventory levels in excess of retail demand. These net inventory changes have impacted the Company's consolidated net sales and net income in the past, and may continue to do so in the future, over a given period or multiple periods. In addition, the Company may from time to time, engage in new distributor relationships that could cause quarterly fluctuations of consolidated net sales and net income. Distributor inventory levels may fluctuate, and may differ from the Company's predictions, resulting in the Company's projections of future results being different than expected. There can be no assurance that the Company's dealers and customers will maintain levels of inventory in accordance with the Company's predictions or past history, or that the timing of customers' inventory build or liquidation will be in accordance with the Company's predictions or past history. Any of these fluctuations could be material to the Company's consolidated financial statements.

During 2018 the Company continued to be impacted by the transition in distribution strategy with Patterson Companies, Inc. (“Patterson”) and Henry Schein, Inc. (“Henry Schein”). In 2017, the Company signed new distribution agreements with Patterson and Henry Schein for the Company’s equipment products. The Company shipped initial stocking orders for the equipment products to Henry Schein under the agreements primarily in the second and third quarters of 2017 which resulted in unfavorable year-over-year sales growth comparisons. Based on the Company’s estimate, year-over-year changes in distributor inventories associated with these agreements negatively impacted the Company’s reported sales growth for the year ended December 31, 2018 by approximately $127 million. Based on the Company’s estimate, distributor inventories increased for the year ended December 31, 2017 by approximately $27 million as compared to a decrease of approximately $100 million for the full year 2018. For more information about the drivers of our business and related risks, see Part I, Item 1, "Business" and Part I, Item 1A, "Risk Factors."

Impact of Foreign Currencies and Interest Rates

Due to the Company’s significant international presence, movements in foreign exchange and interest rates may impact the Consolidated Statements of Operations. With approximately two-thirds of the Company’s net sales located in regions outside the United States, the Company’s consolidated net sales are impacted negatively by the strengthening or positively impacted by the weakening of the U.S. dollar. Additionally, movements in certain foreign exchange rates may unfavorably or favorably impact the Company’s results of operations, financial condition and liquidity as a number of the Company’s manufacturing and distribution operations are located outside of the U.S.

Reclassification of Prior Year Amounts

Certain reclassifications have been made to prior years’ data in order to conform to current year presentation.

RESULTS OF OPERATIONS

2018 Compared to 2017

Net Sales

The discussion below summarizes the Company's net sales growth, excluding precious metal content, applying the following adjustments: (1) constant currency sales growth, which includes internal sales growth and net acquisition sales growth, and (2) foreign currency translation. The discussion below also summarized the Company's adjusted non-US GAAP net sales growth, excluding precious metal content, after applying additional adjustments related to the Merger and other acquisitions. These disclosures provide the reader with sales results on a comparable basis between periods.

Management believes that the presentation of net sales, excluding precious metal content, provides useful information to investors because a portion of Dentsply Sirona's net sales is comprised of sales of precious metals generated through sales of the Company's precious metal dental alloy products, which are used by third parties to construct crown and bridge materials. Due to the fluctuations of precious metal prices and because the cost of the precious metal content of the Company's sales is largely passed through to customers and has minimal effect on earnings, Dentsply Sirona reports net sales both with and without precious metal content to show the Company's performance independent of precious metal price volatility and to enhance comparability of performance between periods. The Company uses its cost of precious metal purchased as a proxy for the precious metal content of sales, as the precious metal content of sales is not separately tracked and invoiced to customers. The Company believes that it is reasonable to use the cost of precious metal content purchased in this manner since precious metal dental alloy sale prices are typically adjusted when the prices of underlying precious metals change.

The presentation of net sales, excluding precious metal content, is considered a measure not calculated in accordance with US GAAP, and is therefore considered a non-US GAAP measure. The Company provides the following reconciliation of net sales to net sales, excluding precious metal content. The Company's definitions and calculations of net sales, excluding precious metal content, and other operating measures derived using net sales, excluding precious metal content, may not necessarily be the same as those used by other companies.

	Year Ended December 31,			
(in millions, except percentage amounts)	2018	2017	$ Change	% Change
Net sales	$ 3,986.3	$ 3,993.4	$ (7.1)	(0.2%)
Less: Precious metal content of sales	37.2	40.5	(3.3)	(8.1%)
Net sales, excluding precious metal content	$ 3,949.1	$ 3,952.9	$ (3.8)	(0.1%)

Net sales, excluding precious metal content, for the year ended December 31, 2018 were $3,949.1 million, a decrease of $3.8 million from the year ended December 31, 2017. Net sales, excluding precious metal content, was negatively impacted, based on the Company's estimate, by approximately $127 million as a result of net changes in equipment inventory levels in the current year as compared to the prior year at certain distributors primarily in the United States, which the Company believes is primarily related to the transition in distribution strategy (see "Business Drivers" under this section for further detail). Based on the Company's estimate, distributor inventories increased for the year ended December 31, 2017 by approximately $27 million as compared to a decrease of approximately $100 million for the full year 2018.

For the year ended December 31, 2018, net sales, excluding precious metal content, decreased 1.3% on a constant currency basis. This includes a benefit of 0.5% from net acquisitions, which leads to negative internal sales growth of 1.8%. Net sales, excluding precious metal content, were positively impacted by approximately 1.3% due to the weakening of the U.S. dollar over the prior year period. The negative internal sales growth was attributable to the Technologies & Equipment segment, partially offset by the Consumables segment.

The Company expects that the impact of divestitures of nonstrategic product lines will negatively impact reported net sales by approximately $70 million for the full year of 2019.

A reconciliation of reported net sales to non-US GAAP net sales, excluding precious metal content, for the years ended December 31, 2018 and 2017, respectfully, were as follows:

(in millions, except percentage amounts)	2018	2017	$ Change	% Change
Net sales	$ 3,986.3	$ 3,993.4	$ (7.1)	(0.2%)
Less: precious metal content of sales	37.2	40.5	(3.3)	(8.1%)
Net sales, excluding precious metal content	3,949.1	3,952.9	(3.8)	(0.1%)
Acquisition/merger related adjustments (a)	6.4	4.0	2.4	NM
Non-US GAAP, net sales, excluding precious metal content	$ 3,955.5	$ 3,956.9	$ (1.4)	(0.1%)

(a) For 2018, amounts represent an adjustment to reflect deferred revenue and for 2017, amounts represents an adjustment to reflect deferred subscription and warranty revenue which was eliminated under business combination accounting standards to make the non-US GAAP results comparable for both years.

NM - Not meaningful

Sales Growth by Region

Net sales, excluding precious metal content, for the years ended December 31, 2018 and 2017, respectively, by geographic region were as follows:

(in millions, except percentage amounts)	2018	2017	$ Change	% Change
United States	$ 1,269.2	$ 1,366.8	$ (97.6)	(7.1%)
Europe	1,637.2	1,575.2	62.0	3.9%
Rest of World	1,042.7	1,010.9	31.8	3.1%

A reconciliation of reported net sales to non-US GAAP net sales, excluding precious metal content, by geographic region for the years ended December 31, 2018 and 2017, respectively, were as follows:

	December 31, 2018			
(in millions)	United States	Europe	Rest of World	Total
Net sales	$ 1,274.3	$ 1,665.9	$ 1,046.1	$ 3,986.3
Less: precious metal content of sales	5.1	28.7	3.4	37.2
Net sales, excluding precious metal content	1,269.2	1,637.2	1,042.7	3,949.1
Acquisition related adjustments (a)	6.4	—	—	6.4
Non-US GAAP, net sales, excluding precious metal content	$ 1,275.6	$ 1,637.2	$ 1,042.7	$ 3,955.5

(a) Represents an adjustment to reflect deferred revenue that was eliminated under business combination accounting standards to make the 2018 and 2017 non-US GAAP results comparable.

	December 31, 2017			
(in millions)	United States	Europe	Rest of World	Total
Net sales	$ 1,372.5	$ 1,606.2	$ 1,014.7	$ 3,993.4
Less: precious metal content of sales	5.7	31.0	3.8	40.5
Net sales, excluding precious metal content	1,366.8	1,575.2	1,010.9	3,952.9
Merger related adjustments (a)	4.0	—	—	4.0
Non-US GAAP, net sales, excluding precious metal content	$ 1,370.8	$ 1,575.2	$ 1,010.9	$ 3,956.9

(a) Represents an adjustment to reflect deferred subscription and warranty revenue that was eliminated under business combination accounting standards to make the 2018 and 2017 non-US GAAP results comparable.

United States

Reported net sales decreased by 7.2% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. Reported net sales, excluding precious metal content, decreased by 7.1% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. The decrease in net sales, excluding precious metal content, was unfavorably impacted, based on the Company's estimate, by approximately $127 million as a result of net changes in equipment inventory levels in the current year as compared to the prior year at two distributors in the United States primarily related to the transition in distribution strategy as discussed above. Based on the Company's estimate, distributor inventories increased for the year ended December 31, 2017 by approximately $27 million as compared to a decrease of approximately $100 million for the full year 2018.

For the year ended December 31, 2018, net sales, excluding precious metal content, including acquisition related adjustments, decreased 6.8% on a constant currency basis. This includes a benefit of 0.9% from net acquisitions which results in a negative internal sales growth rate of 7.7%. The negative internal sales growth in this region was driven by lower sales in the Technologies & Equipment segment. Based on the Company's assessment, the internal sales growth was impacted as a result of the net changes in equipment inventory levels in the current year over the prior year as discussed above. The impact from net changes in inventory levels was entirely within the Technologies & Equipment segment.

Europe

Reported net sales increased by 3.7% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. Reported net sales, excluding precious metal content, increased by 3.9% for the year ended December 31, 2018 as compared to the year ended December 31, 2017.

For the year ended December 31, 2018, net sales, excluding precious metal content, increased 0.3% on a constant currency basis offset by a benefit of 0.3% from net acquisitions. Internal sales growth was led by the Consumables segment, offset by the negative internal sales growth in the Technologies & Equipment segment.

Rest of World

Reported net sales increased by 3.1% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. Reported net sales, excluding precious metal content, increased by 3.1% for the year ended December 31, 2018 as compared to the year ended December 31, 2017.

For the year ended December 31, 2018, net sales, excluding precious metal content, increased 3.8% on a constant currency basis. This includes a benefit of 0.4% from net acquisitions, which results in internal sales growth of 3.4%. The internal sales growth in this region was driven by stronger growth in the Consumables segment.

Gross Profit

(in millions, except percentage amounts)	Year Ended December 31, 2018	2017	$ Change	% Change
Gross profit	$ 2,067.8	$ 2,188.5	$ (120.7)	(5.5%)
Gross profit as a percentage of net sales, including precious metal content	51.9%	54.8%		
Gross profit as a percentage of net sales, excluding precious metal content	52.4%	55.4%		

Gross profit as a percentage of net sales, excluding precious metal content, decreased by 300 basis points for the year ended December 31, 2018 as compared to the year ended December 31, 2017. The decrease in the gross profit rate was primarily driven by higher manufacturing costs, unfavorable product pricing including the impact of geographic sales mix, business combination related costs and product line eliminations, and the effect of dealer destocking, which collectively impacted the gross profit rate by approximately 350 basis points, partially offset by the benefit of the Company's global efficiency initiatives as compared to the year ended December 31, 2017.

Operating Expenses

(in millions, except percentage amounts)	Year Ended December 31, 2018	2017	$ Change	% Change
Selling, general and administrative expenses ("SG&A")	$ 1,719.1	$ 1,674.7	$ 44.4	2.7%
Goodwill impairment	1,085.8	1,650.9	(565.1)	(34.2%)
Restructuring and other costs	221.0	425.2	(204.2)	NM
SG&A as a percentage of net sales, including precious metal content	43.1%	41.9%		
SG&A as a percentage of net sales, excluding precious metal content	43.5%	42.4%		

NM - Not meaningful

SG&A Expenses

SG&A expenses, including research and development expenses, as a percentage of net sales, excluding precious metal content, for the year ended December 31, 2018 increased 110 basis points compared to the year ended December 31, 2017. The higher rate was primarily driven by increased compensation costs and selling and marketing expenses as compared to the year ended December 31, 2017.

Goodwill Impairment

For the year ended December 31, 2018, the Company recorded a goodwill impairment charge of $1,085.8 million, related to two reporting units in the Technologies & Equipment segment and one reporting unit within the Consumables segment. For the year ended December 31, 2017, the Company recorded a goodwill impairment charge of $1,650.9 million, related to three reporting units in the Technologies & Equipment segment. For further information see Note 9, Goodwill and Intangible Assets, in the Notes to Audited Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K.

Restructuring and Other Costs

The Company recorded net restructuring and other costs of $221.0 million for the year ended December 31, 2018 compared to $425.2 million for the year ended December 31, 2017. The Company recorded $32.1 million in restructuring costs during the year ended December 31, 2018 compared to $55.4 million in restructuring costs during the year ended December 31, 2017.

During the year ended December 31, 2018, the Company recorded other costs of $188.9 million which consist of impairment charges of $179.2 million and $9.7 million primarily related to legal settlements. For further information on the impairment charges, see Note 9, Goodwill and Intangible Assets, and Note 19, Commitments and Contingencies, each in the Notes to the Audited Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K.

During the year ended December 31, 2017, the Company recorded other costs of $369.8 million which consist of impairment charges of $346.7 million and legal settlements of $23.1 million.

On November 5, 2018, the Board of Directors of the Company approved a plan to restructure the Company's business to support revenue growth and margin expansion and to simplify the organization. The Company anticipates that the restructuring will result in annualized topline growth of 3% to 4%, an adjusted operating income margin of 20% by the end of the year 2020, an adjusted operating income margin of 22% by the year 2022 and approximately $225 million in net annual cost savings by 2021. The Company expects to incur approximately $275 million in one-time expenditures and charges through 2021. There can be no assurance that the cost reductions and results will be achieved.

Other Income and Expenses

(in millions, except percentage amounts)	Year Ended December 31, 2018	2017	$ Change	% Change
Net interest expense	$ 35.2	$ 35.9	$ (0.7)	(1.9%)
Other expense (income), net	(34.9)	5.3	(40.2)	NM
Net interest and other expense	$ 0.3	$ 41.2	$ (40.9)	

NM - Not meaningful

Net Interest Expense

Net interest expense for the year ended December 31, 2018 decreased $0.7 million as compared to the year ended December 31, 2017. Lower average interest rates partially offset by increased debt levels in 2018 when compared to the prior year resulted in the decrease in net interest expense.

Other Expense (Income), Net

Other expense (income), net for the year ended December 31, 2018 decreased $40.2 million compared to the year ended December 31, 2017. Other expense (income), net for the year ended December 31, 2018 includes foreign exchange loss of $5.8 million and $40.7 million of other non-operating income including a gain of $44.1 million from the sale of marketable securities. Other income, net for the year ended December 31, 2017 was $5.3 million, includes foreign exchange loss of $1.7 million and $3.6 million of other non-operating expenses.

Income Taxes and Net Income

(in millions, except per share and percentage amounts)	Year Ended December 31, 2018	2017	$ Change
Provision (benefit) from income taxes	$ 52.5	$ (53.2)	$ 105.7
Effective income tax rate	NM	3.3%	
Net loss attributable to Dentsply Sirona	$ (1,011.0)	$ (1,550.0)	$ 539.0
Net loss per common share - diluted	$ (4.51)	$ (6.76)	

NM - Not meaningful

Provision for Income Taxes

For the year ended December 31, 2018, income taxes were a net expense of $52.5 million. During the year ended December 31, 2018, the Company recorded the following discrete tax items: $4.3 million of excess tax benefit related to employee share-based compensation, tax benefit of $3.3 million related to enacted statutory rate changes, tax expense of $8.3 million for other discrete tax matters, $4.1 million tax benefit related to U.S. tax reform, and tax expense of $54.8 million related to valuation allowance on foreign tax credits and other deferred tax assets. The Company also recorded a $50.4 million tax benefit as a discrete item related to the indefinite-lived intangible asset impairment charge, $1.1 million for the fixed asset impairment charge, and $3.3 related to tax-deductible goodwill for the twelve months ended December 31, 2018. In addition, the Company also recorded $2.5 million of tax expense as a discrete item related to the gain on sale of marketable securities. Excluding these discrete tax items and adjusting pretax income for the gain on the sale of marketable securities, net of tax and adjusting for the pretax loss related to the impairment of indefinite-lived intangible assets, and tax deductible and non-deductible goodwill impairment charges, the Company's effective tax rate was 20.0%. Further information regarding the details of income taxes is presented in Note 14, Income Taxes, in the Notes to Consolidated Financial Statements in Item 15 of this Form 10-K.

On December 22, 2017, the Tax Cuts and Jobs Act (the "Act" or "U.S. tax reform") was enacted. U.S. tax reform, among other things, reduced the U.S. federal income tax rate to 21% in 2018 from 35%, instituted a dividends received deduction for foreign earnings with a related tax for the deemed repatriation of unremitted foreign earnings and created a new U.S. minimum tax on earnings of foreign subsidiaries. In addition, the SEC staff issued Staff Accounting Bulletin No. 118 (“SAB 118”), which provides guidance on accounting for enactment effects of the Act and provides a measurement period of up to one year from the Act’s enactment date for companies to complete their accounting under Accounting Standards Codification No. 740 “Income Taxes”, (“ASC 740”). In accordance with SAB 118, income tax effects of The Act were refined upon obtaining, preparing, and analyzing additional information during the measurement period. At December 31, 2018 the Company had completed its accounting for the tax effects of The Act.

The undistributed earnings of foreign subsidiaries that are deemed to be permanently invested amount to $1,137.2 million at December 31, 2018 and $1,071.1 million at December 31, 2017. The Act imposed U.S. tax on all post-1986 foreign unrepatriated earnings accumulated through December 31, 2017. Unrepatriated earnings generated after December 31, 2017, are now subject to tax in the current year under the Global Intangible Low Tax Income (“GILTI”) provision of the Act. All undistributed earnings are still subject to certain taxes upon repatriation, primarily where foreign withholding taxes apply.

For the GILTI provision of the Act, the Company has made the policy election to record any liability associated with GILTI in the period in which it is incurred.

The U.S. Department of the Treasury continues to issue interpretative guidance and regulations associated with the Act.

The Company’s effective income tax rate for 2018 included the net impact of restructuring program related costs and other costs, amortization of purchased intangible assets, business combination related costs and fair value adjustments, credit risk and fair value adjustments, gain on sale of marketable securities and income tax related adjustments which impacted loss before income taxes and the provision for income taxes by $1,544.2 million and $78.7 million, respectively.

The Company’s effective income tax rate for 2017 included the net impact of restructuring program related costs and other costs, amortization of purchased intangible assets, business combination related costs and fair value adjustments, credit risk and fair value adjustments and income tax related adjustments which impacted loss before income taxes and the provision for income taxes by $2,351.8 million and $183.6 million, respectively.

Net (Loss) Income attributable to Dentsply Sirona

In addition to the results reported in accordance with US GAAP, the Company provides adjusted net income attributable to Dentsply Sirona and adjusted earnings per diluted common share (“adjusted EPS”). The Company discloses adjusted net income attributable to Dentsply Sirona to allow investors to evaluate the performance of the Company’s operations exclusive of certain items that impact the comparability of results from period to period and may not be indicative of past or future performance of the normal operations of the Company and certain large non-cash charges related to intangible assets either purchased or acquired through a business combination. The Company believes that this information is helpful in understanding underlying operating trends and cash flow generation.

Adjusted net income and adjusted EPS are important internal measures for the Company. Senior management receives a monthly analysis of operating results that includes adjusted net income and adjusted EPS and the performance of the Company is measured on this basis along with other performance metrics.

The adjusted net income attributable to Dentsply Sirona consists of net income attributable to Dentsply Sirona adjusted to exclude the following:

(1) *Business combination related costs and fair value adjustments.* These adjustments include costs related to integrating and consummating mergers and recently acquired businesses, as well as costs, gains and losses related to the disposal of businesses or significant product lines. In addition, this category includes the roll off to the consolidated statements of operations of fair value adjustments related to business combinations, except for amortization expense noted below. These items are irregular in timing and as such may not be indicative of past and future performance of the Company and are therefore excluded to allow investors to better understand underlying operating trends.

(2) *Restructuring program related costs and other costs.* These adjustments include costs related to the implementation of restructuring initiatives as well as certain other costs. These costs can include, but are not limited to, severance costs, facility closure costs, lease and contract terminations costs, related professional service costs, duplicate facility and labor costs associated with specific restructuring initiatives, as well as, legal settlements and impairments of assets. These items are irregular in timing, amount and impact to the Company's financial performance. As such, these items may not be indicative of past and future performance of the Company and are therefore excluded for the purpose of understanding underlying operating trends.

(3) *Amortization of purchased intangible assets.* This adjustment excludes the periodic amortization expense related to purchased intangible assets. Amortization expense has been excluded from adjusted net income attributed to Dentsply Sirona to allow investors to evaluate and understand operating trends excluding these large non-cash charges.

(4) *Credit risk and fair value adjustments.* These adjustments include both the cost and income impacts of adjustments in certain assets and liabilities including the Company's pension obligations, that are recorded through net income which are due solely to the changes in fair value and credit risk. These items can be variable and driven more by market conditions than the Company's operating performance. As such, these items may not be indicative of past and future performance of the Company and therefore are excluded for comparability purposes.

(5) *Gain on sale of marketable securities.* This adjustment represents the gain on the sale of marketable securities held by the Company. The gain has been excluded from adjusted net income attributed to Dentsply Sirona to allow investors to evaluate and understand operating trends excluding this gain.

(6) *Income tax related adjustments.* These adjustments include both income tax expenses and income tax benefits that are representative of income tax adjustments mostly related to prior periods, as well as the final settlement of income tax audits, and discrete tax items resulting from the implementation of restructuring initiatives and the vesting and exercise of employee share-based compensation. These adjustments are irregular in timing and amount and may significantly impact the Company's operating performance. As such, these items may not be indicative of past and future performance of the Company and therefore are excluded for comparability purposes.

Adjusted earnings per diluted common share is calculated by dividing adjusted net (loss) income attributable to Dentsply Sirona by diluted weighted-average common shares outstanding. Adjusted net income attributable to Dentsply Sirona and adjusted earnings per diluted common share are considered measures not calculated in accordance with US GAAP, and therefore are non-US GAAP measures. These non-US GAAP measures may differ from other companies. Income tax related adjustments may include the impact to adjust the interim effective income tax rate to the expected annual effective tax rate. The non-US GAAP financial information should not be considered in isolation from, or as a substitute for, measures of financial performance prepared in accordance with US GAAP.

(in millions, except per share amounts)	Year Ended December 31, 2018 Net (Loss) Income	Per Diluted Common Share
Net loss attributable to Dentsply Sirona	$ (1,011.0)	$ (4.51)
Pre-tax non-US GAAP adjustments:		
Restructuring program related costs and other costs	1,353.1	
Amortization of purchased intangible assets	197.9	
Business combination related costs and fair value adjustments	22.8	
Credit risk and fair value adjustments	14.5	
Gain on sale of marketable securities	(44.1)	
Tax impact of the pre-tax non-US GAAP adjustments (a)	(130.2)	
Subtotal non-US GAAP adjustments	1,414.0	6.26
Adjustment for calculating non-US GAAP net income per diluted common share (b)		0.23
Income tax related adjustments	51.5	0.03
Adjusted non-US GAAP net income	$ 454.5	$ 2.01

(a) The tax amount was calculated using the applicable statutory tax rate in the tax jurisdiction where the non-US GAAP adjustments were generated.

(b) The Company had a net loss for the year ended December 31, 2018, but had net income on a non-US GAAP basis. The shares used in calculating diluted non-US GAAP net income per share includes the dilutive effect of common stock.

Shares used in calculating diluted GAAP net loss per share	224.3
Shares used in calculating diluted non-US GAAP net income per share	226.0

(in millions, except per share amounts)	Year End December 31, 2017 Net (Loss) Income	Per Diluted Common Share
Net loss attributable to Dentsply Sirona	$ (1,550.0)	$ (6.76)
Pre-tax non-US GAAP adjustments:		
Restructuring program related costs and other costs	2,119.3	
Amortization of purchased intangible assets	189.1	
Business combination related costs and fair value adjustments	38.5	
Credit risk and fair value adjustments	4.9	
Tax impact of the pre-tax non-US GAAP adjustments (a)	(199.8)	
Subtotal non-US GAAP adjustments	2,152.0	9.26
Adjustment for calculating non-US GAAP net income per diluted common share (b)		0.09
Income tax related adjustments	16.2	0.07
Adjusted non-US GAAP net income	$ 618.2	$ 2.66

(a) The tax amount was calculated using the applicable statutory tax rate in the tax jurisdiction where the non-US GAAP adjustments were generated.

(b) The Company had a net loss for the year ended December 31, 2017, but had net income on a non-US GAAP basis. The shares used in calculating diluted non-US GAAP net income per share includes the dilutive effect of common stock.

Shares used in calculating diluted GAAP net loss per share	229.4
Shares used in calculating diluted non-US GAAP net income per share.	232.7

Adjusted Operating Income and Margin

Adjusted operating income and margin is another important internal measure for the Company. Operating income in accordance with US GAAP is adjusted for the items noted above which are excluded on a pre-tax basis to arrive at adjusted operating income, a non-US GAAP measure. The adjusted operating margin is calculated by dividing adjusted operating income by net sales, excluding precious metal content.

Senior management receives a monthly analysis of operating results that includes adjusted operating income. The performance of the Company is measured on this basis along with the adjusted non-US GAAP earnings noted above as well as other performance metrics. This non-US GAAP measure may differ from other companies and should not be considered in isolation from, or as a substitute for, measures of financial performance prepared in accordance with US GAAP.

	Year Ended December 31, 2018	
(in millions, except percentage of net sales amount)	Operating (Loss) Income	Percentage of Net Sales, Excluding Precious Metal Content
Operating loss attributable to Dentsply Sirona	$ (958.1)	(24.3%)
Restructuring program related costs and other costs	1,353.1	34.3%
Amortization of purchased intangible assets	197.9	5.0%
Business combination related costs and fair value adjustments	21.3	0.5%
Adjusted non-US GAAP Operating Income	$ 614.2	15.5%

	Year Ended December 31, 2017	
(in millions, except percentage of net sales amounts)	Operating (Loss) Income	Percentage of Net Sales, Excluding Precious Metal Content
Operating loss attributable to Dentsply Sirona	$ (1,562.3)	(39.5%)
Restructuring program related costs and other costs	2,119.9	53.6 %
Amortization of purchased intangible assets	189.1	4.8 %
Business combination related costs and fair value adjustments	37.7	0.9 %
Credit risk and fair value adjustments	7.0	0.2 %
Adjusted non-US GAAP Operating Income	$ 791.4	20.0%

Operating Segment Results

Net Sales, Excluding Precious Metal Content	Year Ended December 31,			
(in millions, except percentage amounts)	2018	2017	$ Change	% Change
Technologies & Equipment	$ 2,098.4	$ 2,160.3	$ (61.9)	(2.9%)
Consumables	$ 1,850.7	$ 1,792.6	$ 58.1	3.2%

Segment Operating Income	Year Ended December 31,			
(in millions, except percentage amounts)	2018	2017	$ Change	% Change
Technologies & Equipment	$ 255.6	$ 412.6	$ (157.0)	(38.1%)
Consumables	$ 495.8	$ 493.0	$ 2.8	0.6%

A reconciliation of reported net sales to non-US GAAP net sales, excluding precious metal content, by segment for the years ended December 31, 2018 and 2017, respectively, were as follows:

	December 31, 2018		
(in millions)	Technologies & Equipment	Consumables	Total
Net sales	$ 2,135.6	$ 1,850.7	$ 3,986.3
Less: precious metal content of sales	37.2	—	37.2
Net sales, excluding precious metal content	2,098.4	1,850.7	3,949.1
Acquisition related adjustments (a)	—	6.4	6.4
Non-US GAAP net sales, excluding precious metal content	$ 2,098.4	$ 1,857.1	$ 3,955.5

(a) Represents an adjustment to reflect deferred revenue that was eliminated under business combination accounting standards to make the 2018 and 2017 non-US GAAP results comparable.

	December 31, 2017		
(in millions)	Technologies & Equipment	Consumables	Total
Net sales	$ 2,200.8	$ 1,792.6	$ 3,993.4
Less: precious metal content of sales	40.5	—	40.5
Net sales, excluding precious metal content	2,160.3	1,792.6	3,952.9
Merger related adjustments (a)	4.0	—	4.0
Non-US GAAP net sales, excluding precious metal content	$ 2,164.3	$ 1,792.6	$ 3,956.9

(a) Represents an adjustment to reflect deferred subscription and warranty revenue that was eliminated under business combination accounting standards to make the 2018 and 2017 non-US GAAP results comparable.

Technologies & Equipment

Reported net sales decreased by 3.0% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. Reported net sales, excluding precious metal content, decreased by $61.9 million or 2.9% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. The decrease in net sales, excluding precious metal content, was negatively impacted, based on the Company's estimate, by approximately $127 million as a result of net changes in equipment inventory levels in the current year as compared to the prior year at certain distributors primarily in the United States, that the Company believes is primarily related to the transition in distribution strategy (see "Business Drivers" under this section for further detail). Based on the Company's estimate, distributor inventories increased for the year ended December 31, 2017 by approximately $27 million as compared to a decrease of approximately $100 million for the full year 2018.

For the year ended December 31, 2018, net sales, excluding precious metal content, decreased 4.2% on a constant currency basis, or negative internal sales growth of 4.2%. The decline in internal sales growth was driven by the U.S., partially offset by internal sales growth in Rest of World region.

The operating income decreased $157.0 million or 38.1% for the year ended December 31, 2018 as compared to 2017. The decrease is primarily the result of the net change in equipment inventory at certain distributors, higher manufacturing costs, unfavorable product pricing, higher selling and marketing investments, as well as unfavorable product mix as compared to the year ended December 31, 2017.

Consumables

Reported net sales increased by 3.2% for the year ended December 31, 2018 as compared to the year ended December 31, 2017. Reported net sales, excluding precious metal content, increased by $58.1 million or 3.2% for the year ended December 31, 2018 as compared to the year ended December 31, 2017.

For the year ended December 31, 2018, net sales, excluding precious metal, including acquisition related adjustments, increased 2.3% on a constant currency basis. This includes a benefit of 1.1% from net acquisitions which results in internal growth of 1.2%. The internal sales growth was primarily driven by the Rest of World and Europe, partially offset by a decrease in the United States.

The operating income increased $2.8 million or 0.6% for the year ended December 31, 2018 as compared to 2017. The increase is primarily related to higher sales volume and product pricing as compared to the year ended December 31, 2017.

RESULTS OF OPERATIONS

2017 Compared to 2016

Net Sales

(in millions, except percentage amounts)	Year Ended December 31, 2017	2016	$ Change	% Change
Net sales	$ 3,993.4	$ 3,745.3	$ 248.1	6.6%
Less: Precious metal content of sales	40.5	64.3	(23.8)	(37.0%)
Net sales, excluding precious metal content	$ 3,952.9	$ 3,681.0	$ 271.9	7.4%

Net sales, excluding precious metal content, for the year ended December 31, 2017 were $3,952.9 million, an increase of $271.9 million from the year ended December 31, 2016. The increase in net sales, excluding precious metal content, reflects sales of $112.7 million as a result of the consolidation of two additional months of Sirona for the year end December 31, 2017 compared to the prior year period. This excludes approximately $4.0 million of revenue that was eliminated in fair value purchase accounting adjustments to deferred income. The increase in net sales, excluding precious metal content, was favorably impacted, based on the Company's estimate, by approximately $23 million as a result of net changes in equipment inventory levels in the current year as compared to the prior year at certain distributors in North America and Europe, that the Company believes is related to the transition in distribution strategy (see "Business Drivers" under this section for further detail). Based on the Company's estimate, inventory held by these distributors increased by approximately $26 million during the current year compared to an increase of approximately $3 million in 2016. The inventory increase in 2017 was more than anticipated, in the Company's assessment, as a result of lower equipment sales to end-users as well as higher than anticipated stocking of inventory by distributors in the U.S.

Sales related to precious metal content declined 37.0% during 2017, which was primarily related to the continued reduction in the use of precious metal alloys in dentistry.

For the year ended December 31, 2017, sales of our combined businesses grew 1.6% on a constant currency basis. This includes a benefit of 1.8% from net acquisitions which leads to negative internal sales growth of 20 basis points. Net sales, excluding precious metal content, were favorably impacted by approximately 1.0% due to the weakening of the U.S. dollar over the prior year period. Based on the Company's assessment, the internal sales growth was benefited by approximately 60 basis points as a result of the net changes in equipment inventory levels in the current year other the prior year as discussed above. A reconciliation of reported net sales to net sales, excluding precious metal content, of the combined business for the year ended December 31, 2017 and 2016, respectfully, is as follows:

(in millions, except percentage amounts)	December 31, 2017	2016	$ Change	% Change
Net sales	$ 3,993.4	$ 3,745.3	$ 248.1	6.6%
Less: precious metal content of sales	40.5	64.3	(23.8)	(37.0%)
Net sales, excluding precious metal content	3,952.9	3,681.0	271.9	7.4%
Sirona net sales (a)	—	160.7	(160.7)	NM
Merger related adjustments (b)	4.0	13.5	(9.5)	NM
Elimination of intercompany net sales	—	(0.5)	0.5	NM
Non-US GAAP combined business, net sales, excluding precious metal content	$ 3,956.9	$ 3,854.7	$ 102.2	2.6%

NM - Not meaningful
(a) Represents Sirona sales for January and February 2016.
(b) Represents an adjustment to reflect deferred subscription and warranty revenue that was eliminated under business combination accounting standards to make the 2017 and 2016 non-U.S. GAAP combined business results comparable.

Sales Growth by Region

Net sales, excluding precious metal content, for the year ended December 31, 2017 and 2016, respectfully, by geographic region is as follows:

(in millions, except percentage amounts)	December 31, 2017	2016	$ Change	% Change
United States	$ 1,366.8	$ 1,306.4	$ 60.4	4.6%
Europe	1,575.2	1,421.7	153.5	10.8%
Rest of World	1,010.9	952.9	58.0	6.1%

A reconciliation of reported net sales to net sales, excluding precious metal content, of the combined business by geographic region for the year ended December 31, 2017 and 2016, respectfully, is as follows:

(in millions)	December 31, 2017 United States	Europe	Rest of World	Total
Net sales	$ 1,372.5	$ 1,606.2	$ 1,014.7	$ 3,993.4
Less: precious metal content of sales	5.7	31.0	3.8	40.5
Net sales, excluding precious metal content	1,366.8	1,575.2	1,010.9	3,952.9
Merger related adjustments (a)	4.0	—	—	4.0
Non-US GAAP combined business, net sales, excluding precious metal content	$ 1,370.8	$ 1,575.2	$ 1,010.9	$ 3,956.9

(a) Represents an adjustment to reflect deferred subscription and warranty revenue that was eliminated under business combination accounting standards to make the 2017 and 2016 non-U.S. GAAP combined business results comparable.

(in millions)	December 31, 2016 United States	Europe	Rest of World	Total
Net sales	$ 1,311.6	$ 1,463.2	$ 970.5	$ 3,745.3
Less: precious metal content of sales	5.2	41.5	17.6	64.3
Net sales, excluding precious metal content	1,306.4	1,421.7	952.9	3,681.0
Sirona net sales (a)	60.5	59.4	40.8	160.7
Merger related adjustments (b)	11.9	1.6	—	13.5
Elimination of intercompany net sales	(0.1)	(0.4)	—	(0.5)
Non-US GAAP combined business, net sales, excluding precious metal content	$ 1,378.7	$ 1,482.3	$ 993.7	$ 3,854.7

(a) Represents Sirona sales for January and February 2016
(b) Represents an adjustment to reflect deferred subscription and warranty revenue that was eliminated under business combinations accounting standards to make the 2017 and 2016 non-U.S. GAAP combined business statements comparable.

United States

Reported net sales, excluding precious metal content, increased by 4.6% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. The increase in net sales, excluding precious metal content, was favorably impacted, based on the Company's estimate, by approximately $42 million as a result of net changes in equipment inventory levels in the current year as compared to the prior year at two distributors in the United States related to the transition in distribution strategy (see "Business Drivers" under this section for further detail). This excludes approximately $4.0 million of revenue that was eliminated in fair value purchase accounting adjustments to deferred income.

For the year ended December 31, 2017, sales of our combined businesses declined 0.5% on a constant currency basis. This includes a benefit of 1.1% from net acquisitions and was unfavorably impacted by discontinued products by approximately 10 basis points, which results in a negative internal sales growth rate of 1.5%. The negative internal sales growth in this region was driven by lower demand in the Technologies & Equipment segment. Based on the Company's assessment, the internal sales growth was benefited by approximately 3% as a result of the net changes in equipment inventory levels in the current year over the prior year as discussed above. The impact from net changes in inventory levels was entirely within the Technologies & Equipment segment.

Europe

Reported net sales, increased by 9.8% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. Reported net sales, excluding precious metal content, increased by 10.8% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. The increase in net sales, excluding precious metal content, was unfavorably impacted, based on the Company's estimate, by approximately $9 million as a result of net changes in equipment inventory levels in the current year as compared to the prior year at a certain distributor in Europe that the Company believes is related to the transition in distribution strategy (see "Business Drivers" under this section for further detail).

For the year ended December 31, 2017, sales of our combined businesses grew 4.1% on a constant currency basis. This includes a benefit of 2.3% from net acquisitions, which results in internal sales growth of 1.8%. Net sales, excluding precious metal content, were positively impacted by approximately 2.2% due to the weakening of the U.S. dollar over the prior year period. Internal sales growth in this region was primarily driven by higher demand in both segments. Based on the Company's assessment, the internal sales growth was unfavorably impacted by approximately 50 basis points as a result of the net changes in equipment inventory levels in the current year over the prior year as discussed above. The impact from net changes in inventory levels was entirely within the Technologies & Equipment segment.

Rest of World

Reported net sales increased by 4.5% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. Reported net sales, excluding precious metal content, increased by 6.1% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. The increase in net sales, excluding precious metal content, was unfavorably impacted, based on the Company's estimate, by approximately $10 million as a result of net changes in equipment inventory levels in the current year as compared to the prior year at a certain distributor in Canada that the Company believes is related to the transition in distribution strategy (see "Business Drivers" under this section for further detail).

For the year ended December 31, 2017, sales of our combined businesses grew 0.8% on a constant currency basis. This includes a benefit of 2.2% from net acquisitions, which results in negative internal sales growth of 1.4%. Net sales, excluding precious metal content, were positively impacted by approximately 0.9% due to the weakening of the U.S. dollar over the prior year period. The negative internal sales growth in this region was driven by lower demand in the Technologies & Equipment segment. Based on the Company's assessment, the internal sales growth was unfavorably impacted by approximately 1% as a result of the net changes in equipment inventory levels in the current year over the prior year as discussed above. The impact from net changes in inventory levels was entirely within the Technologies & Equipment segment.

Gross Profit

(in millions, except percentage amounts)	Year Ended December 31, 2017	2016	$ Change	% Change
Gross profit	$ 2,188.5	$ 2,000.9	$ 187.6	9.4%
Gross profit as a percentage of net sales, including precious metal content	54.8%	53.4%		
Gross profit as a percentage of net sales, excluding precious metal content	55.4%	54.4%		

Gross profit as a percentage of net sales, excluding precious metal content, increased by 100 basis points for the year ended December 31, 2017 as compared to the year ended December 31, 2016. Improvement in the gross profit rate for year ended December 31, 2017, were primarily driven by net reductions in the roll-off of merger-related fair value adjustments and expenses of approximately 150 basis points as compared to the year ended December 31, 2016. This increase was partially offset by approximately 50 basis points associated with the equipment businesses primarily as a result of lower sales related to the transition in distribution strategy as compared to the year ended December 31, 2016.

Operating Expenses

(in millions, except percentage amounts)	Year Ended December 31, 2017	2016	$ Change	% Change
Selling, general and administrative expenses ("SG&A")	$ 1,674.7	1,523.0	$ 151.7	10.0%
Goodwill impairment	1,650.9	—	1,650.9	NM
Restructuring and other costs	425.2	23.2	402.0	NM
SG&A as a percentage of net sales, including precious metal content	41.9%	40.7%		
SG&A as a percentage of net sales, excluding precious metal content	42.4%	41.4%		

NM - Not meaningful

SG&A Expenses

SG&A expenses, including research and developing expenses, as a percentage of net sales, excluding precious metal content, for the year ended December 31, 2017 increased 100 basis points compared to the year ended December 31, 2016.The higher rate was primarily driven by increased professional service costs, biennial trade show and other selling events, unfavorable foreign currency and increased amortization and depreciation which unfavorably impacted the rate by approximately 100 basis points compared to the year ended December 31, 2016. In addition, the rate was also unfavorably impact by 80 basis points due to employment agreement costs related to the resignation of senior management compared to the year ended December 31, 2016. Partially offsetting these increases was a reduction in business combination related costs which favorably impacted the rate by 120 basis points as compared to the year ended December 31, 2016.

Goodwill impairment

For the year ended December 31, 2017, the Company recorded a goodwill impairment charge of $1,650.9 million. The charge is related to three reporting units in the Technologies & Equipment segment. For further information see Note 9, Goodwill and Intangible Assets, in the Notes to Audited Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K.

Restructuring and Other Costs

The Company recorded net restructuring and other costs of $425.2 million for the year ended December 31, 2017 compared to $23.2 million for the year ended December 31, 2016.

The Company recorded net restructuring expense of $55.4 million related to restructuring initiatives in Germany and organizational management changes announced during the fourth quarter. As announced in October 2016, the Company proposed plans in Germany to reorganize and combine portions of its manufacturing, logistics and distribution networks within the Company's two segments. As required under German law, the Company entered into a statutory co-determination process under which it collaborated with the appropriate labor groups to jointly define the infrastructure and staffing adjustments necessary to support this initiative. In 2017, the Company received all necessary approvals and is proceeding with its current plans. The Company estimates the cost of these initiatives to be approximately $65 million, primarily for severance related benefits for employees, which is expected to be incurred as actions are implemented over the next two years. The Company recorded costs of approximately $29 million associated with these plans. The Company estimates that the future annual savings related to these plans to be in the range of $11 million to $14 million to be realized over the next one to three years. There is no assurance that future savings will be fully achieved.

During the year ended December 31, 2017, the Company recorded other costs of $369.8 million which consist of impairment charges of $346.7 million and legal settlements of $23.1 million. For further information on the impairment charges, see Note 9, Goodwill and Intangible Assets, in the Notes to the Audited Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K.

Other Income and Expenses

(in millions, except percentage amounts)	Year Ended December 31, 2017	2016	$ Change	% Change
Net interest expense	$ 35.9	$ 33.9	$ 2.0	5.9%
Other expense (income), net	5.3	(20.1)	25.4	NM
Net interest and other expense	$ 41.2	$ 13.8	$ 27.4	

NM - Not meaningful

Net Interest Expense

Net interest expense for the year ended December 31, 2017 increased $2.0 million as compared to the year ended December 31, 2016. Increased debt levels in 2017 partially offset by lower average interest rates when compared to the prior year resulted in an increase in net interest expense.

Other Expense (Income), Net

Other expense (income), net for the year ended December 31, 2017 increased $25.4 million compared to the year ended December 31, 2016. Other expense (income), net for the year ended December 31, 2017 includes foreign exchange loss of $1.7 million and $3.6 million of other non-operating expenses. Other income, net for the year ended December 31, 2016 was $20.1 million, comprised primarily of $10.3 million of foreign exchange gains, and $9.9 million of other non-operating income primarily due to legal settlements.

Income Taxes and Net Income

(in millions, except per share and percentage amounts)	Year Ended December 31, 2017	2016	$ Change
Effective income tax rate	3.3%	2.2%	
Net (loss) income attributable to Dentsply Sirona	$ (1,550.0)	$ 429.9	$ (1,979.9)
Net (loss) income per common share - diluted	$ (6.76)	$ 1.94	

Provision for Income Taxes

The Company’s effective tax rate for 2017 and 2016 was 3.3% and 2.2%, respectively. For the year ended December 31, 2017, income taxes were a net benefit of $53.2 million. During the year, the Company recorded the following discrete tax items, $20.5 million of excess tax benefit related to employee share based compensation, tax expense of $12.0 million related primarily to state valuation allowances, $3.6 million related to enacted statutory rate changes, $1.0 million related to other discrete tax matters and $20.1 million related to US Tax Reform. The Company also recorded a $99.1 million tax benefit related to the intangible asset impairment charge recorded during the twelve months ended December 31, 2017. Excluding these discrete tax items and adjusting pretax loss to exclude the pretax loss related to the impairment of the intangible assets and non-deductible goodwill impairment charge the Company’s effective tax rate was 7.54%. The effective tax rate was favorably impacted by the Company’s change in the mix of consolidated earnings. Further information regarding the details of income taxes is presented in Note 14, Income Taxes, in the Notes to Consolidated Financial Statements in Item 15 of this Form 10-K.

On December 22, 2017, the Tax Cuts and Jobs Act (the "Act" or "U.S. tax reform") was enacted. U.S. tax reform, among other things, reduces the U.S. federal income tax rate to 21% in 2018 from 35%, institutes a dividends received deduction for foreign earnings with a related tax for the deemed repatriation of unremitted foreign earnings and creates a new U.S. minimum tax on earnings of foreign subsidiaries. In addition, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118"), which provides guidance on accounting for enactment effects of SAB 118 provides a measurement period of up to one year from the Act's enactment date for companies to complete their accounting under Accounting Standards Codification No. 740 "Income Taxes", ("ASC 740"). In accordance with SAB 118, to the extent that a company's accounting for certain income tax effects of the Act is incomplete but it is able to determine a reasonable estimate, it must record a provisional estimate in its financial statements. If a company cannot determine a provisional estimate to be included in its financial statements, it should continue to apply ASC 740 on the basis of the provisions of the tax laws that were in effect immediately before the enactment of the Act. The Company's accounting for certain income tax effects is incomplete, but the Company has determined reasonable estimates for those effects. Accordingly, the Company has recognized a net provisional income tax charge of $20.1 million, which is included as a component of the income tax provision in the consolidated statements of operations.

Based on information available, the Company estimated the cumulative undistributed foreign earnings to be approximately $1.1 billion and recorded a provisional estimate of $62.2 million of income tax expense related to the one-time deemed repatriation toll charge. There is still uncertainty as to the application of the Act, in particular as it relates to state income taxes. Further, the Company has not yet completed the analysis of the components of the computation, including the amount of the foreign earnings subject to U.S. income tax, and the portion of the foreign earnings held in cash or other specified assets. As of December 31, 2017, primarily due to the utilization of foreign tax credit carryforwards and certain other tax attributes the estimated cash liability for the deemed repatriation of foreign earnings is approximately $1.0 million. However, as the Company completes its analysis an additional liability could be recorded and the Company would elect to make installment payments as allowed under the Act.

As a result of the Act, the Company can repatriate the cumulative undistributed foreign earnings back to the U.S. when needed with minimal U.S. income tax consequences other than the one-time deemed repatriation toll charge. The Company is still evaluating whether to change its indefinite reinvestment assertion in light of the Act and consider that conclusion to be incomplete under SAB 118.

The remaining provisional amount is a benefit of $42.1 million relating to the remeasurement of the Company's U.S. net deferred tax liabilities. For the Global Intangible Low Tax Income ("GILTI") provision of the Act, a provisional estimate could not be made as the Company has not yet completed its assessment or elected an accounting policy to either recognize deferred taxes for basis differences expected to reverse as GILTI or to record GILTI as period costs if and when incurred.

In accordance with SEC guidance, provisional amounts may be refined as a result of additional guidance from, and interpretations by, U.S. regulatory and standard-setting bodies, and changes in assumptions. In the subsequent period, provisional amounts will be adjusted for the effects, if any, of interpretative guidance issued after January 19, 2018, by the U.S. Department of the Treasury. The effects of the 2017 Tax Act may be subject to changes for items that were previously reported as provisional amounts, as well as any element of the 2017 Tax Act that a provisional estimate could not be made, and such changes could be material.

The Company's effective income tax rate for 2017 included the net impact of restructuring program related costs and other costs, amortization of purchased intangible assets, business combination related costs and fair value adjustments, credit risk and fair value adjustments and income tax related adjustments which impacted loss before income taxes and the provision for income taxes by $2,351.8 million and $183.6 million, respectively.

The Company's effective income tax rate for 2016 included the net impact of business combination related costs and fair value adjustments, amortization of purchased intangible assets, restructuring program related costs and other costs, credit risk and fair value adjustments and income tax related adjustments which impacted income before income taxes and the provision for income taxes by $340.3 million and $153.1 million, respectively.

Net (loss) income attributable to Dentsply Sirona

In addition to the results reported in accordance with US GAAP, the Company provides adjusted net income attributable to Dentsply Sirona and adjusted earnings per diluted common share ("adjusted EPS"). The Company discloses adjusted net income attributable to Dentsply Sirona to allow investors to evaluate the performance of the Company's operations exclusive of certain items that impact the comparability of results from period to period and may not be indicative of past or future performance of the normal operations of the Company and certain large non-cash charges related to intangible assets either purchased or acquired through a business combination. The Company believes that this information is helpful in understanding underlying operating trends and cash flow generation.

Adjusted net income and adjusted EPS are important internal measures for the Company. Senior management receives a monthly analysis of operating results that includes adjusted net income and adjusted EPS and the performance of the Company is measured on this basis along with other performance metrics.

	Year Ended December 31, 2017	
(in millions, except per share amounts)	Net (Loss) Income	Per Diluted Common Share
Net loss attributable to Dentsply Sirona	$ (1,550.0)	$ (6.76)
Pre-tax non-US GAAP adjustments:		
Restructuring program related costs and other costs	2,119.3	
Amortization of purchased intangible assets	189.1	
Business combination related costs and fair value adjustments	38.5	
Credit risk and fair value adjustments	4.9	
Tax impact of the pre-tax non-US GAAP adjustments (a)	(199.8)	
Subtotal non-US GAAP adjustments	2,152.0	9.26
Adjustment for calculating non-US GAAP net income per diluted common share (b)		0.09
Income tax related adjustments	16.2	0.07
Adjusted non-US GAAP net income	$ 618.2	$ 2.66
(a) The tax amount was calculated using the applicable statutory tax rate in the tax jurisdiction where the non-US GAAP adjustments were generated.		
(b) The Company had a net loss for the year ended December 31, 2017, but had net income on a non-US GAAP basis. The shares used in calculating diluted non-US GAAP net income per share includes the dilutive effect of common stock.		
Shares used in calculating diluted GAAP net loss per share		229.4
Shares used in calculating diluted non-US GAAP net income per share		232.7

	Year Ended December 31, 2016	
(in millions, except per share amounts)	Net Income	Per Diluted Common Share
Net income attributable to Dentsply Sirona	$ 429.9	$ 1.94
Pre-tax non-US GAAP adjustments:		
Business combination related costs and fair value adjustments	162.2	
Amortization of purchased intangible assets	155.3	
Restructuring program related costs and other costs	17.0	
Credit risk and fair value adjustments	5.8	
Tax impact of the pre-tax non-US GAAP adjustments (a)	(79.6)	
Subtotal non-US GAAP adjustments	260.7	1.17
Income tax related adjustments	(73.5)	(0.33)
Adjusted non-US GAAP net income	$ 617.1	$ 2.78

(a) The tax amount was calculated using the applicable statutory tax rate in the tax jurisdiction where the non-US GAAP adjustments were generated.

Adjusted Operating Income and Margin

Adjusted operating income and margin is another important internal measure for the Company. Operating income in accordance with US GAAP is adjusted for the items noted above which are excluded on a pre-tax basis to arrive at adjusted operating income, a non-US GAAP measure. The adjusted operating margin is calculated by dividing adjusted operating income by net sales, excluding precious metal content.

Senior management receives a monthly analysis of operating results that includes adjusted operating income. The performance of the Company is measured on this basis along with the adjusted non-US GAAP earnings noted above as well as other performance metrics. This non-US GAAP measure may differ from other companies and should not be considered in isolation from, or as a substitute for, measures of financial performance prepared in accordance with US GAAP.

	Year Ended December 31, 2017	
(in millions, except percentage of net sales amount)	Operating (Loss) Income	Percentage of Net Sales, Excluding Precious Metal Content
Operating loss attributable to Dentsply Sirona	$ (1,562.3)	(39.5)%
Restructuring program related costs and other costs	2,119.9	53.6%
Amortization of purchased intangible assets	189.1	4.8%
Business combination related costs and fair value adjustments	37.7	0.9%
Credit risk and fair value adjustments	7.0	0.2%
Adjusted non-US GAAP Operating Income	$ 791.4	20.0%

	Year Ended December 31, 2016	
(in millions, except percentage of net sales amounts)	Operating Income	Percentage of Net Sales, Excluding Precious Metal Content
Operating income attributable to Dentsply Sirona	$ 454.7	12.4%
Restructuring program related costs and other costs	161.8	4.4%
Amortization of purchased intangible assets	155.3	4.2%
Business combination related costs and fair value adjustments	27.1	0.7%
Credit risk and fair value adjustments	5.3	0.1%
Adjusted non-US GAAP Operating Income	$ 804.2	21.8%

Operating Segment Results

Net Sales, Excluding Precious Metal Content	Year Ended December 31,			
(in millions, except percentage amounts)	2017	2016	$ Change	% Change
Technologies & Equipment	$ 2,160.3	$ 1,986.4	$ 173.9	8.8%
Consumables	$ 1,792.6	$ 1,694.6	$ 98.0	5.8%

Segment Operating Income (in millions, except percentage amounts)	Year Ended December 31, 2017	2016	$ Change	% Change
Technologies & Equipment	$ 412.6	$ 355.7	$ 56.9	16.0%
Consumables	$ 493.0	$ 445.3	$ 47.7	10.7%

A reconciliation of reported net sales to net sales, excluding precious metal content, of the combined business by segment for the year ended December 31, 2017 and 2016, respectively, is as follows:

(in millions)	December 31, 2017 Technologies & Equipment	Consumables	Total
Net sales	$ 2,200.8	$ 1,792.6	$ 3,993.4
Less: precious metal content of sales	40.5	—	40.5
Net sales, excluding precious metal content	2,160.3	1,792.6	3,952.9
Merger related adjustments (a)	4.0	—	4.0
Non-US GAAP combined business, net sales, excluding precious metal content	$ 2,164.3	$ 1,792.6	$ 3,956.9

(a) Represents an adjustments to reflect deferred subscription and warranty revenue that was eliminated under business combination accounting standards to make the 2017 and 2016 non-U.S. GAAP combined business results comparable.

(in millions)	December 31, 2016 Technologies & Equipment	Consumables	Total
Net sales	$ 2,050.5	$ 1,694.8	$ 3,745.3
Less: precious metal content of sales	64.1	0.2	64.3
Net sales, excluding precious metal content	1,986.4	1,694.6	3,681.0
Sirona net sales (a)	145.0	15.7	160.7
Merger related adjustments (b)	13.5	—	13.5
Elimination of intercompany net sales	—	(0.5)	(0.5)
Non-US GAAP combined business, net sales, excluding precious metal content	$ 2,144.9	$ 1,709.8	$ 3,854.7

(a) Represents Sirona sales for January and February of 2016.
(b) Represents an adjustment to reflect deferred subscription and warranty revenue that was eliminated under business combination accounting standards to make 2017 and 2016 non-US. GAAP combined business results comparable

Technologies & Equipment

Reported net sales increased by 7.3% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. Reported net sales, excluding precious metal content, increased by $173.9 million or 8.8% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. This increase reflects sales of $98.6 million as a result of the inclusion of two additional months of Sirona for the year ended December 31, 2017 compared to the year ended December 31, 2016. The increase in net sales, excluding precious metal content, was favorably impacted, based on the Company's estimate, by approximately $23 million as a result of net changes in equipment inventory levels in the current year as compared to the prior year at certain distributors in North America and Europe, that the Company believes is related to the transition in distribution strategy (see "Business Drivers" under this section for further detail). Based on the Company's estimate, inventory held by these distributors increased by approximately $26 million during the current year compared to an increase of approximately $3 million in 2016. The inventory increase in 2017 was more than anticipated, in the Company's assessment, as a result of lower equipment sales to end-users as well as higher than anticipated stocking of inventory by distributors in the U.S.

For the year ended December 31, 2017, sales of our combined businesses declined 0.1% on a constant currency basis. This

includes a benefit of approximately 2.7% from net acquisitions, which results in negative internal sales growth of 2.8%. Net sales, excluding precious metal content, were favorably impacted by approximately 1.0% due to the weakening of the U.S. dollar as compared to the prior year. Sales decline was led by the U.S. and the Rest of World regions, partially offset by Europe. The negative internal sales growth rate, based on the Company's estimate, was favorably impacted by changes in equipment inventory levels in the current year as compared to the prior year at certain distributors related to the transition in distribution strategy.

The operating income increased $56.9 million or 16.0% for the year ended December 31, 2017 as compared to 2016 reflects the impact of the consolidation of two additional months of Sirona, and the savings from the Company's global efficiency and integration program. Based on the Company's assessment, operating income was favorably impacted by the change in net equipment inventory as discussed above.

Consumables

Reported net sales increased by 5.8% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. Reported net sales, excluding precious metal content, increased by $98.0 million or 5.8% for the year ended December 31, 2017 as compared to the year ended December 31, 2016. This increase reflects sales of $14.1 million as a result of the inclusion of two additional months of Sirona for the year ended December 31, 2017 as compared to the year ended December 31, 2016.

For the year ended December 31, 2017, sales of our combined businesses grew 3.7% on a constant currency basis. This includes a benefit of 0.6% from net acquisitions which results in internal growth of 3.1%. Net sales, excluding precious metal content, were positively impacted by approximately 1.2% due to the weakening of the U.S. dollar over the prior year period. Sales growth in this segment reflects increased demand in the all regions.

The operating income increased $47.7 million or 10.7% for the year ended December 31, 2017 as compared to 2016. This increase was primarily driven by the increase in sales, favorable product mix and the favorable impact of foreign currency.

CRITICAL ACCOUNTING JUDGMENTS AND POLICIES

The preparation of the Company's consolidated financial statements in conformity with US GAAP requires the Company to make estimates and assumptions about future events that affect the amounts reported in the consolidated financial statements and accompanying notes. Future events and their effects cannot be determined with absolute certainty. Therefore, the determination of estimates requires the exercise of judgment. Actual results could differ from those estimates, and such differences may be material to the consolidated financial statements. The process of determining significant estimates is fact specific and takes into account factors such as historical experience, current and expected economic conditions, product mix and in some cases, actuarial techniques. The Company evaluates these significant factors as facts and circumstances dictate. Some events as described below could cause results to differ significantly from those determined using estimates. The Company has identified the following accounting estimates as those which are critical to its business and results of operations.

Business Acquisitions

The Company acquires businesses as well as partial interests in businesses. Acquired businesses are accounted for using the acquisition method of accounting which requires the Company to record assets acquired and liabilities assumed at their respective fair values with the excess of the purchase price over estimated fair values recorded as goodwill. The assumptions made in determining the fair value of acquired assets and assumed liabilities as well as asset lives can materially impact the results of operations.

The Company obtains information during due diligence and through other sources to get respective fair values. Examples of factors and information that the Company uses to determine the fair values include: tangible and intangible asset evaluations and appraisals; evaluations of existing contingencies and liabilities and product line integration information. If the initial valuation for an acquisition is incomplete by the end of the quarter in which the acquisition occurred, the Company will record a provisional estimate in the financial statements. The provisional estimate will be finalized as soon as information becomes available but will only occur up to one year from the acquisition date.

Goodwill and Other Long-Lived Assets

Goodwill and Indefinite-Lived Assets

The Company follows the accounting standards for goodwill and indefinite-lived intangibles, which require an annual test for impairment to goodwill using a fair value approach. In addition to minimum annual impairment tests, the Company also requires that impairment assessments be made more frequently if events or changes in circumstances indicate that the goodwill or indefinite-lived assets might be impaired. If impairment related to goodwill is identified, the resulting charge is determined by recalculating goodwill through a hypothetical purchase price allocation of the fair value and reducing the current carrying value to the extent it exceeds the recalculated goodwill. If the carrying amount of an indefinite-lived intangible asset exceeds its fair value, an impairment loss is recognized.

Other Long-Lived Assets

Other long-lived assets, such as definite-lived intangible assets and fixed assets, are amortized or depreciated over their estimated useful lives. In accordance with US GAAP, these assets are reviewed for impairment whenever events or circumstances provide evidence that suggest that the carrying amount of the asset may not be recoverable based upon an evaluation of the identifiable undiscounted cash flows. If impaired based on the identifiable undiscounted cash flows, the asset's fair value is determined using the discounted cash flow and market participant assumptions. The resulting charge reflects the excess of the asset's carrying cost over its fair value.

Impairment Assessment

Assessment of the potential impairment of goodwill and other long-lived assets is an integral part of the Company's normal ongoing review of operations. Testing for potential impairment of these assets is significantly dependent on numerous assumptions and reflects management's best estimates at a particular point in time. The dynamic economic environments in which the Company's businesses operate and key economic and business assumptions with respect to projected selling prices, increased competition and introductions of new technologies can significantly affect the outcome of impairment tests. Estimates based on these assumptions may differ significantly from actual results. Changes in factors and assumptions used in assessing potential impairments can have a significant impact on the existence and magnitude of impairments, as well as the time at which such impairments are recognized. If there are unfavorable changes in these assumptions, particularly changes in the Company's discount rates, earnings multiples and future cash flows, the Company may be required to recognize impairment charges. Information with respect to the Company's significant accounting policies on goodwill and other long-lived assets are included in Note 1, Significant Accounting Policies, in the Notes to Consolidated Financial Statements in Item 15 of this Form 10-K.

Annual Goodwill Impairment Testing

Goodwill is not amortized; instead, it is tested for impairment annually or more frequently if indicators of impairment exist or if a decision is made to sell a business. The valuation date for annual impairment testing is April 30. Judgment is involved in determining if an indicator of impairment has occurred. Such indicators may include a decline in expected cash flows, a significant adverse change in legal factors or in the business climate, unanticipated competition or slower growth rates, among others. It is important to note that fair values that could be realized in an actual transaction may differ from those used to evaluate the impairment of goodwill.

Goodwill is allocated among and evaluated for impairment at the reporting unit level, which is defined as an operating segment or one level below an operating segment. The Company has several reporting units contained within each operating segment.

The evaluation of impairment involves comparing the current fair value of each reporting unit to its net book value, including goodwill. The Company uses a discounted cash flow model ("DCF model") to estimate the current fair value of its reporting units when testing for impairment, as management believes forecasted operating cash flows are the best indicator of such fair value. A number of significant assumptions and estimates are involved in the application of the DCF model to forecast operating cash flows, including future sales growth, operating margin growth, benefits from restructuring initiatives, tax rates, capital spending, business initiatives, and working capital changes. These assumptions may vary significantly among the reporting units. Operating cash flow forecasts are based on approved business-unit operating plans for the early years and historical relationships and projections in later years. The weighted average cost of capital ("WACC") rate is estimated for geographic regions and applied to the reporting units located within the regions. The Company has not materially changed its methodology for goodwill impairment testing for the years presented. Due to the many variables inherent in the estimation of a reporting unit's fair value and the relative size of the Company's recorded goodwill, differences in assumptions may have a material effect on the results of the Company's impairment analysis.

Should the Company's analysis in the future indicate an increase in discount rates or a degradation in the overall markets served by these reporting units, it could result in impairment of the carrying value of goodwill to its implied fair value. There can be no assurance that the Company's future goodwill impairment testing will not result in a charge to earnings.

Annual Indefinite-Lived Intangible Asset Impairment Testing

Indefinite-lived intangible assets consist of tradenames and trademarks and are not subject to amortization; instead, they are tested for impairment annually or more frequently if indicators of impairment exist or if a decision is made to sell a business. A significant amount of judgment is involved in determining if an indicator of impairment has occurred. Such indicators may include a decline in expected cash flow projections, a significant adverse change in legal factors or in the business climate, unanticipated competition or slower growth rates, among others. It is important to note that fair values that could be realized in an actual transaction may differ from those used to evaluate the impairment of indefinite-lived assets.

The fair value of acquired tradenames and trademarks is estimated by the use of a relief from royalty method, which values an indefinite-lived intangible asset by estimating the royalties saved through the ownership of an asset. Under this method, an owner of an indefinite-lived intangible asset determines the arm's length royalty that likely would have been charged if the owner had to license the asset from a third party. Royalty rates used are consistent with those assumed for the original purchase accounting valuation. The royalty rate, which is based on the estimated rate applied against forecasted sales, is tax-effected and discounted at present value using a discount rate commensurate with the relative risk of achieving the cash flow attributable to the asset. Management judgment is necessary to determine key assumptions, including projected revenue, royalty rates and appropriate discount rates. Royalty rates used are consistent with those assumed for the original purchase accounting valuation. Other assumptions are consistent with those applied to goodwill impairment testing.

Goodwill and Indefinite-Lived Intangible Asset Impairment Results

The Company performed the required annual impairment tests of goodwill at April 30, 2018 on eleven reporting units. To determine the fair value of the Company's reporting units, the Company uses a discounted cash flow model with market-based support as its valuation technique to measure the fair value for its reporting units. The discounted cash flow model uses five- to ten-year forecasted cash flows plus a terminal value based on a multiple of earnings or by capitalizing the last period's cash flows using a perpetual growth rate. In the development of the forecasted cash flows, the Company applies revenue, gross profit, and operating expense assumptions taking into consideration historical trends as well as futures expectations. These future expectations include, but are not limited to, new product development and distribution channel changes for the respective reporting units. The Company also considers the current and projected market conditions for dental and medical device industries, both in the U.S. and globally, when determining its assumptions. The total forecasted cash flows were discounted based on market participant data, which included assumptions regarding the Company's weighted-average cost of capital adjusted for the relevant risk associated with business-specific characteristics and the uncertainty related to the reporting unit's ability to execute on the projected cash flows. The Company's significant estimates in the discounted cash flow models include, but are not limited to, the weighted average cost of capital, long-term rate of growth and profitability of the reporting unit's business and working capital effects. A change in any of these estimates and assumptions could produce a different fair value, which could have a material impact on the Company's results of operations.

Goodwill Testing Results

In connection with the updating of the estimates and assumptions with the annual impairment tests of goodwill and the preparation of the financial statements for the three months ended June 30, 2018, the Company determined that the goodwill associated with the CAD/CAM, Imaging and Orthodontics reporting units was impaired. Additionally, near the end of the quarter, the Company recognized that the CAD/CAM and Imaging reporting units' ("equipment reporting units") revenue and operating margins would not meet forecasted expectations for the quarter as a result of several significant unfavorable developments which also affected the reporting units' projections for future revenue and operating margins. As a result, the Company recorded a goodwill impairment charge of $1,085.8 million. The CAD/CAM and Imaging reporting units are within the Technologies & Equipment segment and the Orthodontics reporting unit is within the Consumables segment. The significant unfavorable developments in the current period which are reflected in the Company's April 30, 2018 goodwill impairment testing model, are as follows:

- The equipment reporting units were negatively affected in connection with the continued transition of the Company's distribution relationships primarily in the U.S. from exclusive to non-exclusive. The Company's expectations for revenue growth from its non-exclusive distribution relationships, which replaced its former long-term exclusive distribution relationship, were not met. As a result, the Company's forecasts of current and future third-party demand have been reduced as the Company's U.S. distributors continue to offer and promote competitive alternatives to the Company's full CAD/CAM systems and lower-priced alternatives to the Imaging reporting units' products.

- The Imaging reporting unit observed revenue and operating margins being negatively impacted by aggressive competition with a focus on value-based products in the marketplace as opposed to the reporting unit's premium products. This has resulted in increased competition from low-cost products in certain regions throughout the world causing the reporting unit to offer additional product features at the current price levels and to offer additional promotions and reduce its future sales forecasts.

- The CAD/CAM and Imaging reporting units have also experienced lower than expected sales with respect to higher margin products as well as a regional shift in sales to emerging markets each of which has negatively impacted the reporting units' overall operating margins as compared to the original forecasts for the period and for future sales forecasts.

- The equipment reporting units were also further impacted by the unfavorable change in the discount rate due primarily to a higher risk factor, which represents management's assessment of increased risk with respect to the CAD/CAM and Imaging reporting units' forecasts primarily due to the factors described above, and to a lesser extent a higher risk-free interest rate for all reporting units.

- The increased reduction of inventory being held by the Company's U.S. distributors in the second quarter, which was larger than anticipated for the period, and planned further reductions of inventory, impacts the Company's near-term results.

As a result of the factors described above, and the resulting reduced revenue and profitability expectations for these reporting units, we forecasted reductions in unit volume growth rates and operating margins and lower future cash flows used to estimate the fair value of these reporting units, which resulted in a determination that an impairment adjustment was required.

The Orthodontics reporting unit goodwill impairment charge was primarily driven by lower operating margins and lower sales growth. The products manufactured and sold within this reporting unit have consisted mainly of traditional orthodontic treatment products, (i.e., brackets, bands and wires). The impairment charge is unrelated to the Company's acquisition of OraMetrix. The Company has observed a continuing decline in operating margins as the marketplace has seen higher than expected price competition primarily due to increased supply of traditional orthodontic products in the market. In addition, the Company has seen lower than expected revenue growth which is reflected in its future forecast. The Company believes the revenue trend is the result of competition as well as the growing end-user demand for newer orthodontic treatment options.

For the Company's reporting units that were not impaired, the Company applied a hypothetical sensitivity analysis. Had the discount rate of each of these reporting units been hypothetically increased by 100 basis points at April 30, 2018, the fair value of one reporting unit, Treatment Centers, would not exceed net book value. If the fair value of each of these reporting units had been hypothetically reduced by 10% at April 30, 2018, the fair value of one reporting unit, Treatment Centers, would not exceed net book value. Goodwill for that reporting unit totals $292.4 million at December 31, 2018.

At December 31, 2018, the Company did not identify any impairment triggers related to the reporting units noted above.

Indefinite-lived and Definite-lived Intangible Assets Testing Results

The Company also assessed the annual impairment of indefinite-lived intangible assets as of April 30, 2018, which largely consist of acquired tradenames and trademarks, in conjunction with the annual impairment tests of goodwill. As a result of the annual impairment tests of indefinite-lived intangible assets, the Company recorded an impairment charge of $179.2 million for the three months ended June 30, 2018 which was recorded in Restructuring and other costs in the Consolidated Statements of Operations. The impaired indefinite-lived intangible assets are tradenames and trademarks related to the CAD/CAM, Imaging, and Instrument reporting units. The impairment charge was primarily driven by a decline in forecasted sales resulting from increased competition and the impact of low-cost competitive products, as discussed above with respect to goodwill. In addition, the unfavorable impact of an increase in the equipment reporting units' respective risk factors, along with increases in the risk-free rate, increased the discount rate. The assumptions and estimates used in determining the fair value of the indefinite-lived intangible assets contain uncertainties, and any changes to these assumptions and estimates could have a negative impact and result in a future impairment. At December 31, 2018, the Company did not identify any impairment triggers for the indefinite-lived assets related to the reporting units noted above.

For the Company's indefinite-lived assets that were not impaired, the Company applied a hypothetical sensitivity analysis. If the fair value of each of these indefinite-lived intangibles assets had been hypothetically reduced by 10% or the discount rate had been hypothetically increased by 50 basis points at April 30, 2018, the fair value of these assets would still exceed their book value.

Litigation

The Company and its subsidiaries are from time to time parties to lawsuits arising out of their respective operations. The Company records liabilities when a loss is probable and can be reasonably estimated. These estimates are typically in the form of ranges, and the Company records the liabilities at the low point of the ranges, when no other point within the ranges is a better estimate of the probable loss. The ranges established by management are based on analysis made by internal and external legal counsel based on information known at the time. If the Company determines a liability to be only reasonably possible, it considers the same information to estimate the possible exposure and discloses any material potential liability. These loss contingencies are monitored regularly for a change in fact or circumstance that would require an accrual adjustment. The Company believes it has appropriately estimated liabilities for probable losses in the past; however, the unpredictability of litigation and court decisions could cause a liability to be incurred in excess of estimates. Legal costs related to these lawsuits are expensed as incurred.

Income Taxes

Income taxes are determined using the liability method of accounting for income taxes. The Company’s tax expense includes U.S. and international income taxes plus the provision for U.S. taxes on undistributed earnings of international subsidiaries not deemed to be permanently invested.

The Company applies a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The Company recognizes in the financial statements, tax benefits from an uncertain tax position only if is more likely than not that the position will be sustained upon examination by the taxing authorities based on the technical merits of the position.

Certain items of income and expense are not reported in tax returns and financial statements in the same year. The tax effect of such temporary differences is reported as deferred income taxes. Deferred tax assets are recognized if it is more likely than not that the assets will be realized in future years. The Company establishes a valuation allowance for deferred tax assets for which realization is not likely. At December 31, 2018, the Company has a valuation allowance of $288.4 million against the benefit of certain deferred tax assets of foreign and domestic subsidiaries.

The Company operates within multiple taxing jurisdictions and in the normal course of business is examined in various jurisdictions. The reversal of accruals is recorded when examinations are completed, statutes of limitation are closed or tax laws are changed.

See Note 14 for further information relating to the enactment of the Tax Cuts and Jobs Act (the "Act" or "U.S. tax reform").

LIQUIDITY AND CAPITAL RESOURCES

Cash flows from operating activities during the year ended December 31, 2018 were $499.8 million compared to $601.9 million during the year ended December 31, 2017. Net income increased by $539.4 million in the period ended December 31, 2018 compared to the prior year, largely from lower non-cash impairments of goodwill and intangible assets. Working capital consumed $4.0 million of operating cash flow in 2018 compared to $149.3 million consumed in 2017. Other non-cash charges decreased approximately $75.7 million versus the prior year, largely driven by decreased share based compensation, restructuring, and legal settlements. The Company's cash and cash equivalents decreased by $11.0 million during the year ended December 31, 2018 to $309.6 million.

For the year ended December 31, 2018, on a constant currency basis, the number of days for sales outstanding in accounts receivable decreased by 2 days to 59 days as compared to 61 days in 2017. On a constant currency basis, the number of days of sales in inventory decreased by 7 days to 124 days at December 31, 2018 as compared to 131 days at December 31, 2017.

Cash used in investing activities for the year ended December 31, 2018 included capital expenditures of $182.5 million and acquisitions of businesses and intangible assets of $136.0 million. The Company expects capital expenditures to be in the range of approximately $165 million to $175 million for the full year 2019.

Cash used in financing activities for the year ended December 31, 2018 was primarily related to dividend payments of $78.6 million and share repurchases of $250.2 million, offset by proceeds from stock option exercises of $27.9 million and net change in borrowings of $51.1 million.

During the year ended December 31, 2018, the Board of Directors of the Company approved an increase in the authorized number of shares of common stock that may be repurchased under the share repurchase program for a total authorization of $1.0 billion. For the year ended December 31, 2018, the Company purchased 5.4 million shares or $250.2 million at an average price of $45.92. Share repurchases will be made through open market purchases, Rule 10b5-1 plans, accelerated share repurchases, privately negotiated transactions or other transactions in such amounts and at such times as the Company deems appropriate based upon prevailing market and business conditions and other factors. As of December 31, 2018 and 2017, the Company held 41.5 million and 37.7 million shares, respectively, of treasury stock. The Company received proceeds of $28.0 million as a result of the exercise of stock options during the year ended December 31, 2018.

Total debt increased by $15.6 million for the year ended December 31, 2018. Dentsply Sirona's long-term debt, including the current portion, at December 31, 2018 and 2017 was $1,575.5 million and $1,620.8 million, respectively. The Company's long-term debt, including the current portion decreased by a net of $45.3 million during the year ended December 31, 2018. This net change included a net decrease in borrowings of $34.6 million, and a decrease of $10.7 million due to exchange rate fluctuations on debt denominated in foreign currencies. At December 31, 2018 and 2017, there was $67.8 and $7.3 million, respectively, outstanding borrowings under the commercial paper facility.

During the year ended December 31, 2018, the Company's ratio of net debt to total capitalization increased to 20.8% compared to 16.6% at December 31, 2017. Dentsply Sirona defines net debt as total debt, including current and long-term portions, less cash and cash equivalents and total capitalization as the sum of net debt plus total equity.

The Company has access to $700.0 million revolving credit facility through July 27, 2023. The facility is unsecured and contains certain affirmative and negative covenants relating to the operations and financial condition of the Company. The most restrictive of these covenants pertain to asset dispositions and prescribed ratios of indebtedness to total capital and operating income plus depreciation and amortization to interest expense.

The Company’s revolving credit facility, term loans and senior notes contain certain affirmative and negative covenants relating to the Company's operations and financial condition. These credit agreements contain a number of covenants and two financial ratios, which the Company is required to satisfy. The most restrictive of these covenants pertain to asset dispositions and prescribed ratios of total debt outstanding to total capital not to exceed the ratio of 0.6 to 1.0, and operating income excluding depreciation and amortization to interest expense of not less than 3.0 times, in each case, as such terms are defined in the relevant agreement. Any breach of any such covenants or ratios would result in a default under the existing debt agreements that would permit the lenders to declare all borrowings under such debt agreements to be immediately due and payable and, through cross default provisions, would entitle the Company's other lenders to accelerate their loans. At December 31, 2018, the Company was in compliance with these covenants.

The Company also has access to $44.6 million in uncommitted short-term financing under lines of credit from various financial institutions. The lines of credit have no major restrictions and are provided under demand notes between the Company and the lending institutions. At December 31, 2018, $14.0 million was outstanding under these short-term lines of credit. At December 31, 2018, the Company had total unused lines of credit related to the revolving credit agreement and the uncommitted short-term lines of credit of $662.8 million.

The Company expects on an ongoing basis to be able to finance cash requirements, including capital expenditures, cash payments related to restructuring programs, debt service, operating leases and potential future acquisitions, from the current cash, cash equivalents and short-term investment balances, funds generated from operations and amounts available under its existing credit facilities. The Company estimates cash payments related to recently announced restructuring to be in a range from $115 million to $125 million in 2019. The Company's credit facilities are further discussed in Note 12, Financing Arrangements, to the Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K. The Company intends to pay or refinance the current portion of long term debt due in 2019 utilizing cash or available credit. As noted in the Company's Consolidated Statements of Cash Flows in Part IV, Item 15 of this Form 10-K, the Company has continued to generate strong cash flows from operations, which has been used to finance the Company's activities.

At December 31, 2018, the majority of the Company’s cash and cash equivalents were held outside of the United States. The majority of the Company’s excess free cash flow is generated outside of the United States. Most of the foreign excess free cash flow could be repatriated to the United States. The Company expects to repatriate its foreign excess free cash flow (the amount in excess of capital investment and acquisition needs), subject to current regulations, to fund ongoing operations and capital needs. Historically, the Company has generated more than sufficient operating cash flows in the United States to fund domestic operations. Further, the Company expects on an ongoing basis, to be able to finance domestic and international cash requirements, including capital expenditures, stock repurchases, debt service, operating leases and potential future acquisitions, from the funds generated from operations and amounts available under its existing credit facilities.

As a result of U.S. tax reform, $271.7 million of cash and cash equivalents held by the Company’s non-U.S. subsidiaries was subject to current tax in the U.S. in 2017. As of December 31, 2018, the Company has repatriated $106.0 million of the $271.7 million that was taxed under the Act. To the extent the Company repatriates funds to the U.S., the Company may be required to pay income taxes in certain U.S. states and applicable foreign withholding taxes on these amounts during the period when such repatriation occurs.

Off Balance Sheet Arrangements

At December 31, 2018, the Company held $42.2 million of precious metals on consignment from several financial institutions. Under these consignment arrangements, the financial institutions own the precious metal, and, accordingly, the Company does not report this consigned inventory as part of its inventory on the Consolidated Balance Sheets. These consignment agreements allow the Company to acquire the precious metal at market rates at a point in time, which is approximately the same time, and for the same price as alloys are sold to the Company's customers. In the event that the financial institutions would discontinue offering these consignment arrangements, and if the Company could not obtain other comparable arrangements, the Company may be required to obtain third party financing to fund an ownership position to maintain precious metal inventory at operational levels. For additional details, see Part II, Item 7A "Quantitative and Qualitative Disclosure About Market Risk - Consignment Arrangements" of this Form 10-K.

Contractual Obligations

The following table presents the Company's scheduled contractual cash obligations at December 31, 2018:

Contractual Obligations

(in millions)

	Within 1 Year	Years 2-3	Years 4-5	Greater Than 5 Years	Total
Long-term borrowings	$ 125.2	$ 420.3	$ 1.1	$ 1,033.4	$ 1,580.0
Operating leases	40.2	56.9	34.0	21.9	153.0
Interest on long-term borrowings, net of interest rate swap agreements	28.7	48.3	34.4	64.5	175.9
Postemployment obligations	17.1	38.2	40.4	117.4	213.1
Precious metal consignment agreements	42.2	—	—	—	42.2
	$ 253.4	$ 563.7	$ 109.9	$ 1,237.2	$ 2,164.2

Due to the uncertainty with respect to the timing of future cash flows associated with the Company's unrecognized tax benefits at December 31, 2018, the Company is unable to make reasonably reliable estimates of the period of cash settlement with the respective taxing authority; therefore, $31.9 million of the unrecognized tax benefit has been excluded from the contractual obligations table above. See Note 14, Income Taxes, in the Notes to Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K.

NEW ACCOUNTING PRONOUNCEMENTS

Refer to Note 1, Significant Accounting Policies, in the Notes to Consolidated Financial Statements in Part IV, Item 15 of this Form 10-K for a discussion of recent accounting guidance and pronouncements.

Item 7A. Quantitative and Qualitative Disclosure About Market Risk

QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

The Company's major market risk exposures are changing interest rates, movements in foreign currency exchange rates and potential price volatility of commodities used by the Company in its manufacturing processes. The Company's policy is to manage interest rates through the use of floating rate debt and interest rate swaps to adjust interest rate exposures when appropriate, based upon market conditions. The Company employs foreign currency denominated debt and currency swaps which serve to partially offset the Company's exposure on its net investments in subsidiaries denominated in foreign currencies. The Company's policy generally is to hedge major foreign currency transaction exposures through foreign exchange forward contracts. These contracts are entered into with major financial institutions thereby minimizing the risk of credit loss. In order to limit the unanticipated earnings fluctuations from volatility in commodity prices, the Company selectively enters into commodity swaps to convert variable raw material costs to fixed costs. The Company does not hold or issue derivative financial instruments for speculative or trading purposes. The Company is subject to other foreign exchange market risk exposure in addition to the risks on its financial instruments, such as possible impacts on its pricing and production costs, which are difficult to reasonably predict, and have therefore not been included below.

Foreign Exchange Risk Management

The Company enters into derivative financial instruments to hedge the foreign exchange revaluation risk associated with recorded assets and liabilities that are denominated in a non-functional currency. The Company hedges various currencies, primarily in euros, Swedish kronor, Canadian dollars, British pounds, Swiss francs, Japanese yen and Australian dollars. The gains and losses on these derivative transactions offset the gains and losses generated by the revaluation of the underlying non-functional currency balances. The Company primarily uses forward foreign exchange contracts and cross currency basis swaps to hedge these risks.

The Company uses a layered hedging program to hedge select anticipated foreign currency cash flows to reduce volatility in both cash flows and reported earnings of the consolidated Company. These cash flow hedges have maturities of six to 18 months and do not change the underlying long term foreign currency exchange risk. The Company accounts for the forward foreign exchange contracts as cash flow hedges.

The Company has numerous investments in foreign subsidiaries the most significant of which are denominated in euros, Swiss francs, Japanese yen and Swedish kronor. The net assets of these subsidiaries are exposed to volatility in currency exchange rates. Currently, the Company uses both derivative and non-derivative financial instruments, including foreign currency denominated debt held at the parent company level and foreign exchange forward contracts to hedge some of this exposure. Translation gains and losses related to the net assets of the foreign subsidiaries are offset by gains and losses in the non-derivative and derivative financial instruments designated as hedges of net investment.

At December 31, 2018, a 10% strengthening of the U.S. dollar against all other currencies would improve the net fair value associated with the forward foreign exchange contracts by approximately $67.7 million.

Interest Rate Risk Management

The Company uses interest rate swaps to convert a portion of its variable interest rate debt to fixed interest rate debt and, in the past, to convert fixed rate debt to variable rate debt. At December 31, 2018, the Company has one significant interest rate swap. This interest rate swap has notional amounts totaling 12.6 billion Japanese yen, and effectively converts the underlying variable interest rates to an average fixed interest rate of 0.9% for a term of five years, ending in September 2019. The interest rates on variable rate term loan debt are consistent with current market conditions; therefore, the fair value of this instrument approximates its carrying values.

On January 2, 2018, the Company entered into a 245.6 million euro cross currency basis swap maturing in August 2021, that is designated as a hedge of net investments. This contract effectively converts the $295.7 million bond coupon from 4.1% to 1.7%.

At December 31, 2018, an increase of 1.0% in the interest rates on the variable interest rate instruments would increase the Company's annual interest expense by approximately $1.3 million.

Consignment Arrangements

The Company consigns the precious metals used in the production of precious metal dental alloy products from various financial institutions. Under these consignment arrangements, the banks own the precious metal, and, accordingly, the Company does not report this consigned inventory as part of its inventory on the Consolidated Balance Sheet. These agreements are cancellable by either party at the end of each consignment period, which typically run for a period of one to nine months; however, because the Company typically has access to numerous financial institutions with excess capacity, consignment needs created by cancellations can be shifted among the other institutions. The consignment agreements allow the Company to take ownership of the metal at approximately the same time customer orders are received and to closely match the price of the metal acquired to the price charged to the customer (i.e., the price charged to the customer is largely a pass through).

As precious metal prices fluctuate, the Company evaluates the impact of the precious metal price fluctuation on its target gross margins for precious metal dental alloy products and revises the prices customers are charged for precious metal dental alloy products accordingly, depending upon the magnitude of the fluctuation. While the Company does not separately invoice customers for the precious metal content of precious metal dental alloy products, the underlying precious metal content is the primary component of the cost and sales price of the precious metal dental alloy products. For practical purposes, if the precious metal prices go up or down by a small amount, the Company will not immediately modify prices, as long as the cost of precious metals embedded in the Company’s precious metal dental alloy price closely approximates the market price of the precious metal. If there is a significant change in the price of precious metals, the Company adjusts the price for the precious metal dental alloys, maintaining its margin on the products.

At December 31, 2018, the Company had approximately 44,700 troy ounces of precious metal, primarily gold, platinum, palladium and silver on consignment for periods of less than one year with a market value of $42.2 million. Under the terms of the consignment agreements, the Company also makes compensatory payments to the consignor banks based on a percentage of the value of the consigned precious metals inventory. At December 31, 2018, the average annual rate charged by the consignor banks was 5.9%. These compensatory payments are considered to be a cost of the metals purchased and are recorded as part of the cost of products sold.

Item 8. Financial Statements and Supplementary Data

The information set forth under the captions Management's Report on Internal Control Over Financial Reporting, Report of Independent Registered Public Accounting Firm, Consolidated Statements of Operations, Consolidated Statements of Comprehensive Income, Consolidated Balance Sheets, Consolidated Statements of Changes in Equity, Consolidated Statements of Cash Flows, and Notes to Consolidated Financial Statements, is filed in Part IV, Item 15 of this Form 10-K.

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

None.

Item 9A. Controls and Procedures

(a) Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

The Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures as of the end of the period covered by this report were effective to provide reasonable assurance that the information required to be disclosed by the Company in reports filed under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that it is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

(b) Management's Report on Internal Control Over Financial Reporting

Management's report on the Company's internal control over financial reporting is included under Item 15(a)(1) of this Form 10-K.

(c) Changes in Internal Control Over Financial Reporting

There have been no changes in the Company's internal controls over financial reporting that occurred during the quarter ended December 31, 2018 that have materially affected, or are reasonably likely to materially affect, its internal control over financial reporting.

Item 9B. Other Information

Not Applicable

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required under this item is set forth in the 2019 Proxy Statement, which is incorporated herein by reference.

Code of Ethics

The Company has a Code of Business Conduct and Ethics that applies to the Chief Executive Officer, Chief Financial Officer and the Board of Directors and substantially all of the Company's management level employees. A copy of the Code of Business Conduct and Ethics is available in the Investor Relations section of the Company's website at www.dentsplysirona.com. The Company intends to disclose any amendment to its Code of Business Conduct and Ethics that relates to any element enumerated in Item 406(b) of Regulation S-K, and any waiver from a provision of the Code of Business Conduct and Ethics granted to any director, principal executive officer, principal financial officer, principal accounting officer, or any of the Company's other executive officers, in the Investor Relations section of the Company's website at www.dentsplysirona.com, within four business days following the date of such amendment or waiver.

Item 11. Executive Compensation

The information required under this item is set forth in the 2019 Proxy Statement, which is incorporated herein by reference.

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

The information required under this item is set forth in the 2019 Proxy Statement, which is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions and Director Independence

The information required under this item is presented in the 2019 Proxy Statement, which is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information required under this item is set forth in the 2019 Proxy Statement, which is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedule

a Documents filed as part of this Report

1 Financial Statements

The following consolidated financial statements of the Company are filed as part of this Form 10-K:

2 Financial Statement Schedule for the Years Ended December 31, 2018, 2017, and 2016.

The following financial statement schedule is filed as part of this Form 10-K and is covered by the Report of Independent Registered Public Accounting Firm:

All other schedules for which provision is made in the applicable accounting regulations of the Securities and Exchange Commission are not required to be included herein under the related instructions or are inapplicable and, therefore, have been omitted.

3 Exhibits

The Exhibits listed below are filed or incorporated by reference as part of the Company's Form 10-K.

Exhibit Number		Description
2.1		Agreement and Plan of Merger, dated as of September 15, 2015, by and among DENTSPLY International Inc., Sirona Dental Systems, Inc. and Dawkins Merger Sub Inc. (14)
3.1	(a)	Second Amended and Restated Certificate of Incorporation (17)
	(b)	Certificate of Amendment to Second Amended and Restated Certificate of Incorporation of Dentsply Sirona Inc., dated as of May 23, 2018 (24)
3.2		Fifth Amended and Restated By-Laws, dated as of February 14, 2018 (22)
4.1	(a)	United States Commercial Paper Dealer Agreement dated as of March 28, 2002 between the Company and Citigroup Global Markets Inc. (formerly known as Salomon Smith Barney Inc.) (formerly Exhibit 4.1(b)) (3)
	(b)	First Amendment to the United States Commercial Paper Dealer Agreement dated as of March 28, 2002 between the Company and Citigroup Global Markets Inc. (formerly known as Salomon Smith Barney Inc.) (13)
4.2	(a)	United States Commercial Paper Dealer Agreement dated as of August 18, 2011 between the Company and J.P. Morgan Securities LLC (13)
	(b)	First Amendment to the United States Commercial Paper Dealer Agreement dated as of August 18, 2011 between the Company and J.P. Morgan Securities LLC (13)

Exhibit Number		Description
4.3		$700.0 Million Credit Agreement, dated as of July 27, 2018 final maturity in July 27, 2023, by and among the Company, the subsidiary borrowers party thereto, the lenders party thereto, JPMorgan Chase Bank, N.A. as administrative agent, Citibank N.A. as Syndication Agent, and Wells Fargo Bank, N.A., Commerzbank AG, New York Branch, MUFG Bank, Ltd., Unicredit Bank AG New York Branch, and TD Bank, N.A. as co-documentation agents, and J.P. Morgan Chase Bank, N.A. and Citibank, N.A., as Joint Bookrunners and Joint Lead Arrangers (25)
4.4		$250.0 Million Private Placement Note Purchase Agreement, due February 19, 2016 dated as of October 16, 2009 (7)
4.5	(a)	65.0 Million Swiss Franc Term Loan Agreement, due March 1, 2012 dated as of February 24, 2010 (8)
	(b)	First Amendment to the 65.0 Million Swiss Franc Term Loan Agreement dated May 21, 2010 between the Company, the Lenders, and PNC Bank National Association, as Agent (15)
	(c)	Second Amendment to the 65.0 Million Swiss Franc Term Loan Agreement dated August 31, 2011 due September 1, 2016, between the Company, the Lenders, and PNC Bank, National Association, as Agent (9)
	(d)	Third Amendment to the 65.0 Million Swiss Franc Term Loan Agreement dated November 30, 2015 (15)
4.10		$175.0 Million Credit Agreement dated August 26, 2013 among DENTSPLY International Inc., PNC Bank, National Association as Administrative Agent and the Lenders Party thereto (12)
	(a)	First Amendment to the $175.0 Million Credit Agreement dated November 30, 2015 between the Company and PNC Bank, National Association as Administrative Agent and the Lenders Party thereto (15)
4.11		Form of Indenture (10)
4.12		Supplemental Indenture, dated August 23, 2011 between DENTSPLY International Inc., as Issuer and Wells Fargo, National Association, as Trustee (11)
4.14		12.55 Billion Japanese Yen Term Loan Agreement between the Company and Bank of Tokyo dated September 22, 2014 due September 28, 2019, between the Company, The Bank of Tokyo-Mitsubishi UFJ, LTD as Sole Lead Arranger, Development Bank of Japan, Inc. as Co-Arranger, The Bank of Tokyo-Mitsubishi UFJ, LTD, as Administrative Agent (13)
	(a)	First Amendment to 12.55 Billion Japanese Yen Term Loan Agreement dated December 18, 2015 between the Company and Bank of Tokyo-Mitsubishi UFJ, LTD (15)
4.15		United States Commercial Paper issuing and paying Agency Agreement dated as of November 4, 2014, between the Company and U.S. Bank N.A. (13)
4.16		Note Purchase Agreement, dated December 11, 2015, by and among the Company and the purchasers listed in Schedule A thereto (15)
4.17		Note Purchase Agreement, dated October 27, 2016, by and among the Company and the purchasers listed in Schedule A thereto (17)
10.2		2002 Amended and Restated Equity Incentive Plan* (5)
10.3		Restricted Stock Unit Deferral Plan* (15)
10.4	(a)	Trust Agreement for the Company's Employee Stock Ownership Plan between the Company and T. Rowe Price Trust Company dated as of November 1, 2000 (1)
	(b)	Plan Recordkeeping Agreement for the Company's Employee Stock Ownership Plan between the Company and T. Rowe Price Trust Company dated as of November 1, 2000 (1)
10.5		DENTSPLY Supplemental Saving Plan Agreement dated as of December 10, 2007* (5)
10.12		Amended and Restated Employment Agreement entered January 1, 2009 between the Company's subsidiary, DeguDent GMBH and Albert Sterkenburg* (6)
10.13		DENTSPLY SIRONA Inc. Directors' Deferred Compensation Plan, as amended and restated January 1, 2019* (Filed herewith)
10.15		DENTSPLY SIRONA Inc. Supplemental Executive Retirement Plan, as amended and restated January 1, 2019* (Filed herewith)
10.16		Incentive Compensation Plan, amended and restated* (9)
10.17		AZ Trade Marks License Agreement, dated January 18, 2001 between AstraZeneca AB and Maillefer Instruments Holdings, S.A. (1)
10.18	(a)	Precious metal inventory Purchase and Sale Agreement dated November 30, 2001, as amended October 10, 2006 between Bank of Nova Scotia and the Company (4)

Exhibit Number		Description
	(b)	Precious metal inventory Purchase and Sale Agreement dated December 20, 2001 between JPMorgan Chase Bank and the Company (2)
	(c)	Precious metal inventory Purchase and Sale Agreement dated December 20, 2001 between Mitsui & Co., Precious Metals Inc. and the Company (2)
	(e)	Precious metal inventory Purchase and Sale Agreement dated January 30, 2002 between Commerzbank AG (formerly known as Dresdner Bank AG), Frankfurt, and the Company (5)
	(f)	Precious metal inventory Purchase and Sale Agreement dated December 6, 2010, as amended February 8, 2013 between HSBC Bank USA, National Association and the Company (12)
	(g)	Precious metal inventory Purchase and Sale Agreement dated April 29, 2013 between The Toronto-Dominion Bank and the Company (12)
10.20		2010 Equity Incentive Plan, amended and restated (15)
10.25		DENTSPLY SIRONA Inc. 2016 Omnibus Incentive Plan, as amended and restated effective February 14, 2018 (23)
10.27		Amended and Restated U.S. Distributorship Agreement, dated May 31, 2012, by and between Patterson Companies, Inc. and Sirona Dental Systems, Inc. (16)
10.28		Amended and Restated U.S. CAD-CAM Distributorship Agreement, dated May 31, 2012, by and between Patterson Companies, Inc. and Sirona Dental Systems GmbH (16)
10.29		Sirona Dental Systems, Inc. Equity Incentive Plan, as Amended* (17)
10.30		Sirona Dental Systems, Inc. 2015 Long-Term Incentive Plan* (17)
10.31		Employment Agreement, dated September 27, 2017, between DENTSPLY SIRONA Inc. and Mark Thierer* (18)
10.32		Employment Agreement, dated September 27, 2017, between DENTSPLY SIRONA Inc. and Robert Size* (19)
10.33		Employment Agreement, dated October 10, 2017, between DENTSPLY SIRONA Inc. and Nicholas W. Alexos* (20)
10.34		Employment Agreement, dated October 10, 2017, between DENTSPLY SIRONA Inc. and Keith Ebling* (23)
10.35	(a)	Employment Agreement, dated February 12, 2018, between DENTSPLY SIRONA Inc. and Donald M. Casey Jr* (21)
	(b)	First Amendment to Employment Agreement, dated August 3, 2018, by and between DENTSPLY SIRONA Inc. and Donald M. Casey Jr. (Filed herewith)
10.36		Form of DENTSPLY SIRONA Inc. Indemnification Agreement (22)
10.37		Form of Option Grant Notice Under the DENTSPLY SIRONA Inc. 2016 Omnibus Incentive Plan as amended and restated (22)
10.38		Form of Restricted Share Unit Grant Notice Under the DENTSPLY SIRONA Inc. 2016 Omnibus Incentive Plan as amended and restated (22)
10.39		Form of Performance Restricted Share Unit Grant Notice Under the DENTSPLY SIRONA Inc. 2016 Omnibus Incentive Plan as amended and restated (22)
10.40		Employment Agreement, dated May 5, 2016, between DENTSPLY SIRONA Inc. and Maureen J. MacInnis* (23)
10.41		Employee Stock Purchase Plan, dated May 23, 2018 (26)
10.42		Non-Employee Director Compensation Policy, dated June 26, 2018 (26)
21.1		Subsidiaries of the Company (Filed herewith)
23.1		Consent of Independent Registered Public Accounting Firm - PricewaterhouseCoopers LLP (Filed herewith)
31.1		Section 302 Certification Statement Chief Executive Officer (Filed herewith)
31.2		Section 302 Certification Statements Chief Financial Officer (Filed herewith)
32		Section 906 Certification Statement (Filed herewith)
101.INS		XBRL Instance Document
101.SCH		XBRL Taxonomy Extension Schema Document
101.CAL		XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF		XBRL Taxonomy Extension Definition Linkbase Document
101.LAB		XBRL Extension Labels Linkbase Document
101.PRE		XBRL Taxonomy Extension Presentation Linkbase Document

*Management contract or compensatory plan.

(1) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2000, File 0-16211.

(2) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2001, File 0-16211.

(3) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2002, File 0-16211.

(4) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2006, File no. 0-16211.

(5) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2007, File No. 0-16211.

(6) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2008, File No. 0-16211.

(7) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2009, File no. 0-16211.

(8) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2010, File no. 0-16211.

(9) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2011, File no. 0-16211.

(10) Incorporated by reference to exhibit included in the Company's Registration Statement on Form S-3 dated August 15, 2011 (No. 333-176307).

(11) Incorporated by reference to exhibit included in the Company's Form 8-K dated August 29, 2011, File no. 0-16211.

(12) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2013, File no. 0-16211.

(13) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2014, File no. 0-16211.

(14) Incorporated by reference to exhibit included in the Company's Form 8-K dated September 16, 2015, File no. 0-16211.

(15) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2015, File no. 0-16211.

(16) Incorporated by reference to exhibit included in the Form 8-K/A, filed by Sirona Dental Systems, Inc. on July 12, 2012 (File no 000-22673).

(17) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2016, File no. 0-16211.

(18) Incorporated by reference to exhibit included in the Company's Form 8-K, dated October 2, 2017, File no. 0-16211.

(19) Incorporated by reference to exhibit included in the Company's Form 10-Q for the quarterly period ended September 30, 2017, File no. 0-16211.

(20) Incorporated by reference to exhibit included in the Company's Form 8-K, dated November 3, 2017, File no.0-16211.

(21) Incorporated by reference to exhibit included in the Company's Form 8-K, dated January 17, 2018, File no.0-16211.

(22) Incorporated by reference to exhibit included in the Company's Form 8-K, dated February 15, 2018, File no.0-16211.

(23) Incorporated by reference to exhibit included in the Company's Form 10-K for the fiscal year ended December 31, 2017 File no. 0-16211.

(24) Incorporated by reference to exhibit included in the Company's Form 8-K, dated May 23, 2018, File no.0-16211.

(25) Incorporated by reference to exhibit included in the Company's Form 8-K, dated July 30, 2018, File no.0-16211.

(26) Incorporated by reference to exhibit included in the Company's Form 10-Q for the quarterly period ended June 30, 2018, File no. 0-16211.

SCHEDULE II

DENTSPLY SIRONA INC. AND SUBSIDIARIES
VALUATION AND QUALIFYING ACCOUNTS
FOR THE YEARS ENDED DECEMBER 31, 2018, 2017, and 2016

(in millions)		Additions				
Description	Balance at Beginning of Period	Charged (Credited) To Costs And Expenses	Charged to Other Accounts	Write-offs Net of Recoveries	Translation Adjustment	Balance at End of Period
Allowance for doubtful accounts:						
For the Year Ended December 31,						
2016	$ 10.7	$ 9.2	$ 4.3	$ (2.5)	$ 1.0	$ 22.7
2017	22.7	6.6	(2.6)	(4.8)	0.5	22.4
2018	22.4	6.0	1.1	(2.6)	(2.4)	24.5
Deferred tax asset valuation allowance:						
For the Year Ended December 31,						
2016	$ 274.3	$ (99.9)	$ 8.5	$ —	$ (0.2)	$ 182.7
2017	182.7	2,829.8	—	—	2.3	3,014.8
2018	3,014.8	107.9	—	(2,768.9)	(65.4)	288.4

Management's Report on Internal Control Over Financial Reporting

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. The 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 accounting principles generally accepted in the United States of America. A Company's internal control over financial reporting 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. In addition, 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.

Management of the Company has assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2018. In making its assessment, management used the criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on its assessment management concluded that, as of December 31, 2018, the Company's internal control over financial reporting was effective based on the criteria established in *Internal Control - Integrated Framework (2013)* issued by the COSO.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2018 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report, which appears herein.

/s/	*Donald M. Casey, Jr.*	*/s/*	*Nicholas W. Alexos*
	Donald M. Casey, Jr.		Nicholas W. Alexos
	Chief Executive Officer		Executive Vice President and Chief Financial Officer
	March 8, 2019		March 8, 2019

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders
of DENTSPLY SIRONA Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the consolidated financial statements, including the related notes, as listed in the index appearing under Item 15 (a)(1) and the financial statement schedule listed in the index appearing under Item 15(a)(2), of DENTSPLY SIRONA Inc. and its subsidiaries (the "Company") (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.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for Intra-Entity Transfers of Assets Other Than Inventory in 2018 due to the adoption of Accounting Standards Update 2016-16, Intra-Entity Transfers Other Than Inventory.

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 the accompanying Management's Report on Internal Control over Financial Reporting, appearing under Item 15(a)(1). 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 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*

PricewaterhouseCoopers LLP
Harrisburg, Pennsylvania
March 8, 2019

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

DENTSPLY SIRONA INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(in millions, except per share amounts)

	Year Ended December 31,		
	2018	2017	2016
Net sales	$ 3,986.3	$ 3,993.4	$ 3,745.3
Cost of products sold	1,918.5	1,804.9	1,744.4
Gross profit	2,067.8	2,188.5	2,000.9
Selling, general and administrative expenses	1,719.1	1,674.7	1,523.0
Goodwill impairment	1,085.8	1,650.9	—
Restructuring and other costs	221.0	425.2	23.2
Operating (loss) income	(958.1)	(1,562.3)	454.7
Other income and expenses:			
Interest expense	37.3	38.3	35.9
Interest income	(2.1)	(2.4)	(2.0)
Other expense (income), net	(34.9)	5.3	(20.1)
(Loss) income before income taxes	(958.4)	(1,603.5)	440.9
Provision (benefit) for income taxes	52.5	(53.2)	9.5
Net (loss) income	(1,010.9)	(1,550.3)	431.4
Less: Net income (loss) attributable to noncontrolling interests	0.1	(0.3)	1.5
Net (loss) income attributable to Dentsply Sirona	$ (1,011.0)	$ (1,550.0)	$ 429.9
Net (loss) income per common share attributable to Dentsply Sirona:			
Basic	$ (4.51)	$ (6.76)	$ 1.97
Diluted	$ (4.51)	$ (6.76)	$ 1.94
Weighted average common shares outstanding:			
Basic	224.3	229.4	218.0
Diluted	224.3	229.4	221.6

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

DENTSPLY SIRONA INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)

	Year Ended December 31,		
	2018	2017	2016
Net (loss) income	$ (1,010.9)	$ (1,550.3)	$ 431.4
Other comprehensive (loss) income, net of tax:			
Foreign currency translation adjustments	(180.0)	386.3	(90.5)
Net gain (loss) on derivative financial instruments	29.4	(20.2)	(8.6)
Net unrealized holding gain on available-for-sale securities	(44.3)	44.3	—
Pension liability adjustments	7.4	4.6	(13.8)
Total other comprehensive (loss) income	(187.5)	415.0	(112.9)
Total comprehensive (loss) income	(1,198.4)	(1,135.3)	318.5
Less: Comprehensive income attributable to noncontrolling interests	0.3	—	0.3
Comprehensive (loss) income attributable to Dentsply Sirona	$ (1,198.7)	$ (1,135.3)	$ 318.2

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

DENTSPLY SIRONA INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in millions, except per share amounts)

	December 31, 2018	December 31, 2017
Assets		
Current Assets:		
Cash and cash equivalents	$ 309.6	$ 320.6
Accounts and notes receivable-trade, net	701.9	746.2
Inventories, net	598.9	623.1
Prepaid expenses and other current assets	277.6	312.6
Total Current Assets	1,888.0	2,002.5
Property, plant and equipment, net	870.6	876.0
Identifiable intangible assets, net	2,420.3	2,800.7
Goodwill, net	3,431.3	4,539.2
Other noncurrent assets, net	76.8	156.1
Total Assets	$ 8,687.0	$ 10,374.5
Liabilities and Equity		
Current Liabilities:		
Accounts payable	$ 283.9	$ 284.4
Accrued liabilities	578.9	585.8
Income taxes payable	58.1	54.2
Notes payable and current portion of long-term debt	92.4	30.1
Total Current Liabilities	1,013.3	954.5
Long-term debt	1,564.9	1,611.6
Deferred income taxes	552.8	718.0
Other noncurrent liabilities	423.0	462.5
Total Liabilities	3,554.0	3,746.6
Commitments and contingencies		
Equity:		
Preferred stock, $1.00 par value; 0.25 million shares authorized; no shares issued	—	—
Common stock, $0.01 par value;	2.6	2.6
400.0 million shares authorized at December 31, 2018 and 2017		
264.5 million shares issued at December 31, 2018 and 2017		
223.0 million and 226.8 million shares outstanding at December 31, 2018 and 2017, respectively		
Capital in excess of par value	6,522.3	6,543.9
Retained earnings	1,225.9	2,316.2
Accumulated other comprehensive loss	(478.7)	(291.0)
Treasury stock, at cost, 41.5 million and 37.7 million shares at December 31, 2018 and 2017, respectively	(2,151.0)	(1,955.4)
Total Dentsply Sirona Equity	5,121.1	6,616.3
Noncontrolling interests	11.9	11.6
Total Equity	5,133.0	6,627.9
Total Liabilities and Equity	$ 8,687.0	$ 10,374.5

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

DENTSPLY SIRONA INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(in millions, except per share amounts)

	Common Stock	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Total Dentsply Sirona Equity	Noncontrolling Interests	Total Equity
Balance at December 31, 2015	$ 1.6	$ 237.8	$ 3,591.0	$ (594.0)	$ (898.4)	$ 2,338.0	$ 1.4	$ 2,339.4
Net income	—	—	429.9	—	—	429.9	1.5	431.4
Other comprehensive loss	—	—	—	(111.7)	—	(111.7)	(1.2)	(112.9)
Acquisition of noncontrolling interest	—	(0.1)	—	—	—	(0.1)	(0.3)	(0.4)
Common stock issuance related to Sirona merger	1.0	6,255.2	—	—	—	6,256.2	10.2	6,266.4
Exercise of stock options	—	(10.8)	—	—	48.1	37.3	—	37.3
Tax benefit from stock options exercised	—	16.1	—	—	—	16.1	—	16.1
Stock based compensation expense	—	41.3	—	—	—	41.3	—	41.3
Funding of Employee Stock Ownership Plan	—	2.1	—	—	4.3	6.4	—	6.4
Treasury shares purchased	—	—	—	—	(815.1)	(815.1)	—	(815.1)
RSU distributions	—	(25.5)	—	—	13.8	(11.7)	—	(11.7)
RSU dividends	—	0.6	(0.6)	—	—	—	—	—
Cash dividends ($0.31 per share)	—	—	(72.3)	—	—	(72.3)	—	(72.3)
Balance at December 31, 2016	$ 2.6	$ 6,516.7	$ 3,948.0	$ (705.7)	$ (1,647.3)	$ 8,114.3	$ 11.6	$ 8,125.9
Net loss	—	—	(1,550.0)	—	—	(1,550.0)	(0.3)	(1,550.3)
Other comprehensive income	—	—	—	414.7	—	414.7	0.3	415.0
Exercise of stock options	—	6.9	—	—	75.0	81.9	—	81.9
Stock based compensation expense	—	48.0	—	—	—	48.0	—	48.0
Reclassification on adoption of ASU No. 2016-09 (see Note 1)	—	1.0	(1.0)	—	—	—	—	—
Funding of Employee Stock Ownership Plan	—	3.3	—	—	3.3	6.6	—	6.6
Treasury shares purchased	—	—	—	—	(400.3)	(400.3)	—	(400.3)
RSU distributions	—	(32.6)	—	—	13.9	(18.7)	—	(18.7)
RSU dividends	—	0.6	(0.6)	—	—	—	—	—
Cash dividends ($0.35 per share)	—	—	(80.2)	—	—	(80.2)	—	(80.2)
Balance at December 31, 2017	$ 2.6	$ 6,543.9	$ 2,316.2	$ (291.0)	$ (1,955.4)	$ 6,616.3	$ 11.6	$ 6,627.9
Net (loss) income	—	—	(1,011.0)	—	—	(1,011.0)	0.1	(1,010.9)
Other comprehensive (loss) income	—	—	—	(187.7)	—	(187.7)	0.2	(187.5)
Exercise of stock options	—	(14.1)	—	—	38.9	24.8	—	24.8
Cumulative Effect on adoption of ASC 606 (see Note 1)	—	—	(6.0)	—	—	(6.0)	—	(6.0)
Reclassification on adoption of ASU No. 2016-16 (see Note 1)	—	—	(2.7)	—	—	(2.7)	—	(2.7)
Reclassification on adoption of ASU No. 2018-02 (see Note 1)	—	—	8.1	—	—	8.1	—	8.1
Stock based compensation expense	—	21.0	—	—	—	21.0	—	21.0
Treasury shares purchased	—	—	—	—	(250.2)	(250.2)	—	(250.2)
RSU distributions	—	(29.1)	—	—	15.7	(13.4)	—	(13.4)
RSU dividends	—	0.6	(0.6)	—	—	—	—	—
Cash dividends ($0.35 per share)	—	—	(78.1)	—	—	(78.1)	—	(78.1)
Balance at December 31, 2018	$ 2.6	$ 6,522.3	$ 1,225.9	$ (478.7)	$ (2,151.0)	$ 5,121.1	$ 11.9	$ 5,133.0

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

DENTSPLY SIRONA INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	Year Ended December 31,		
	2018	2017	2016
Cash flows from operating activities:			
Net (loss) income	$ (1,010.9)	$ (1,550.3)	$ 431.4
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation	132.9	127.3	116.6
Amortization of intangible assets	197.9	189.1	155.1
Amortization of deferred financing costs	2.7	2.6	4.5
Goodwill impairment	1,085.8	1,650.9	—
Indefinite-lived intangible asset impairment	179.2	346.7	—
Deferred income taxes	(62.0)	(143.8)	(110.1)
Stock based compensation expense	21.0	48.0	41.3
Restructuring and other costs - non-cash	22.5	64.7	9.7
Stock option income tax benefit	—	—	(12.7)
Gain on sale of equity security	(44.1)	—	—
Other non-cash expense (income)	3.4	9.9	(32.0)
Loss on disposal of property, plant and equipment	4.6	1.6	2.8
Changes in operating assets and liabilities, net of acquisitions:			
Accounts and notes receivable-trade, net	23.5	(63.4)	(75.1)
Inventories, net	(19.9)	(62.9)	65.4
Prepaid expenses and other current assets, net	(27.1)	(75.0)	(32.4)
Other noncurrent assets, net	(12.7)	(3.7)	2.6
Accounts payable	7.1	44.2	7.2
Accrued liabilities	0.3	28.3	(12.2)
Income taxes	12.1	(20.5)	(7.7)
Other noncurrent liabilities	(16.5)	8.2	9.0
Net cash provided by operating activities	499.8	601.9	563.4
Cash flows from investing activities:			
Cash paid for acquisitions of businesses and equity investments, net of cash acquired	(130.5)	(145.9)	(341.8)
Proceeds from the sale of businesses	—	—	6.1
Purchases of short term investments	(3.7)	(2.5)	(6.8)
Capital expenditures	(182.5)	(144.3)	(125.0)
Cash assumed in Sirona merger	—	—	522.3
Purchase of company owned life insurance policies	—	(0.9)	(1.7)
Cash received on derivative contracts	8.0	6.5	20.1
Cash paid on derivative contracts	(2.4)	—	(17.1)
Expenditures for identifiable intangible assets	(5.5)	(6.7)	(1.1)
Proceeds from the sale of equity security	54.1	—	—
Proceeds from sale of property, plant and equipment, net	9.2	7.4	5.0
Net cash (used in) provided by investing activities	(253.3)	(286.4)	60.0
Cash flows from financing activities:			
Proceeds from long-term borrowings, net of deferred financing costs	0.1	3.1	1,220.6
Repayments on long-term borrowings	(9.4)	(16.7)	(877.5)
Increase (decrease) in short-term borrowings	60.4	10.2	(44.1)
Proceeds from exercise of stock options	27.9	82.3	41.0
Excess tax benefits from stock based compensation	—	—	12.7
Cash paid for acquisition of noncontrolling interests of consolidated subsidiaries	—	—	(0.4)
Cash paid for treasury stock	(250.2)	(401.4)	(813.9)
Cash dividends paid	(78.6)	(78.3)	(64.6)
Net cash used in financing activities	(249.8)	(400.8)	(526.2)
Effect of exchange rate changes on cash and cash equivalents	(7.7)	22.0	2.1
Net (decrease) increase in cash and cash equivalents	(11.0)	(63.3)	99.3
Cash and cash equivalents at beginning of period	320.6	383.9	284.6
Cash and cash equivalents at end of period	$ 309.6	$ 320.6	$ 383.9
Schedule of non-cash investing activities:			
Merger financed by common stock	$ —	$ —	$ 6,256.2
Supplemental disclosures of cash flow information:			
Interest paid, net of amounts capitalized	$ 35.1	$ 37.0	$ 36.7
Income taxes paid	$ 104.7	$ 122.7	$ 112.3

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

NOTE 1 - SIGNIFICANT ACCOUNTING POLICIES

Description of Business

DENTSPLY SIRONA Inc. ("Dentsply Sirona" or the "Company"), is the world's largest manufacturer of professional dental products and technologies, with a 130-year history of innovation and service to the dental industry and patients worldwide. Dentsply Sirona develops, manufactures, and markets a comprehensive solutions offering including dental and oral health products as well as other consumable healthcare products under a strong portfolio of world class brands. The Company's principal product categories are dental consumable products, dental equipment, healthcare consumable products and dental technologies. The Company distributes its products in over 120 countries under some of the most well established brand names in the industry.

On February 29, 2016, DENTSPLY International Inc. merged with Sirona Dental Systems, Inc. ("Sirona") to form DENTSPLY SIRONA Inc. (the "Merger"). The Consolidated Statements of Operations for the year ended December 31, 2016 include the results of operations for Sirona for the period February 29, 2016 to December 31, 2016.

Unless otherwise stated herein, reference throughout this Form 10-K to "Dentsply Sirona", or the "Company" refers to financial information and transactions of DENTSPLY International Inc. ("DENTSPLY") prior to February 29, 2016 and to financial information and transactions of DENTSPLY SIRONA Inc., thereafter.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ("US GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenue and expense during the reporting period. Actual results could differ from those estimates, and such differences may be material to the consolidated financial statements.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company. All significant intercompany accounts and transactions are eliminated in consolidation.

Investments in non-consolidated affiliates (20-50 percent owned companies, joint ventures and partnerships as well as less than 20 percent ownership positions where the Company maintains significant influence over the subsidiary) are accounted for using the equity method.

Cash and Cash Equivalents

Cash and cash equivalents include deposits with banks as well as highly liquid time deposits with maturities at the date of purchase of ninety days or less.

Short-term Investments

Short-term investments are highly liquid time deposits with original maturities at the date of purchase greater than ninety days and with remaining maturities of one year or less.

Accounts and Notes Receivable-Trade

The Company sells dental and certain medical products and equipment through a worldwide network of distributors and directly to end users. For customers on credit terms, the Company performs ongoing credit evaluation of those customers' financial condition and generally does not require collateral from them. The Company establishes allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. The Company records a provision for doubtful accounts, which is included in Selling, general and administrative expenses in the Consolidated Statements of Operations.

Accounts receivable – trade is stated net of these allowances that were $24.5 million and $22.4 million at December 31, 2018 and 2017, respectively. For the years ended December 31, 2018 and 2017, the Company wrote-off $2.6 million and $4.8 million, respectively, of accounts receivable that were previously reserved. The Company increased the provision for doubtful accounts by $6.0 million and $6.6 million during 2018 and 2017, respectively.

Inventories

Inventories are stated at the lower of cost and net realizable value. At December 31, 2018 and 2017, the cost of $9.0 million and $12.4 million, respectively, of inventories was determined by the last-in, first-out ("LIFO") method. The cost of remaining inventories was determined by the first-in, first-out ("FIFO") or average cost methods.

If the FIFO method had been used to determine the cost of LIFO inventories, the amounts at which net inventories are stated would be higher than reported at December 31, 2018 and 2017 by $10.2 million and $10.6 million, respectively.

The Company establishes reserves for inventory estimated to be obsolete or unmarketable equal to the difference between the cost of inventory and estimated market value based upon assumptions about future demand and market conditions.

Valuation of Goodwill and Other Long-Lived Assets

Assessment of the potential impairment of goodwill and other long-lived assets is an integral part of the Company's normal ongoing review of operations. Testing for potential impairment of these assets is significantly dependent on assumptions and reflects management's best estimates at a particular point in time. The dynamic economic environments in which the Company's businesses operate and key economic and business assumptions with respect to projected selling prices, increased competition and introductions of new technologies can significantly affect the outcome of impairment tests. Estimates based on these assumptions may differ significantly from actual results. Changes in factors and assumptions used in assessing potential impairments can have a significant impact on the existence and magnitude of impairments, as well as the time at which such impairments are recognized. If there are unfavorable changes in these assumptions, future cash flows, a key variable in assessing the impairment of these assets, may decrease and as a result the Company may be required to recognize impairment charges. Future changes in the environment and the economic outlook for the assets being evaluated could also result in additional impairment charges being recognized. The following information outlines the Company's significant accounting policies on long-lived assets by type.

Goodwill

Goodwill is the excess of the purchase price over the fair value of identifiable net assets acquired and liabilities assumed in a business combination. Goodwill is not amortized. The Company conducts an annual impairment test during the Company's second quarter, or when indications of potential impairment exist. The Company monitors for the existence of potential impairment throughout the year. This impairment assessment includes an evaluation of various reporting units, which is an operating segment or one reporting level below the operating segment. The Company performs impairment tests using a fair value approach which compares the fair value of each reporting unit to its carrying amount to determine if there is potential goodwill impairment. If impairment is identified on goodwill, the resulting charge is determined by recalculating goodwill through a hypothetical purchase price allocation of the fair value and reducing the current carrying value to the extent it exceeds the recalculated goodwill.

The Company's fair value approach involves using a discounted cash flow model with market-based support as its valuation technique to measure the fair value for its reporting units. The discounted cash flow model uses five- to ten- year forecasted cash flows plus a terminal value based on a multiple of earnings or by capitalizing the last period's cash flows using a perpetual growth rate. In addition, the Company applies gross profit and operating expense assumptions consistent with its historical trends. The total cash flows were discounted based on market participant data, which included the Company's weighted-average cost of capital. The Company considered the current market conditions when determining its assumptions. Lastly, the Company reconciled the aggregate fair values of its reporting units to its market capitalization, which included a reasonable control premium based on market conditions. Additional information related to the testing for goodwill impairment is provided in Note 9 Goodwill and Intangible Assets.

Indefinite-Lived Intangible Assets

Indefinite-lived intangible assets consist of tradenames and trademarks and are not subject to amortization. Valuations of identifiable intangibles assets acquired are based on information and assumptions available at the time of acquisition, using income and market model approaches to determine fair value. In-process research and development assets are not subject to amortization until the product associated with the research and development is substantially complete and is a viable product. At that time, the useful life to amortize the intangible asset is determined by identifying the period in which substantially all the cash flows are expected to be generated and the asset is moved to definite-lived.

These assets are reviewed for impairment annually during the Company's second quarter, or whenever events or circumstances suggest that the carrying amount of the asset may not be recoverable. The Company performs impairment tests using an income approach, more specifically a relief from royalty method. In the development of the forecasted cash flows, the Company applies significant management judgment to determine key assumptions, including revenue growth, royalty rates and discount rates assumptions. Royalty rates used are consistent with those assumed for the original purchase accounting valuation. Other assumptions are consistent with those applied to goodwill impairment testing. If the carrying value exceeds the fair value, an impairment loss in the amount equal to the excess is recognized.

Identifiable Definite-Lived Intangible Assets

Identifiable definite-lived intangible assets, which primarily consist of patents, tradenames, trademarks, brand names, non-compete agreements and licensing agreements, are amortized on a straight-line basis over their estimated useful lives. The useful life is the period over which the asset is expected to contribute to the future cash flows of the Company. The Company uses the following guidance to determine the useful life of certain intangible assets:

Intangible Asset Type	Life
Patents	Up to date patent expires
Tradenames and trademarks	Up to 20 years
Licensing agreements	Up to 20 years
Customer relationships	Up to 15 years

When the expected life is not known, the Company will estimate the useful life based on similar asset or asset groups, any legal, regulatory, or contractual provision that limits the useful life, the effect of economic factors, including obsolescence, demand, competition, and the level of maintenance expenditures required to obtain the expected future economic benefit from the asset. Valuations of identifiable intangibles assets acquired are based on information and assumptions available at the time of acquisition, using income and market model approaches to determine fair value.

These assets are reviewed for impairment whenever events or circumstances suggest that the carrying amount of the asset may not be recoverable. The Company closely monitors all intangible assets including those related to new and existing technologies for indicators of impairment as these assets have more risk of becoming impaired. Impairment is based upon an initial evaluation of the identifiable undiscounted cash flows. If the initial evaluation identifies a potential impairment, a fair value of the asset is determined by using a discounted cash flows valuation. If impaired, the resulting charge reflects the excess of the asset’s carrying cost over its fair value.

Property, Plant and Equipment

Property, plant and equipment are stated at cost, with the exception of assets acquired through acquisitions, which are recorded at fair value, net of accumulated depreciation. Except for leasehold improvements, depreciation for financial reporting purposes is computed by the straight-line method over the following estimated useful lives: generally 40 years for buildings and 4 to 15 years for machinery and equipment. The cost of leasehold improvements is amortized over the shorter of the estimated useful life or the term of the lease. Maintenance and repairs are expensed as incurred to the statements of operations; replacements and major improvements are capitalized. These asset groups are reviewed for impairment whenever events or circumstances suggest that the carrying amount of the asset group may not be recoverable. Impairment is based upon an evaluation of the identifiable undiscounted cash flows. If impaired, the resulting charge reflects the excess of the asset group’s carrying cost over its fair value.

Derivative Financial Instruments

The Company records all derivative instruments in the consolidated balance sheet at fair value and changes in fair value are recorded each period in the consolidated statements of operations or accumulated other comprehensive income ("AOCI"). The Company classifies derivative assets and liabilities as current when the remaining term of the derivative contract is one year or less. The Company has elected to classify the cash flow from derivative instruments in the same category as the cash flows from the items being hedged. Should the Company enter into a derivative instrument that included an other-than-insignificant financing element then all cash flows will be classified as financing activities in the Consolidated Statements of Cash Flows as required by US GAAP.

The Company employs derivative financial instruments to hedge certain anticipated transactions, firm commitments, and assets and liabilities denominated in foreign currencies. Additionally, the Company utilizes interest rate swaps to convert floating rate debt to fixed rate.

Pension and Other Postemployment Benefits

Some of the employees of the Company and its subsidiaries are covered by government or Company-sponsored defined benefit plans. Many of the employees have available to them defined contribution plans. Additionally, certain union and salaried employee groups in the United States are covered by postemployment healthcare plans. Costs for Company-sponsored defined benefit and postemployment benefit plans are based on expected return on plan assets, discount rates, employee compensation increase rates and health care cost trends. Expected return on plan assets, discount rates and health care cost trend assumptions are particularly important when determining the Company's benefit obligations and net periodic benefit costs associated with postemployment benefits. Changes in these assumptions can impact the Company's earnings before income taxes. In determining the cost of postemployment benefits, certain assumptions are established annually to reflect market conditions and plan experience to appropriately reflect the expected costs as actuarially determined. These assumptions include medical inflation trend rates, discount rates, employee turnover and mortality rates. The Company predominantly uses liability durations in establishing its discount rates, which are observed from indices of high-grade corporate bond yields in the respective economic regions of the plans. The expected return on plan assets is the weighted average long-term expected return based upon asset allocations and historic average returns for the markets where the assets are invested, principally in foreign locations. The Company reports the funded status of its defined benefit pension and other postemployment benefit plans on its consolidated balance sheets as a net liability or asset. Additional information related to the impact of changes in these assumptions is provided in Note 15, Benefit Plans.

Accruals for Self-Insured Losses

The Company maintains insurance for certain risks, including workers' compensation, general liability, product liability and vehicle liability, and is self-insured for employee related healthcare benefits. The Company accrues for the expected costs associated with these risks by considering historical claims experience, demographic factors, severity factors and other relevant information. Costs are recognized in the period the claim is incurred, and the financial statement accruals include an estimate of claims incurred but not yet reported. The Company has stop-loss coverage to limit its exposure to any significant exposure on a per claim basis.

Litigation

The Company and its subsidiaries are from time to time parties to lawsuits arising out of their respective operations. The Company records liabilities when a loss is probable and can be reasonably estimated. These estimates are typically in the form of ranges, and the Company records the liabilities at the low point of the ranges, when no other point within the ranges are a better estimate of the probable loss. The ranges established by management are based on analysis made by internal and external legal counsel who considers information known at the time. If the Company determines a liability to be only reasonably possible, it considers the same information to estimate the possible exposure and discloses any material potential liability. These loss contingencies are monitored regularly for a change in fact or circumstance that would require an accrual adjustment. The Company believes it has estimated liabilities for probable losses appropriately in the past; however, the unpredictability of litigation and court decisions could cause a liability to be incurred in excess of estimates. Legal costs related to these lawsuits are expensed as incurred.

Foreign Currency Translation

The functional currency for foreign operations, except for those in highly inflationary economies, generally has been determined to be the local currency.

Assets and liabilities of foreign subsidiaries are translated at foreign exchange rates on the balance sheet date; revenue and expenses are translated at the average year-to-date foreign exchange rates. The effects of these translation adjustments are reported in Equity within AOCI in the Consolidated Balance Sheets. During the year ended December 31, 2018, the Company had gains of $14.9 million on its loans designated as hedges of net investments and translation losses of $200.1 million. During the year ended December 31, 2017, the Company had losses of $48.5 million on its loans designated as hedges of net investments and translation gains of $434.5 million.

Foreign exchange gains and losses arising from transactions denominated in a currency other than the functional currency of the entity involved and remeasurement adjustments in countries with highly inflationary economies are included in income. Net foreign exchange transaction losses of $5.8 million and $1.7 million in 2018 and 2017, respectively, and gain of $10.2 million in 2016 are included in Other expense (income), net in the Consolidated Statements of Operations.

Revenue Recognition

Revenue is recognized when performance obligations under the terms of a contract with a customer are satisfied; generally this occurs with the transfer of risk and/or control of Dental and Healthcare Consumables products ("consumable" products), Dental Technology products ("technology" products), or Dental Equipment products ("equipment" products). Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring goods or providing services. Sales, value add, and other taxes collected concurrent with revenue-producing activities are excluded from revenue. Incidental items that are immaterial in the context of the contract are recognized as expense.

For most of consumables, technologies, and equipment, the Company transfers control and recognizes a sale when products are shipped from the Company's manufacturing facility or warehouse to the customer (distributors and direct to dentists). For contracts with customers that contain destination shipping terms, revenue is not recognized until risk has transferred and the goods are delivered to the agreed upon destination. The amount of consideration received and revenue recognized varies with changes in marketing incentives (e.g. discounts, rebates, free goods) and returns offered to customers and their customers. When the Company gives customers the right to return eligible products and receive credit, returns are estimated based on an analysis of historical experience. However, returns of products, excluding warranty related returns, are infrequent and insignificant. The Company adjusts the estimate of revenue at the earlier of when the most likely amount of consideration can be estimated, the amount expected to be received changes, or when the consideration becomes fixed. Consideration received from customers in advance of revenue recognition is classified as deferred revenue.

Depending on the terms of the arrangement, the Company may also defer the recognition of a portion of the consideration received when performance obligations are not yet satisfied (e.g., free extended maintenance/service contracts, software and licenses, customer loyalty points and coupon programs). The Company uses an observable price, typically average selling price, to determine the stand-alone selling price for separate performance obligations. The Company determines the stand-alone selling price, based on Company geographic sales locations' database of pricing and discounting practices for the specific product or service when sold separately, and utilizes this data to arrive at average selling prices by product. Revenue is then allocated proportionately, based on the determined stand-alone selling price, to the unsatisfied performance obligation, which is deferred until satisfied. At December 31, 2018, the Company had $29.3 million of deferred revenue recorded in Accrued liabilities in the Consolidated Balance Sheets. The Company expects to recognize significantly all of the deferred revenue within the next twelve months.

The Company has elected to account for shipping and handling activities as a fulfillment cost within the cost of products sold, and records shipping and handling costs collected from customers in net sales. The Company has adopted two practical expedients: the “right to invoice” practical expedient, which allows us to recognize revenue in the amount of the invoice when it corresponds directly with the value of performance completed to date; and relief from considering the existence of a significant financing component when the payment for the good or service is expected to be one year or less.

The Company offers discounts to its customers and distributors if certain conditions are met. Discounts are primarily based on the volume of products purchased or targeted to be purchased by the customer or distributor. Discounts are deducted from revenue at the time of sale or when the discount is offered, whichever is later. The Company estimates volume discounts based on the individual customer’s or distributor's historical and estimated future product purchases.

Certain of the Company's customers are offered cash rebates based on targeted sales increases. The Company estimates rebates based on the forecasted performance of a customer and their expected level of achievement within the rebate programs. In accounting for these rebate programs, the Company records an accrual and reduces net sales ratably as sales occur over the rebate period. The Company updates the accruals for these rebate programs as actual results and updated forecasts impact the estimated achievement for customers within the rebate programs.

A portion of the Company's net sales is comprised of sales of precious metals generated through its precious metal dental alloy product offerings. As the precious metal content of the Company's sales is largely a pass-through to customers, the Company uses its cost of precious metal purchased as a proxy for the precious metal content of sales, as the precious metal content of sales is not separately tracked and invoiced to customers. The Company believes that it is reasonable to use the cost of precious metal content purchased in this manner since precious metal alloy sale prices are typically adjusted when the prices of underlying precious metals change.

Cost of Products Sold

Cost of products sold represents costs directly related to the manufacture and distribution of the Company's products. Primary costs include raw materials, packaging, direct labor, overhead, shipping and handling, warehousing and the depreciation of manufacturing, warehousing and distribution facilities. Overhead and related expenses include salaries, wages, employee benefits, utilities, lease costs, maintenance and property taxes.

Warranties

The Company provides warranties on certain equipment products. Estimated warranty costs are accrued when sales are made to customers. Estimates for warranty costs are based primarily on historical warranty claim experience. Warranty costs are included in Cost of products sold in the Consolidated Statements of Operations. The following table presents the Company's warranty expense and warranty accrual at December 31:

	December 31,		
(in millions)	2018	2017	2016
Warranty Expense	$ 23.7	$ 25.7	$ 25.2
Warranty Accrual	13.0	11.8	11.2

Selling, General and Administrative Expenses

Selling, general and administrative expenses represent costs incurred in generating revenues and in managing the business of the Company. Such costs include advertising and other marketing expenses, salaries, employee benefits, incentive compensation, research and development, travel, office expenses, lease costs, amortization of capitalized software and depreciation of administrative facilities. Advertising cost are expensed as incurred.

Research and Development Costs

Research and development ("R&D") costs relate primarily to internal costs for salaries and direct overhead expenses. In addition, the Company contracts with outside vendors to conduct R&D activities. All such R&D costs are charged to expense when incurred. The Company capitalizes the costs of equipment that have general R&D uses and expenses such equipment that is solely for specific R&D projects. The depreciation expense related to this capitalized equipment is included in the Company's R&D costs. Software development costs incurred prior to the attainment of technological feasibility are considered R&D and are expensed as incurred. Once technological feasibility is established, software development costs are capitalized until the product is available for general release to customers. Amortization of these costs are included in Cost of products sold over the estimated life of the products. R&D costs are included in Selling, general and administrative expenses in the Consolidated Statements of Operations and amounted to $160.5 million, $151.7 million and $128.5 million for 2018, 2017 and 2016, respectively.

Stock Compensation

The Company recognizes the compensation cost relating to stock-based payment transactions in the financial statements. The cost of stock-based payment transactions is measured at the grant date, based on the calculated fair value of the award, and is recognized as an expense over the employee's requisite service period (generally the vesting period of the equity awards). The compensation cost is only recognized for the portion of the awards that are expected to vest.

Income Taxes

The Company's tax expense includes U.S. and international income taxes plus the provision for U.S. taxes on undistributed earnings of international subsidiaries not deemed to be permanently invested. Tax credits and other incentives reduce tax expense in the year the credits are claimed. Certain items of income and expense are not reported in tax returns and financial statements in the same year. The tax effect of such temporary differences is reported as deferred income taxes. Deferred tax assets are recognized if it is more likely than not that the assets will be realized in future years. The Company establishes a valuation allowance for deferred tax assets for which realization is not likely.

The Company applies a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The Company recognizes in the financial statements, tax benefits from an uncertain tax position only if is more likely than not that the position will be sustained upon examination by the taxing authorities based on the technical merits of the position.

See Note 14, Income Taxes, for further information relating to the enactment of the Tax Cuts and Jobs Act (the "Act" or "U.S. tax reform").

Earnings Per Share

Basic earnings per share are calculated by dividing net earnings by the weighted average number of shares outstanding for the period. Diluted earnings per share is calculated by dividing net earnings by the weighted average number of shares outstanding for the period, adjusted for the effect of an assumed exercise of all dilutive options outstanding at the end of the period.

Business Acquisitions

The Company acquires businesses as well as partial interests in businesses. Acquired businesses are accounted for using the acquisition method of accounting which requires the Company to record assets acquired and liabilities assumed at their respective fair values with the excess of the purchase price over estimated fair values recorded as goodwill. The assumptions made in determining the fair value of acquired assets and assumed liabilities as well as asset lives can materially impact the results of operations.

The Company obtains information during due diligence and through other sources to establish respective fair values. Examples of factors and information that the Company uses to determine the fair values include: tangible and intangible asset evaluations and appraisals; evaluations of existing contingencies and liabilities and product line information. If the initial valuation for an acquisition is incomplete by the end of the quarter in which the acquisition occurred, the Company will record a provisional estimate in the financial statements. The provisional estimate will be finalized as soon as information becomes available, but will only occur up to one year from the acquisition date.

Noncontrolling Interests

The Company reports noncontrolling interest ("NCI") in a subsidiary as a separate component of Equity in the Consolidated Balance Sheets. Additionally, the Company reports the portion of net income (loss) and comprehensive income (loss) attributed to the Company and NCI separately in the Consolidated Statements of Operations. The Company also includes a separate column for NCI in the Consolidated Statements of Changes in Equity.

Segment Reporting

The Company has numerous operating businesses covering a wide range of products and geographic regions, primarily serving the professional dental market and to a lesser extent the consumable medical device market. Professional dental products and equipment represented approximately 91%, 92% and 92% of sales for the years ended 2018, 2017 and 2016, respectively. The Company has two reportable segments and a description of the activities within these segments is included in Note 5, Segment and Geographic Information.

Fair Value Measurement

Recurring Basis

The Company records certain financial assets and liabilities at fair value in accordance with the accounting guidance, which defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The accounting guidance establishes a hierarchical disclosure framework associated with the level of pricing observability utilized in measuring financial instruments at fair value. The three broad levels defined by the fair value hierarchy are as follows:

Level 1 - Quoted prices are available in active markets for identical assets or liabilities as of the reported date.

Level 2 - Pricing inputs are other than quoted prices in active markets, which are either directly or indirectly observable reported date. The nature of these financial instruments include derivative instruments whose fair value have been derived using a model where inputs to the model are directly observable in the market or can be derived principally from, or corroborated by observable market data.

Level 3 - Instruments that have little to no pricing observability as of the reported date. These financial instruments do not have two-way markets and are measured using management's best estimate of fair value, where the inputs into the determination of fair value require significant management judgment or estimation.

The degree of judgment utilized in measuring the fair value of certain financial assets and liabilities generally correlates to the level of pricing observability. Pricing observability is impacted by a number of factors, including the type of financial instrument. Financial assets and liabilities with readily available active quoted prices or for which fair value can be measured from actively quoted prices generally will have a higher degree of pricing observability and a lesser degree of judgment utilized in measuring fair value. Conversely, financial assets and liabilities rarely traded or not quoted will generally have less, or no pricing observability and a higher degree of judgment utilized in measuring fair value.

The Company primarily applies the market approach for recurring fair value measurements and endeavors to utilize the best available information. Accordingly, the Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs. Additionally, the Company considers its credit risks and its counterparties' credit risks when determining the fair values of its financial assets and liabilities. The Company has presented the required disclosures in Note 18, Fair Value Measurement.

Non-Recurring Basis

When events or circumstances require an asset or liability to be fair valued that otherwise is generally recorded based on another valuation method, such as, net realizable value, the Company will utilize the valuation techniques described above.

Recently Adopted Accounting Pronouncements

Effective January 1, 2018, the Company adopted Accounting Standards Update ("ASU") No. 2014-09, "Revenue from Contracts with Customers", as amended (Topic 606, commonly referred to as ASC 606) to all contracts using the modified retrospective method. The Company recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of retained earnings. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods.

Most of the Company's revenue continues to be recognized when products are shipped from manufacturing facilities. For certain customer and dealer incentive programs, such as coupons, customer loyalty and free goods, the Company recognizes the proportionate revenue and cost of product when the incentives are shipped or awarded. Prior to adoption of ASC 606, costs for these types of programs were recognized when triggering events occurred. For contracts with customers where performance occurs over time, such as software sales, the Company recognizes revenue ratably over the performance period.

The new revenue standard also provided additional guidance that resulted in reclassifications to or from Net sales, Cost of products sold, Selling, general and administrative expenses, and the resultant change in Provision (benefit) for income taxes.

The cumulative effect of the changes made in the Consolidated Balance Sheets at December 31, 2017 for the adoption of ASC 606, was as follows:

Consolidated Balance Sheets Item (in millions)	December 31, 2017 As Reported Balance	Adoption of ASC 606	January 1, 2018 Revised Balance
Assets			
Accounts and notes receivable-trade, net	$ 746.2	$ 0.2	$ 746.4
Inventory, net	623.1	(0.3)	622.8
Prepaid expense and other current assets, net	312.6	1.9	314.5
Liabilities and Equity			
Accrued liabilities	$ 585.8	$ 9.9	$ 595.7
Income taxes payable	54.2	(2.1)	52.1
Retained earnings	2,316.2	(6.0)	2,310.2

The impact of adopting the new revenue recognition standard on the Company's Consolidated Statements of Operations and Consolidated Balance Sheets was as follows:

Consolidated Statements of Operations Item (in millions)	December 31, 2018		
	As Reported Balance	Balances Without Adoption of ASC 606	Effect of Change Increase/(Decrease)
Net sales	$ 3,986.3	$ 3,986.8	$ (0.5)
Selling, general and administrative expenses	1,719.1	1,719.0	0.1
Provision (benefit) for income taxes	52.5	52.6	(0.1)
Net (loss) income attributable to Dentsply Sirona	(1,011.0)	(1,010.5)	(0.5)

Consolidated Balance Sheets Item (in millions)	December 31, 2018		
	As Reported Balance	Balances Without Adoption of ASC 606	Effect of Change Increase/(Decrease)
Assets			
Accounts and notes receivables-trade, net	$ 701.9	$ 701.8	$ 0.1
Inventories, net	598.9	599.2	(0.3)
Prepaid expenses and other current assets	277.6	276.2	1.4
Liabilities and Equity			
Accrued liabilities	$ 578.9	$ 568.9	$ 10.0
Income taxes payable	58.1	60.4	(2.3)
Retained earnings	1,225.9	1,232.4	(6.5)

Effective January 1, 2018, the Company adopted ASU No. 2016-16, “Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory.” This accounting standard seeks to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory. Previously, US GAAP prohibited the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to a third party, which is an exception to the principle of comprehensive recognition of current and deferred income taxes in US GAAP. ASU No. 2016-16 eliminates this exception. The Company adopted this accounting standard using the modified retrospective method with a cumulative-effect adjustment directly to retained earnings. Upon adoption, the Company made the following reclassification:

Consolidated Balance Sheets Item

(in millions)	December 31, 2017 As Reported Balance	Adoption of ASU 2016-16 Increase/(Decrease)	January 1, 2018 Revised Balance
Assets			
Prepaid expenses and other current assets	$ 312.6	$ (5.6)	$ 307.0
Other noncurrent assets, net	156.1	(73.1)	83.0
Liabilities and Equity			
Deferred income taxes	$ 718.0	$ (76.0)	$ 642.0
Retained earnings	2,316.2	(2.7)	2,313.5

In March 2017, the FASB issued ASU No. 2017-07, “Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.” This accounting standard is primarily intended to improve the presentation of net periodic pension cost and net periodic postretirement benefit cost. The amendments in this update require an employer to report the service cost component of net periodic benefit cost in operating income, while the interest cost, amortization, return on assets and any settlement or curtailment expense will be reported below operating income. More specifically, the service cost will be reported in the same line item as other compensation costs arising from the services rendered by the pertinent employee during the period. The amendments in this update are required for annual and interim periods beginning after December 15, 2017, and should be applied retrospectively for the presentation of the components of net periodic benefit cost and net periodic postretirement benefit cost in the income statement. The amendment allows a practical expedient that permits an employer to use the amounts disclosed in its pension and other postretirement benefit plan note for the prior comparative periods as the estimation basis for applying the retrospective presentation requirements. The Company adopted this accounting standard on January 1, 2018, and applied the practical expedient upon adoption. The impact of adopting this standard, by financial statement line item, for the year ended December 31, 2017 and 2016 is reflected below:

Consolidated Statements of Operations Item

(in millions)	December 31, 2017 As Reported Balance	Adoption of ASU 2017-07 Increase/(Decrease)	December 31, 2017 Revised Balance
Cost of products sold	$ 1,804.9	$ (3.9)	$ 1,801.0
Gross profit	2,188.5	3.9	2,192.4
Selling, general and administrative expense	1,674.7	(5.3)	1,669.4
Operating (loss) income	(1,562.3)	9.2	(1,553.1)
Other expense (income), net	5.3	9.2	14.5

Consolidated Statements of Operations Item

(in millions)	December 31, 2016 As Reported Balance	Adoption of ASU 2017-07 Increase/(Decrease)	December 31, 2016 Revised Balance
Cost of products sold	$ 1,744.4	$ (3.7)	$ 1,740.7
Gross profit	2,000.9	3.7	2,004.6
Selling, general and administrative expense	1,523.0	(5.3)	1,517.7
Operating (loss) income	454.7	9.0	463.7
Other expense (income), net	(20.1)	9.0	(11.1)

In February 2018, the FASB issued ASU No. 2018-02, “Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income.” This newly issued accounting standard allows for a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from tax rate changes due to the Tax Cuts and Jobs Act. The amendments in this update are required for annual and interim periods beginning after December 15, 2018. This standard also requires the Company to disclose its accounting policy for releasing income tax effects from accumulated other comprehensive income. In general, the Company applies the individual item approach. As permitted by the accounting standard, the Company early adopted this accounting standard on January 1, 2018. As a result of the adoption, the Company elected to reclassify the income tax effects from AOCI to Retained earnings and reclassified $8.1 million.

Accounting Standards Not Yet Adopted

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842) with subsequent amendments (collectively, “Topic 842”). The Company will adopt the new leasing standard in the first quarter of 2019 using the modified retrospective approach transition method through a cumulative-effect adjustment at the beginning of the period of adoption. Results for reporting periods beginning after January 1, 2019 will be presented under ASC 842, while prior periods are not adjusted and continue to be reported in accordance with historic accounting under ASC 840. The Company expects to elect the package of practical expedients permitted under the transition guidance within the standard, which eliminates the reassessment of past leases, classification and initial direct costs. The Company does not expect to elect to adopt the hindsight practical expedient. The Company expects that adoption of the new leasing standard will result in recognition of material right-of-use asset and liabilities on the consolidated balance sheets for its operating lease commitments with terms greater than twelve months.

In August 2017, the FASB issued ASU No. 2017-12, “Derivatives and Hedging.” This newly issued accounting standard improves the financial reporting and disclosure of hedging relationships to better portray the economic results of an entity’s risk management activities in its financial statements. The amendments in this update make improvements to simplify the application of the hedge accounting guidance in current US GAAP based on the feedback received from preparers, auditors, users and other stakeholders. More specifically, this update expands and refines hedge accounting for both nonfinancial and financial risk components and align the recognition and presentation of the effects of the hedging instrument and the hedged item in the financial statements. The amendments in this update are required for annual and interim periods beginning after December 15, 2018. Early adoption is permitted. The effect of adoption should be reflected as of the beginning of the fiscal year of adoption. For cash flow and net investment hedges existing at the date of adoption, an entity should apply a cumulative-effect adjustment related to eliminating the separate measurement of ineffectiveness to accumulated other comprehensive income with a corresponding adjustment to the opening balance of retained earnings as of the beginning of the fiscal year that an entity adopts the amendments in this update. The amended presentation and disclosure guidance is required only prospectively. The Company will adopt this accounting standard for the quarter ended March 31, 2019. The adoption of this standard will not materially impact the statements of operations, financial position, cash flows and disclosures.

In August 2018, the FASB issued ASU No. 2018-14 "Compensation - Retirement Benefits - Defined Benefit Plans - General (Subtopic 715-20): Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans." This newly issued accounting standard changes disclosure requirements for defined benefit plans, including removal and modification of existing disclosures. The amendments in this standard are required for fiscal years ending after December 15, 2020. Early adoption is permitted. The amendments should be applied on a retrospective basis for all periods presented. The Company is currently assessing the impact that this standard will have on its financial position, results of operations, cash flows and disclosures.

NOTE 2 - EARNINGS PER COMMON SHARE

The following table sets forth the computation of basic and diluted (loss) earnings per common share for the year ended December 31:

Basic Earnings Per Common Share Computation (in millions, except per share amounts)	2018	2017	2016
Net (loss) income attributable to Dentsply Sirona	$ (1,011.0)	$ (1,550.0)	$ 429.9
Weighted average common shares outstanding	224.3	229.4	218.0
(Loss) earnings per common share - basic	$ (4.51)	$ (6.76)	$ 1.97

Diluted Earnings Per Common Share Computation (in millions, except per share amounts)	2018	2017	2016
Net (loss) income attributable to Dentsply Sirona	$ (1,011.0)	$ (1,550.0)	$ 429.9
Weighted average common shares outstanding	224.3	229.4	218.0
Incremental weighted average shares from assumed exercise of dilutive options from stock-based compensation awards	—	—	3.6
Total weighted average diluted shares outstanding	224.3	229.4	221.6
(Loss) earnings per common share - diluted	$ (4.51)	$ (6.76)	$ 1.94

The calculation of weighted average diluted shares outstanding excludes stock options and restricted stock units (“RSUs”) of 5.1 million, 4.3 million and 0.6 million shares of common stock that were outstanding during the years ended December 31, 2018, 2017 and 2016, respectively, were excluded from the computation of diluted earnings per common share since their effect would be antidilutive.

NOTE 3 - COMPREHENSIVE INCOME

AOCI includes foreign currency translation adjustments related to the Company's foreign subsidiaries, net of the related changes in certain financial instruments hedging these foreign currency investments. In addition, changes in the Company's fair value of certain derivative financial instruments, pension liability adjustments and prior service costs, net are recorded in AOCI. These changes are recorded in AOCI net of any related tax adjustments. For the years ended December 31, 2018, 2017 and 2016, these tax adjustments were $157.4 million, $203.8 million and $166.4 million, respectively, primarily related to foreign currency translation adjustments.

The cumulative foreign currency translation adjustments included translation loss of $172.9 million and translation gain of $22.1 million at December 31, 2018 and 2017, respectively, and which included losses of $111.8 million and $126.6 million, at December 31, 2018 and 2017, respectively, on loans designated as hedges of net investments.

Changes in AOCI by component for the years ended were as follows:

(in millions)	Foreign Currency Translation (Loss) Gain	(Loss) and Gain on Cash Flow Hedges	(Loss) and Gain on Net Investment Hedges	Net Unrealized Holding Gain on Available-for-Sale Securities	Pension Liability (Loss) Gain	Total
Balance, net of tax, at December 31, 2017	$ (104.5)	$ (12.6)	$ (127.6)	$ 44.3	$ (90.6)	$ (291.0)
Other comprehensive (loss) income before reclassifications and tax impact	(160.1)	5.1	36.2	—	7.7	(111.1)
Tax expense	(20.1)	(1.6)	(20.0)	—	(4.7)	(46.4)
Other comprehensive (loss) income, net of tax, before reclassifications	(180.2)	3.5	16.2	—	3.0	(157.5)
Amounts reclassified from accumulated other comprehensive income, net of tax	—	9.7	—	(44.3)	4.4	(30.2)
Net (decrease) increase in other comprehensive income	(180.2)	13.2	16.2	(44.3)	7.4	(187.7)
Balance, net of tax, at December 31, 2018	$ (284.7)	$ 0.6	$ (111.4)	$ —	$ (83.2)	$ (478.7)

(in millions)	Foreign Currency Translation (Loss) Gain	(Loss) and Gain on Cash Flow Hedges	(Loss) and Gain on Net Investment Hedges	Net Unrealized Holding Gain on Available-for-Sale Securities	Pension Liability (Loss) Gain	Total
Balance, net of tax, at December 31, 2016	$ (490.5)	$ (3.2)	$ (116.8)	$ —	$ (95.2)	$ (705.7)
Other comprehensive income (loss) before reclassifications and tax impact	354.6	(14.7)	(14.1)	45.0	(1.0)	369.8
Tax benefit (expense)	31.4	2.7	3.3	(0.7)	0.7	37.4
Other comprehensive income (loss), net of tax, before reclassifications	386.0	(12.0)	(10.8)	44.3	(0.3)	407.2
Amounts reclassified from accumulated other comprehensive income, net of tax	—	2.6	—	—	4.9	7.5
Net increase (decrease) in other comprehensive income	386.0	(9.4)	(10.8)	44.3	4.6	414.7
Balance, net of tax, at December 31, 2017	$ (104.5)	$ (12.6)	$ (127.6)	$ 44.3	$ (90.6)	$ (291.0)

Reclassification out of accumulated other comprehensive loss for the years ended December 31 were as follows:

Details about AOCI Components	Amounts Reclassified from AOCI			
(in millions)	2018	2017	2016	Affected Line Item in the Consolidated Statements of Operations
(Loss) gain on derivative financial instruments:				
Interest rate swaps	$ (2.3)	$ (2.3)	$ (2.9)	Interest expense
Foreign exchange forward contracts	(8.9)	(3.0)	4.8	Cost of products sold
Foreign exchange forward contracts	—	—	0.1	SG&A expenses
Commodity contracts	—	—	(0.1)	Cost of products sold
Net (loss) gain before tax	(11.2)	(5.3)	1.9	
Tax impact	1.5	2.7	(0.2)	Provision (benefit) for income taxes
Net (loss) gain after tax	$ (9.7)	$ (2.6)	$ 1.7	
Realized gain on available-for-sale securities:				
Available -for-sale-securities	$ 45.0	$ —	$ —	Other expense (income), net
Tax impact	(0.7)	—	—	Provision (benefit) for income taxes
Net gain after tax	$ 44.3	$ —	$ —	
Amortization of defined benefit pension and other postemployment benefit items:				
Amortization of prior service benefits	$ 0.2	$ 0.2	$ 0.2	(a)
Amortization of net actuarial losses	(6.3)	(7.0)	(5.3)	(a)
Net loss before tax	(6.1)	(6.8)	(5.1)	
Tax impact	1.7	1.9	1.4	Provision (benefit) for income taxes
Net loss after tax	$ (4.4)	$ (4.9)	$ (3.7)	
Total reclassifications for the period	$ 30.2	$ (7.5)	$ (2.0)	

(a) These accumulated other comprehensive income (loss) components are included in the computation of net periodic benefit cost for the years ended December 31, 2018, 2017, and 2016, respectively (see Note 15, Benefit Plans, for additional details).

NOTE 4 - BUSINESS COMBINATIONS

Business Combinations

2018 Transactions

On May 1, 2018, the Company acquired all of the outstanding shares of privately held OraMetrix, Inc. for $120.0 million, with an additional payment totaling $30.0 million, subject to meeting earn-out provisions. OraMetrix specializes in orthodontic treatment planning software, wire bending, and clear aligner manufacturing and is headquartered in Richardson, Texas. At December 31, 2018, the Company recorded $58.0 million in goodwill related to the fair value of assets acquired and liabilities assumed and the consideration given for the acquisition. The purchase price has been assigned on the basis of the fair values of assets acquired and liabilities assumed. Goodwill is considered to represent the value associated with workforce and synergies the two companies anticipate realizing as a combined company. The goodwill is not expected to be deductible for tax purposes.

Intangible assets acquired consist of the following:

(in millions, except for useful life)	Amount	Weighted Average Useful Life (in years)
Customer relationships	$ 18.3	15
Developed technology and patents	64.7	15
Tradenames and trademarks	13.5	Indefinite
Total	$ 96.5	

The results of operation for this business have been included in the accompanying financial statements as of the effective date of the transaction. The purchase price has been assigned on the basis of the fair values of assets acquired and liabilities assumed. This transaction was not material to the Company's net sales and net loss attributable to Dentsply Sirona for the year ended December 31, 2018.

2017 Transactions

During the quarter ended June 30, 2017, the Company acquired RTD, a privately-held France-based manufacturer of endodontic posts for $132.0 million. At December 31, 2018, the Company recorded $83.9 million in goodwill related to the fair value of assets acquired and liabilities assumed and the consideration given for the acquisition. Goodwill is considered to represent the value associated with workforce and synergies the two companies anticipate realizing as a combined company. The goodwill is not expected to be deductible for tax purposes. Intangible assets acquired consist of the following:

(in millions, except for useful life)	Amount	Weighted Average Useful Life (in years)
Customer relationships	$ 18.1	15
Developed technology and patents	22.4	15
Tradenames and trademarks	8.5	Indefinite
Total	$ 49.0	

The results of operation for this business have been included in the accompanying financial statements as of the effective date of the transaction. The purchase price has been assigned on the basis of the fair values of assets acquired and liabilities assumed. This transaction was not material to the Company's net sales and net loss attributable to Dentsply Sirona for the year ended December 31, 2017.

2016 Transactions

On February 29, 2016, DENTSPLY merged with Sirona in an all-stock transaction and the registrant was renamed DENTSPLY SIRONA Inc. and the common stock continues to trade on the Nasdaq under the ticker “XRAY”. In connection with the Merger, each former share of Sirona common stock issued and outstanding immediately prior to February 29, 2016, was converted to 1.8142 shares of DENTSPLY common stock. The Company issued approximately 101.8 million shares of DENTSPLY common stock to former shareholders of Sirona common stock, representing approximately 42% of the approximately 242.2 million total shares of DENTSPLY common stock outstanding on the Merger date.

The following table summarizes the consideration transferred:

(in millions, except per share amount)*		
Sirona common stock outstanding at February 29, 2016	56.1	
Exchange ratio	1.8142	
DENTSPLY common stock issued for consideration	101.8	
DENTSPLY common stock per share price at February 26, 2016	$ 60.67	
Fair value of DENTSPLY common stock issued to Sirona shareholders		$ 6,173.8
Fair value of vested portion of Sirona stock-based awards outstanding - 1.5 million		
at February 29, 2016		82.4
Total acquisition consideration		$ 6,256.2

*Lines may not add precisely to total due to rounding

Sirona contributed net sales of $1,220.2 million and operating loss of $1,543.1 million to the Company’s Consolidated Statements of Operations during the period January 1, 2017 to December 31, 2017. The operating loss includes a goodwill impairment charge of $1,650.9 million and an indefinite-lived intangible asset impairment charge of $346.7 million. Sirona contributed net sales of $1,039.9 million and operating income of $227.2 million to the Company's Consolidated Statements of Operations during the period from February 29, 2016 to December 31, 2016 which is primarily included in the Technologies & Equipment segment.

The following unaudited pro forma financial information reflects the consolidated results of operations of the Company had the Merger occurred on January 1, 2016. Sirona’s financial information has been compiled in a manner consistent with the accounting policies adopted by DENTSPLY. The following unaudited pro forma financial information for the year ended December 31, 2016, has been prepared for comparative purposes and does not purport to be indicative of what would have occurred had the Merger occurred on January 1, 2016, nor is it indicative of any future results.

	Pro forma - unaudited
	Year Ended
(in millions, except per share amount)	2016
Net sales	$ 3,916.0
Net income attributable to Dentsply Sirona	$ 437.0
Diluted earnings per common share	$ 1.85

The pro forma financial information is based on the Company's preliminary assignment of consideration given and therefore subject to adjustment. These pro forma amounts were calculated after applying the Company’s accounting policies and adjusting Sirona’s results to reflect adjustments that are directly attributable to the Merger. These adjustments mainly include additional intangible asset amortization, depreciation, inventory fair value adjustments, transaction costs and taxes that would have been charged assuming the fair value adjustments had been applied from January 1, 2016, together with the consequential tax effects at the statutory rate. Pro forma results do not include any anticipated synergies or other benefits of the Merger.

For the year ended December 31, 2016, in connection with the Merger, the Company has incurred $29.9 million of transaction related costs, primarily amounts paid to third party advisers, legal and banking fees, which are included in Selling, general and administrative expenses in the Consolidated Statements of Operations.

In September 2016, the Company finalized the acquisitions of MIS Implants Technologies Ltd., a dental implant systems manufacturer headquartered in northern Israel and a small acquisition of a healthcare consumable business. Total purchase price related to these two acquisitions was $341.4 million, net of cash acquired of $66.9 million.

The results of operations for these businesses have been included in the accompanying financial statements as of the effective date of the respective transactions. The purchase prices have been assigned based on the fair values of assets acquired and liabilities assumed. These transactions (other than the Merger) were not material to the Company's net sales and net income attributable to Dentsply Sirona for the year ended December 31, 2016.

Investment in Affiliates

On December 9, 2010, the Company purchased an initial ownership interest of 17% of the outstanding shares of DIO Corporation ("DIO"). In addition, on December 9, 2010, the Company invested $49.7 million in the corporate convertible bonds of DIO, which were permitted to be converted into common shares at any time. The bonds were designated by the Company as available-for-sale securities which are reported in, Prepaid expenses and other current assets, in the Consolidated Balance Sheets at December 31, 2014 and the changes in fair value were reported in AOCI. The contractual maturity of the bonds was December 2015. The Company had recorded the ownership in DIO under the equity method of accounting as it had significant influence over DIO.

In September 2015, the Company sold the bonds at face value. The Company recorded an unrealized holding loss, net of tax, of $4.8 million for the year ended December 31, 2016, in the Consolidated Statements of Comprehensive Income. As a result of sale of the bonds, the Company recorded $3.7 million, net of tax, of realized foreign currency gains in Other expense (income), net, in the Consolidated Statements of Operations for the year ended December 31, 2016. The fair value of the DIO bonds was $57.7 million at December 31, 2016 and a cumulative unrealized holding gain of $8.5 million was recorded in available-for-sale securities, net of tax in AOCI.

At December 31, 2016, the Company no longer has representation on the DIO Board of Directors and as a result the Company no longer has significant influence on the operations of DIO. In addition, the buyers of the convertible bonds exercised the conversion rights which resulted in DIO issuing additional shares and diluting the Company's ownership position to 13%. As a result of these changes the Company used the cost-basis method of accounting for the remaining direct investment.

During the year ended December 31, 2017, the Company has reclassified the security as available-for-sale. At December 31, 2017 the fair value was $54.4 million, which is recorded in Prepaid expense and other current assets in the Consolidated Balance Sheets. The unrealized gain of $45.0 million was recorded in AOCI, net of tax, in the Consolidated Statements of Comprehensive Income. The book value of the Company's direct investment in DIO was $9.4 million at December 31, 2017.

During the year ended December 31, 2018, the Company sold its direct investment in DIO. The gain was transferred out of AOCI and a gain of $44.1 million was recorded in Other expense (income), net in the Consolidated Statements of Operations.

NOTE 5 - SEGMENT AND GEOGRAPHIC INFORMATION

The operating businesses are combined into two operating groups, which generally have overlapping geographical presence, customer bases, distribution channels, and regulatory oversight.

These operating groups are considered the Company's reportable segments as the Company's chief operating decision-maker regularly reviews financial results at the operating group level and uses this information to manage the Company's operations. The Company evaluates performance of the segments based on the groups' net third party sales, excluding precious metal content, and segment adjusted operating income. The Company defines net third party sales excluding precious metal content as the Company's net sales excluding the precious metal cost within the products sold, which is considered a measure not calculated in accordance with US GAAP, and is therefore considered a non-US GAAP measure. Management believes that the presentation of net sales, excluding precious metal content, provides useful information to investors because a portion of Dentsply Sirona's net sales is comprised of sales of precious metals generated through sales of the Company's precious metal dental alloy products, which are used by third parties to construct crown and bridge materials. Due to the fluctuations of precious metal prices and because the cost of the precious metal content of the Company's sales is largely passed through to customers and has minimal effect on earnings, Dentsply Sirona reports net sales both with and without precious metal content to show the Company's performance independent of precious metal price volatility and to enhance comparability of performance between periods. The Company uses its cost of precious metal purchased as a proxy for the precious metal content of sales, as the precious metal content of sales is not separately tracked and invoiced to customers. The Company believes that it is reasonable to use the cost of precious metal content purchased in this manner since precious metal dental alloy sale prices are typically adjusted when the prices of underlying precious metals change. The Company's exclusion of precious metal content in the measurement of net third party sales enhances comparability of performance between periods as it excludes the fluctuating market prices of the precious metal content. The Company also evaluates segment performance based on each segment's adjusted operating income before provision for income taxes and interest. Segment adjusted operating income is defined as operating income before income taxes and before certain corporate headquarter unallocated costs, restructuring and other costs, interest expense, interest income, other expense (income), net, amortization of intangible assets and depreciation resulting from the fair value step-up of property, plant and equipment from acquisitions. The Company's segment adjusted operating income is considered a non-US GAAP measure. A description of the products and services provided within each of the Company's two operating segments is provided below.

Technologies & Equipment

This segment includes responsibility for the worldwide design, manufacture, sales and distribution of the Company's Dental Technology and Equipment Products and Healthcare Consumable Products. These products includes dental implants, laboratory dental products, CAD/CAM systems, imaging systems, treatment centers as well as consumable medical device products.

Consumables

This segment is responsible for the worldwide design, manufacture, sales and distribution of the Company's Dental Consumable Products which include preventive, restorative, instruments, endodontic, and orthodontic dental products.

Reclassification of Prior Years Amounts

Certain reclassifications have been made to prior years' data in order to conform to a current year presentation.

The following table sets forth information about the Company's segments for the years ended December 31:

Third Party Net Sales

(in millions)	2018	2017	2016
Technologies & Equipment	$ 2,135.6	$ 2,200.8	$ 2,050.5
Consumables	1,850.7	1,792.6	1,694.8
Total net sales	$ 3,986.3	$ 3,993.4	$ 3,745.3

Third Party Net Sales, Excluding Precious Metal Content

(in millions)	2018	2017	2016
Technologies & Equipment	$ 2,098.4	$ 2,160.3	$ 1,986.4
Consumables	1,850.7	1,792.6	1,694.6
Total net sales, excluding precious metal content	$ 3,949.1	$ 3,952.9	$ 3,681.0
Precious metal content of sales	37.2	40.5	64.3
Total net sales, including precious metal content	$ 3,986.3	$ 3,993.4	$ 3,745.3

Depreciation and Amortization

(in millions)	2018	2017	2016
Technologies & Equipment	$ 269.3	$ 257.5	$ 218.1
Consumables	59.9	57.5	52.6
All Other (a)	1.6	1.4	1.0
Total	$ 330.8	$ 316.4	$ 271.7

(a) Includes amounts recorded at Corporate headquarters.

Segment Operating Income (Loss)

(in millions)	2018	2017	2016
Technologies & Equipment	$ 255.6	$ 412.6	$ 355.7
Consumables	495.8	493.0	445.3
Segment adjusted operating income before income taxes and interest	$ 751.4	$ 905.6	$ 801.0
Reconciling Items (income) expense:			
All Other (a)	197.6	196.5	162.8
Restructuring and other costs	221.0	425.2	23.2
Goodwill Impairment	1,085.8	1,650.9	—
Interest expense	37.3	38.3	35.9
Interest income	(2.1)	(2.4)	(2.0)
Other expense (income), net	(34.9)	5.3	(20.1)
Amortization of intangible assets	197.9	189.1	155.3
Depreciation resulting from the fair value step-up of property, plant and equipment from business combinations	7.2	6.2	5.0
(Loss) income before income taxes	$ (958.4)	$ (1,603.5)	$ 440.9

(a) Includes results of Corporate headquarters, inter-segment eliminations and one distribution warehouse not managed by named segments.

Capital Expenditures

(in millions)	2018	2017	2016
Technologies & Equipment	$ 118.0	$ 98.6	$ 73.7
Consumables	50.9	37.6	42.2
All Other (a)	13.6	8.1	9.1
Total	$ 182.5	$ 144.3	$ 125.0

(a) Includes capital expenditures of Corporate headquarters.

Assets

(in millions)	2018	2017
Technologies & Equipment	$ 6,380.2	$ 8,130.6
Consumables	2,158.4	1,965.1
All Other (a)	148.4	278.8
Total	$ 8,687.0	$ 10,374.5

(a) Includes results of Corporate headquarters, inter-segment eliminations and one distribution warehouse not managed by named segments.

Geographic Information

The following table sets forth information about the Company's operations in different geographic areas for the years ended December 31, 2018, 2017 and 2016. Net sales reported below represent revenues for shipments made by operating businesses located in the country or territory identified, including export sales. Property, plant and equipment, net, represents those long-lived assets held by the operating businesses located in the respective geographic areas.

(in millions)	United States	Germany	Sweden	Other Foreign	Consolidated
2018					
Net sales	$ 1,269.9	$ 494.3	$ 55.2	$ 2,166.9	$ 3,986.3
Property, plant and equipment, net	211.1	339.3	99.3	220.9	870.6
2017					
Net sales	$ 1,376.5	$ 493.3	$ 52.4	$ 2,071.2	$ 3,993.4
Property, plant and equipment, net	202.0	331.5	103.4	239.1	876.0
2016					
Net sales	$ 1,383.0	$ 617.0	$ 53.2	$ 1,692.1	$ 3,745.3
Property, plant and equipment, net	192.5	244.1	82.5	280.7	799.8

Product and Customer Information

The following table presents net sales by product category for the years ended December 31:

(in millions)	2018	2017	2016
Dental consumables products	$ 1,829.3	$ 1,769.7	$ 1,770.3
Dental technology and equipment products	1,808.2	1,895.7	1658.6
Healthcare consumable products	348.8	328.0	316.4
Total net sales	$ 3,986.3	$ 3,993.4	$ 3,745.3

Dental Consumable Products

Dental consumable products consist of value added dental supplies and small equipment used in dental offices for the treatment of patients. It also includes specialized treatment products used within the dental office and laboratory settings including products used in the preparation of dental appliances by dental laboratories.

Dentsply Sirona's dental supplies include endodontic (root canal) instruments and materials, dental anesthetics, prophylaxis paste, dental sealants, impression materials, restorative materials, tooth whiteners and topical fluoride. Small equipment products include dental handpieces, intraoral curing light systems, dental diagnostic systems and ultrasonic scalers and polishers.

The Company's products used in the dental laboratories include dental prosthetics, including artificial teeth, precious metal dental alloys, dental ceramics and crown and bridge materials. Dental laboratory equipment products include amalgamators, mixing machines and porcelain furnaces.

Dental Technology and Equipment Products

Dental technology products consist of basic and high-tech dental equipment such as treatment centers, imaging equipment and computer aided design and machining "CAD/CAM" systems equipment for dental practitioners and laboratories. The product category also includes high-tech and state-of-art dental implants and related scanning equipment and treatment software, orthodontic appliances for dental practitioners and specialist and dental laboratories. The Company offers the broadest line of products to fully outfit a dental practitioner’s office.

Treatment centers comprise a broad range of products from basic dentist chairs to sophisticated chair-based units with integrated diagnostic, hygiene and ergonomic functionalities, as well as specialist centers used in preventative treatment and for training purposes. Imaging systems consist of a broad range of diagnostic imaging systems for 2D or 3D, panoramic, and intra-oral applications. Dental CAD/CAM Systems are products designed for dental offices and laboratories used for dental restorations, which includes several types of restorations, such as inlays, onlays, veneers, crowns, bridges, copings and bridge frameworks made from ceramic, metal or composite blocks. This product line also includes high-tech CAD/CAM techniques of chairside economic restoration of aesthetic ceramic dentistry, or CEREC equipment. This equipment allows for in-office application that enables dentists to produce high quality restorations from ceramic material and insert them into the patient’s mouth during a single appointment. CEREC has a number of advantages compared to the traditional out-of-mouth pre-shaped restoration method, as CEREC does not require a physical model, restorations can be created in the dentist’s office and the procedure can be completed in a single visit.

Healthcare Consumable Products

Healthcare consumable products consist mainly of urology catheters, certain surgical products, medical drills and other non-medical products.

Concentration Risk

For the year ended December 31, 2018, one customer accounted for approximately 10% of consolidated net sales. At December 31, 2018, two customers each accounted for approximately 10% and 13% of the consolidated accounts receivable balance. For the year ended December 31, 2017, one customer accounted for approximately 15% of consolidated net sales. At December 31, 2017, two customers accounted for approximately 14% and 15%, respectively, of the consolidated accounts receivable balance. For the year ended December 31, 2016, the Company had two customers that accounted for approximately 12% each of consolidated net sales. For the years ended December 31, 2018, 2017, and 2016, third party export sales from the U.S. were less than ten percent of consolidated net sales.

NOTE 6 - OTHER EXPENSE (INCOME), NET

Other expense (income), net, for the years ended December 31 consists of the following:

(in millions)	2018	2017	2016
Foreign exchange transaction loss (gain)	$ 5.8	$ 1.7	$ (10.2)
Other expense (income), net	(40.7)	3.6	(9.9)
Total other expense (income), net	$ (34.9)	$ 5.3	$ (20.1)

NOTE 7 - INVENTORIES, NET

Inventories, net of inventory valuation reserve, at December 31 consist of the following:

(in millions)	2018	2017
Finished goods	$ 380.0	$ 387.6
Work-in-process	89.2	90.4
Raw materials and supplies	129.7	145.1
Inventories, net	$ 598.9	$ 623.1

The Company’s inventory valuation reserve was $92.5 million and $71.7 million at December 31, 2018 and 2017, respectively.

NOTE 8 - PROPERTY, PLANT AND EQUIPMENT, NET

Property, plant and equipment, net, at December 31 consist of the following:

(in millions)	2018	2017
Assets, at cost:		
Land	$ 55.0	$ 58.7
Buildings and improvements	560.3	554.7
Machinery and equipment	1,353.9	1,367.5
Construction in progress	107.6	91.6
	2,076.8	2,072.5
Less: Accumulated depreciation	1,206.2	1,196.5
Property, plant and equipment, net	$ 870.6	$ 876.0

NOTE 9 - GOODWILL AND INTANGIBLE ASSETS

The Company performed the required annual impairment tests of goodwill at April 30, 2018 on eleven reporting units. To determine the fair value of the Company's reporting units, the Company uses a discounted cash flow model with market-based support as its valuation technique to measure the fair value for its reporting units. The discounted cash flow model uses five- to ten- year forecasted cash flows plus a terminal value based on a multiple of earnings or by capitalizing the last period's cash flows using a perpetual growth rate. In the development of the forecasted cash flows, the Company applies revenue, gross profit and operating expense assumptions taking into consideration historical trends as well as future expectations. These future expectations include, but are not limited to, new product development and distribution channel changes for the respective reporting units. The Company also considers the current and projected market conditions for dental and medical device industries, both in the U.S. and globally, when determining its assumptions. The total forecasted cash flows were discounted based on market participant data, which included assumptions regarding the Company's weighted-average cost of capital adjusted for the relevant risk associated with business-specific characteristics and the uncertainty related to the reporting unit's ability to execute on the projected cash flows. The Company's significant estimates in the discounted cash flow models include, but not limited to, the weighted average cost of capital, long-term rate of growth and profitability of the reporting unit's business and working capital effects. A change in any of these estimates and assumptions could produce a different fair value, which could have a material impact on the Company's results of operations.

Unfavorable developments in the market for the dental or medical device industries, an increase in discounts rates, unfavorable changes in earnings multiples or a decline in future cash flow projections, among other factors, may cause a change in circumstances indicating that the carry value of the indefinite-lived assets and goodwill within the Company's reporting units may not be recoverable.

2018 Annual Goodwill Impairment Testing

In connection with the updating of the estimates and assumptions with the annual impairment tests of goodwill and the preparation of the financial statements for the three months ended June 30, 2018, the Company determined that the goodwill associated with the CAD/CAM, Imaging and Orthodontics reporting units was impaired. Additionally, near the end of the quarter, the Company recognized that the CAD/CAM and Imaging reporting units' ("equipment reporting units") revenue and operating margins would not meet forecasted expectations for the quarter as a result of several significant unfavorable developments which also affected the reporting units' projections for future revenue and operating margins. As a result, the Company recorded a goodwill impairment charge of $1,085.8 million. The CAD/CAM and Imaging reporting units are within the Technologies & Equipment segment and the Orthodontics reporting unit is within the Consumables segment. The significant unfavorable developments in the current period which are reflected in the Company's April 30, 2018 goodwill impairment testing model, are as follows:

- The equipment reporting units were negatively affected in connection with the continued transition of the Company's distribution relationships primarily in the U.S. from exclusive to non-exclusive. The Company's expectations for revenue growth from its non-exclusive distribution relationships, which replaced its former long-term exclusive distribution relationship, were not met. As a result, the Company's forecasts of current and future third-party demand have been reduced as the Company's U.S. distributors continue to offer and promote competitive alternatives to the Company's full CAD/CAM systems and lower-priced alternatives to the Imaging reporting units' products.

- The Imaging reporting unit observed revenue and operating margins being negatively impacted by aggressive competition with a focus on value-based products in the marketplace as opposed to the reporting unit's premium products. This has resulted in increased competition from low-cost products in certain regions throughout the world causing the reporting unit to offer additional product features at the current price levels and to offer additional promotions and reduce its future sales forecasts.

- The CAD/CAM and Imaging reporting units have also experienced lower than expected sales with respect to higher margin products as well as a regional shift in sales to emerging markets each of which has negatively impacted the reporting units' overall operating margins as compared to the original forecasts for the period and for future sales forecasts.

- The equipment reporting units were also further impacted by the unfavorable change in the discount rate due primarily to a higher risk factor, which represents management's assessment of increased risk with respect to the CAD/CAM and Imaging reporting units' forecasts primarily due to the factors described above, and to a lesser extent a higher risk-free interest rate for all reporting units.

- The increased reduction of inventory being held by the Company's U.S. distributors in the second quarter, which was larger than anticipated for the period, and planned further reductions of inventory, impacts the Company's near-term results.

As a result of the factors described above, and the resulting reduced revenue and profitability expectations for these reporting units, we forecasted reductions in unit volume growth rates and operating margins and lower future cash flows used to estimate the fair value of these reporting units, which resulted in a determination that an impairment adjustment was required.

The Orthodontics reporting unit goodwill impairment charge was primarily driven by lower operating margins and lower sales growth. The products manufactured and sold within this reporting unit have consisted mainly of traditional orthodontic treatment products, (i.e., brackets, bands and wires). The impairment charge is unrelated to the Company's acquisition of OraMetrix. The Company has observed a continuing decline in operating margins as the marketplace has seen higher than expected price competition primarily due to increased supply of traditional orthodontic products in the market. In addition, the Company has seen lower than expected revenue growth which is reflected in its future forecast. The Company believes the revenue trend is the result of competition as well as the growing end-user demand for newer orthodontic treatment options.

At December 31, 2018, the Company did not identify any impairment triggers related to the reporting units noted above.

For the Company's reporting units that were not impaired, the Company applied a hypothetical sensitivity analysis. Had the discount rate of each of these reporting units been hypothetically increased by 100 basis points at April 30, 2018, the fair value of one reporting unit, Treatment Centers, would not exceed net book value. If the fair value of each of these reporting units had been hypothetically reduced by 10% at April 30, 2018, the fair value of one reporting unit, Treatment Centers, would not exceed net book value. Goodwill for the Treatment Centers reporting unit totals $292.4 million at December 31, 2018.

In conjunction with the goodwill and indefinite-lived intangibles impairment test, the Company utilized its best estimate of future cash flows as of April 30, 2018, which include significant management assumptions such as future revenue growth rates, operating margins, weighted average cost of capital, and future economic and market conditions affecting the dental and medical device industries. Any changes to these assumptions and estimates could have a negative impact on the fair value of these reporting units and may result in further impairment. Given the uncertainty in the marketplace and other factors affecting management's assumptions underlying the Company's discounted cash flow model, these estimates could vary significantly in the future, which may result in a goodwill impairment charge at that time. The goodwill impairment charge is not expected to result in future cash expenditures.

2018 Annual Indefinite-Lived Intangibles Impairment Testing

The Company also assessed the annual impairment of indefinite-lived intangible assets as of April 30, 2018, which largely consist of acquired tradenames and trademarks, in conjunction with the annual impairment tests of goodwill. As a result of the annual impairment tests of indefinite-lived intangible assets, the Company recorded an impairment charge of $179.2 million for the three months ended June 30, 2018 which was recorded in Restructuring and other costs in the Consolidated Statements of Operations. The impaired indefinite-lived intangible assets are tradenames and trademarks related to the CAD/CAM, Imaging, and Instrument reporting units. The impairment charge was primarily driven by a decline in forecasted sales resulting from increased competition and the impact of low-cost competitive products, as discussed above with respect to goodwill. In addition, the unfavorable impact of an increase in the equipment reporting units' respective risk factors, along with increases in the risk-free rate, increased the discount rate. The assumptions and estimates used in determining the fair value of the indefinite-lived intangible assets contain uncertainties, and any changes to these assumptions and estimates could have a negative impact and result in a future impairment.

At December 31, 2018, the Company did not identify any impairment triggers for the indefinite-lived asset related to the reporting units noted above.

2017 Goodwill Impairment Testing

In preparing the financial statements for the year ended December 31, 2017, the Company identified an impairment triggering event related to the CAD/CAM, Imaging and Treatment Center equipment reporting units. Forecasted revenues and operating margins for these reporting units were impacted by continued unfavorable developments in the marketplace which included an increase in competition. These developments resulted in significantly lower sales to end-users than expected in the fourth quarter of 2017 in the North America and Rest of World regions as well as declines in expected gross profit rates which included the unfavorable impacts from changes in the foreign exchange rates. The impacts from foreign exchange rate changes were primarily driven by the strengthening of the euro versus the U.S. dollar as a result of the higher euro denominated costs and net assets associated with these reporting units as compared to the lower amount of euro denominated sales. While the Company considered unfavorable market developments and foreign exchange rate changes, in its April 30, 2017 assessment, the impact of these developments were at levels beyond those anticipated by the Company despite moving away from a non-exclusive distribution channel in the United States and the execution of new distribution agreements with Patterson Companies, Inc. and Henry Schein, Inc. in May and June of 2017. In addition to the unfavorable market and foreign exchange rate developments, the income tax rate forecast used in the annual goodwill test was unfavorably impacted by the recent tax legislation in the U.S. and other foreign jurisdictions. As a result the Company tested these reporting units for impairment in preparation of the financial statements for the year ended December 31, 2017 and determined that the goodwill associated with the CAD/CAM, Imaging and Treatment Center equipment reporting units, all within the Technologies & Equipment segment, was impaired. The impairment was the result of a change in forecasted sales and gross profit as well as changes in foreign exchange rates and the income tax rate. As a result, the Company recorded a goodwill impairment charge of $558.0 million for the three months ended December 31, 2017. The combination of impairment charges for the second and fourth quarters of 2017 resulted in a total goodwill impairment charge of $1,650.9 million for the year ended December 31, 2017.

The estimates of discounted future cash flows include significant management assumptions such as revenue growth rates, operating margins, weighted average cost of capital, and future economic and market conditions affecting the dental and medical device industries. Any changes to these assumptions and estimates could have a negative impact on the fair value of these reporting units and may result in further impairment. The goodwill impairment charge is not expected to result in future cash expenditures.

2017 Indefinite-Lived Intangibles Impairment Testing

The Company also assessed the annual impairment of indefinite-lived intangible assets as of April 30, 2017, which largely consists of acquired tradenames and trademarks, in conjunction with the annual impairment tests of goodwill. As a result of the annual impairment tests of indefinite-lived intangible assets, the Company recorded an impairment charge of $79.8 million for the three months ended June 30, 2017 which was recorded in Restructuring and other cost in the Consolidated Statements of Operations. The impaired indefinite-lived intangible assets are tradenames and trademarks related to the CAD/CAM and Imaging equipment reporting units. The impairment charge was driven by a decline in forecasted sales. The assumptions and estimates used in determining the fair value of the indefinite-lived intangible assets contain uncertainties, and any changes to these assumptions and estimates could have a negative impact and result in a future impairment.

In preparing the financial statements for the year ended December 31, 2017, the Company, as result of the triggering event, tested the indefinite-lived intangible assets related to these reporting units for impairment. As a result, the Company identified that certain tradenames and trademarks related to the CAD/CAM, Imaging and Treatment Center equipment reporting units, all within the Technologies & Equipment segment, were impaired. The Company recorded an impairment charge of $266.9 million for the three months ended December 31, 2017 which was recorded in Restructuring and other cost in the Consolidated Statements of Operations. The combination of impairment charges for the second and fourth quarters of 2017 resulted in a total impairment charge for the year ended December 31, 2017 of $346.7 million related to indefinite-lived assets. The impairment charge was driven by a continuing decline in forecasted sales. The assumptions and estimates used in determining the fair value of the indefinite-lived intangible assets contain uncertainties, and any changes to these assumptions and estimates could have a negative impact and result in a future impairment.

In conjunction with the goodwill and indefinite-lived intangibles impairment tests at both April 30, 2017 and December 31, 2017, the Company utilized its best estimate of future revenue growth, operating margin rates and income tax rate. Given the market place uncertainty associated with the new distribution agreements, continued weakness in end-user demand for the Company’s products as a result of competition, further developments in tax legislation that could impact the income tax rates and unfavorable changes in foreign exchange rates, these estimates could vary significantly in the future, which may result in an impairment charge at that time.

A reconciliation of changes in the Company's goodwill by segment and in total are as follows:

(in millions)	Technologies & Equipment	Consumables	Total
Balance at December 31, 2016	$ 5,193.3	$ 758.7	$ 5,952.0
Acquisition activity	—	87.5	87.5
Adjustment of provisional amounts on prior acquisitions	(19.2)	—	(19.2)
Impairment	(1,650.9)	—	(1,650.9)
Effect of exchange rate changes	137.4	32.4	169.8
Balance at December 31, 2017	$ 3,660.6	$ 878.6	$ 4,539.2
Acquisition activity	5.0	56.7	61.7
Adjustment of provisional amounts on prior acquisitions	—	0.7	0.7
Impairment	(1,017.2)	(68.5)	(1,085.7)
Effect of exchange rate changes	(68.6)	(16.0)	(84.6)
Balance at December 31, 2018	$ 2,579.8	$ 851.5	$ 3,431.3

The following table provides the gross carrying amount of goodwill and the cumulative goodwill impairment at December 31:

	2018			2017		
(in millions)	Gross Carrying Amount	Cumulative Impairment	Net Carrying Amount	Gross Carrying Amount	Cumulative Impairment	Net Carrying Amount
Technologies & Equipment	$ 5,247.9	$ (2,668.1)	$ 2,579.8	$ 5,311.5	$ (1,650.9)	$ 3,660.6
Consumables	920.0	(68.5)	851.5	878.6	—	878.6
Total effect of cumulative impairment	$ 6,167.9	$ (2,736.6)	$ 3,431.3	$ 6,190.1	$ (1,650.9)	$ 4,539.2

Identifiable definite-lived and indefinite-lived intangible assets at December 31 consist of the following:

	2018			2017		
(in millions)	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patents	$ 1,376.4	$ (407.1)	$ 969.3	$ 1,385.5	$ (305.0)	$ 1,080.5
Tradenames and trademarks	81.1	(62.5)	18.6	76.4	(46.5)	29.9
Licensing agreements	36.1	(26.3)	9.8	31.2	(24.8)	6.4
Customer relationships	1,085.3	(334.4)	750.9	1,109.1	(272.0)	837.1
Total definite-lived	$ 2,578.9	$ (830.3)	$ 1,748.6	$ 2,602.2	$ (648.3)	$ 1,953.9
Indefinite-lived tradenames and trademarks	$ 671.7	$ —	$ 671.7	$ 846.8	$ —	$ 846.8
Total identifiable intangible assets	$ 3,250.6	$ (830.3)	$ 2,420.3	$ 3,449.0	$ (648.3)	$ 2,800.7

Amortization expense for identifiable definite-lived intangible assets for 2018, 2017 and 2016 was $197.9 million, $189.1 million and $155.1 million, respectively. The annual estimated amortization expense related to these intangible assets for each of the five succeeding fiscal years is $192.3 million, $192.1 million, $190.8 million, $188.2 million and $187.3 million for 2019, 2020, 2021, 2022 and 2023, respectively. For the years ended December 31, 2018 and 2017, the Company recorded an impairment charge of $179.2 million and $346.7 million, respectively, related to indefinite-lived tradenames and trademarks.

NOTE 10 - PREPAID EXPENSES AND OTHER CURRENT ASSETS

Prepaid expenses and other current assets at December 31 consist of the following:

(in millions)	2018	2017
Prepaid expenses	$ 104.8	$ 100.3
Available-for-sale securities	—	54.4
Deposits	28.2	37.2
Fair value of derivatives	21.3	3.9
Other current assets	123.3	116.8
Prepaid expenses and other current assets	$ 277.6	$ 312.6

NOTE 11 - ACCRUED LIABILITIES

Accrued liabilities at December 31 consist of the following:

(in millions)	2018	2017
Payroll, commissions, bonuses, other cash compensation and employee benefits	$ 161.9	$ 171.4
Sales and marketing programs	105.3	105.8
Restructuring costs	43.4	60.3
Accrued vacation and holidays	40.2	42.8
Professional and legal costs	42.2	31.5
Current portion of derivatives	2.8	17.4
General insurance	12.5	15.0
Warranty liabilities	13.0	11.8
Third party royalties	10.0	10.7
Deferred income	29.3	8.9
Accrued interest	11.6	9.4
Accrued travel expenses	7.8	7.8
Accrued property taxes	10.2	7.3
Other	88.7	85.7
Accrued liabilities	$ 578.9	$ 585.8

NOTE 12 - FINANCING ARRANGEMENTS

Short-Term Debt

Short-term debt at December 31 consist of the following:

(in millions except percentage amounts)	2018 Principal Balance	2018 Interest Rate	2017 Principal Balance	2017 Interest Rate
Corporate commercial paper facility	$ 67.8	2.8%	$ 7.3	1.9%
Other short-term loans	14.0	0.8%	13.6	0.9%
Add: Current portion of long-term debt	10.6		9.2	
Total short-term debt	$ 92.4		$ 30.1	
Maximum month-end short-term debt outstanding during the year	$ 248.5		$ 54.4	
Average amount of short-term debt outstanding during the year	121.7		24.9	
Weighted-average interest rate on short-term debt at year-end		2.5%		1.6%

Short-Term Borrowings

On July 27, 2018, the Company amended and extended its $500.0 million multicurrency revolving credit facility increasing the total available to $700.0 million through July 27, 2023. In addition, certain new lenders joined the bank group. The Company has access to the full $700.0 million through July 27, 2023. The facility is unsecured and contains certain affirmative and negative covenants relating to the operations and financial condition of the Company. The most restrictive of these covenants pertain to asset dispositions and prescribed ratios of indebtedness to total capital and operating income, plus depreciation and amortization to interest expense.

The Company has a $500.0 million commercial paper facility. At December 31, 2018 and 2017, the Company had $67.8 million and $7.3 million, respectively, outstanding under this commercial paper facility. The average balance outstanding for the commercial paper facility during the year ended December 31, 2018 was $119.0 million.

Long-Term Debt

Long-term debt at December 31 consist of the following:

(in millions except percentage amounts)	2018 Principal Balance	2018 Interest Rate	2017 Principal Balance	2017 Interest Rate
Term loan 12.6 billion Japanese yen denominated due September 2019	$ 114.6	0.6%	$ 111.4	0.7%
Term loan $175.0 million due August 2020	131.3	3.9%	140.0	2.6%
Fixed rate senior notes $450 million due August 2021	295.7	4.1%	295.7	4.1%
Private placement notes 70.0 million euros due October 2024	80.2	1.0%	84.0	1.0%
Private placement notes 25.0 million Swiss franc due December 2025	25.4	0.9%	25.6	0.9%
Private placement notes 97.0 million euros due December 2025	111.2	2.1%	116.5	2.1%
Private placement notes 26.0 million euros due February 2026	29.8	2.1%	31.2	2.1%
Private placement notes 58.0 million Swiss franc due August 2026	59.0	1.0%	59.5	1.0%
Private placement notes 106.0 million euros due August 2026	121.5	2.3%	127.3	2.3%
Private placement notes 70.0 million euros due October 2027	80.2	1.3%	84.0	1.3%
Private placement notes 7.5 million Swiss franc due December 2027	7.6	1.0%	7.7	1.0%
Private placement notes 15.0 million euros due December 2027	17.2	2.2%	18.0	2.2%
Private placement notes 140.0 million Swiss franc due August 2028	142.5	1.2%	143.6	1.2%
Private placement notes 70.0 million euros due October 2029	80.2	1.5%	84.1	1.5%
Private placement notes 70.0 million euros due October 2030	80.2	1.6%	84.1	1.6%
Private placement notes 45.0 million euros due February 2031	51.6	2.5%	54.0	2.5%
Private placement notes 65.0 million Swiss franc due August 2031	66.1	1.3%	66.7	1.3%
Private placement notes 70.0 million euros due October 2031	80.2	1.7%	84.1	1.7%
Other borrowings, various currencies and rates	5.5		8.6	
	$ 1,580.0		$ 1,626.1	
Less: Current portion				
(included in “Notes payable and current portion of long-term debt” in the Consolidated Balance Sheets)	10.6		9.2	
Less: Long-term portion of deferred financing costs	4.5		5.3	
Long-term portion	$ 1,564.9		$ 1,611.6	

On August 28, 2018, the Company paid the fifth annual principal amortization of $8.8 million due in each of the first six years under the terms of the $175.0 million Term Loan with a final maturity of August 26, 2020. An amount of $8.8 million will be due in August 2019 and has been classified as current in the Consolidated Balance Sheets. The Company intends to use available cash, commercial paper and the revolving credit facilities to pay the 2019 Term Loan payment.

At December 31, 2018, the Company had $662.8 million borrowings available under unused lines of credit, including lines available under its short-term arrangements and revolving credit agreement.

The Company's Japanese yen denominated term loan due in September 2019 has been classified as noncurrent in the Consolidated Balance Sheets, as the Company has the ability and intent to refinance.

The Company’s revolving credit facility, term loans and senior notes contain certain affirmative and negative covenants relating to the Company's operations and financial condition. At December 31, 2018, the Company was in compliance with all debt covenants.

The table below reflects the contractual maturity dates of the various long term borrowings at December 31, 2018:

(in millions)	
2019	$ 125.2
2020	123.5
2021	296.8
2022	0.9
2023	0.2
2024 and beyond	1,033.4
	$ 1,580.0

NOTE 13 - EQUITY

During the year ended December 31, 2018, the Board of Directors of the Company approved an increase in the authorized number of shares of common stock that may be repurchased under the share repurchase program for a total authorization of $1.0 billion. Share repurchases will be made through open market purchases, Rule 10b5-1 plans, accelerated share repurchases, privately negotiated transactions or other transactions in such amounts and at such times as the Company deems appropriate based upon prevailing market and business conditions and other factors. For the years ended December 31, 2018, 2017 and 2016, the Company repurchased outstanding shares of common stock at a cost of $250.2 million, $400.3 million and $815.1 million, respectively. At December 31, 2018, the Company has remaining authorization to repurchase $749.8 million worth of common shares under the current share repurchase program.

For the years ended December 31, 2018, 2017 and 2016, the Company received proceeds of $28.0 million, $82.3 million and $41.0 million, respectively, primarily as a result of stock options exercised in the amount of 1.0 million, 2.3 million and 1.2 million in each of the years, respectively. It is the Company's practice to issue shares from treasury stock when options are exercised. The tax benefit realized for the options exercised during the year ended December 31,2016 is $16.1 million.

The following table represents total outstanding shares of common stock and treasury stock:

(in millions)	Shares of Common Stock	Shares of Treasury Stock	Outstanding Shares
Balance at December 31, 2015	162.8	(22.7)	140.1
Common stock issuance related to Merger	101.7	—	101.7
Shares of treasury stock issued	—	1.7	1.7
Repurchase of common stock at an average cost of $60.78	—	(13.4)	(13.4)
Balance at December 31, 2016	264.5	(34.4)	230.1
Shares of treasury stock issued	—	2.9	2.9
Repurchase of common stock at an average cost of $64.40	—	(6.2)	(6.2)
Balance at December 31, 2017	264.5	(37.7)	226.8
Shares of treasury stock issued	—	1.6	1.6
Repurchase of common stock at an average cost of $45.92	—	(5.4)	(5.4)
Balance at December 31, 2018	264.5	(41.5)	223.0

The Company maintains the 2016 Omnibus Incentive Plan (the "Plan") under which it may grant non-qualified stock options ("NQSOs"), incentive stock options, restricted stock, restricted stock units ("RSUs") and stock appreciation rights, collectively referred to as "Awards." Awards are granted at exercise prices that are equal to the closing stock price on the date of grant. The Company authorized grants under the Plan of 25.0 million shares of common stock, plus any unexercised portion of canceled or terminated stock options granted under the legacy DENTSPLY International Inc. 2010 and 2002 Equity Incentive Plans, as amended, and under the legacy Sirona Dental Systems, Inc. 2015 and 2006 Equity Incentive Plans, as amended. For each restricted stock and RSU issued, it is counted as a reduction of 3.09 shares of common stock available to be issued under the Plan. No key employee may be granted awards in excess of 1.0 million shares of common stock in any calendar year. The number of shares available for grant under the 2016 Plan at December 31, 2018 is 31.6 million.

Stock options granted become exercisable as determined by the grant agreement and expire ten years after the date of grant under these plans. RSUs vest as determined by the grant agreement and are subject to a service condition, which requires grantees to remain employed by the Company during the period following the date of grant. Under the terms of the RSUs, the vesting period is referred to as the restricted period. RSUs and the rights under the award may not be sold, assigned, transferred, donated, pledged or otherwise disposed of during the restricted period prior to vesting. In addition to the service condition, certain key executives are granted RSUs subject to performance requirements that can vary between the first year and up to the final year of the RSU award. If targeted performance is not met the RSU granted is adjusted to reflect the achievement level. Upon the expiration of the applicable restricted period and the satisfaction of all conditions imposed, the restrictions on RSUs will lapse, and one share of common stock will be issued as payment for each vested RSU. Upon death, disability or qualified retirement all awards become immediately exercisable for up to one year. Awards are expensed as compensation over their respective vesting periods or to the eligible retirement date if shorter. The Company records forfeitures on stock-based compensation as the participant terminates rather than estimating forfeitures.

The following table represents total stock based compensation expense and the tax related benefit for the years ended December 31:

(in millions)	2018	2017	2016
Stock option expense	$ 6.6	$ 15.4	$ 10.6
RSU expense	13.2	31.2	29.1
Total stock based compensation expense	$ 19.8	$ 46.6	$ 39.7
Related deferred income tax benefit	$ 2.4	$ 8.4	$ 10.9

For the years ended December 31, 2018, 2017, and 2016, stock compensation expense of $19.8 million, $46.6 million and $39.7 million, respectively, was recorded in the Consolidated Statements of Operations. For the years ended December 31, 2018, 2017, and 2016, $18.0 million, $45.7 million and $39.1 million, respectively, was recorded in Selling, general and administrative expense and $0.7 million, $0.7 million and $0.6 million, respectively, was recorded in Cost of products sold. For the years ended December 31, 2018 and 2017, the Company recorded $1.1 million and $0.2 million, respectively, in Restructuring and other costs in the Consolidated Statements of Operations. For the year ended December 31, 2018, the Company lowered the likely payout level on certain performance-based grants.

There were 1.4 million non-qualified stock options unvested at December 31, 2018. The remaining unamortized compensation cost related to non-qualified stock options is $7.7 million, which will be expensed over the weighted average remaining vesting period of the options, or 1.9 years. The unamortized compensation cost related to RSUs is $41.9 million, which will be expensed over the remaining weighted average restricted period of the RSUs, or 1.9 years.

The Company uses the Black-Scholes option-pricing model to estimate the fair value of each option awarded. The following table sets forth the average assumptions used to determine compensation cost for the Company's NQSOs issued during the years ended December 31:

	2018	2017	2016
Weighted average fair value per share	$ 12.38	$ 13.83	$ 12.78
Expected dividend yield	0.64%	0.57%	0.52%
Risk-free interest rate	2.72%	2.11%	1.54%
Expected volatility	19.7%	20.0%	20.8%
Expected life (years)	6.07	5.95	6.14

The total intrinsic value of options exercised for the years ended December 31, 2018, 2017 and 2016 was $21.5 million, $65.2 million and $38.3 million, respectively.

The total fair value of shares vested for the years ended December 31, 2018, 2017 and 2016 was $47.8 million, $44.7 million and $34.8 million, respectively.

The following table summarizes the NQSO transactions for the year ended December 31, 2018:

	Outstanding			Exercisable		
(in millions, except per share amounts)	Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value	Shares	Weighted Average Exercise Price	Aggregate Intrinsic Value
December 31, 2017	7.0	$ 43.43	$ 157.0	5.4	$ 38.74	$ 144.9
Granted	0.7	53.76				
Exercised	(1.1)	27.62				
Cancelled	(0.1)	51.63				
Forfeited	(0.1)	58.71				
December 31, 2018	6.4	$ 46.80	$ 4.5	5.0	$ 43.98	$ 4.5

The weighted average remaining contractual term of all outstanding options is 5.2 years and the weighted average remaining contractual term of exercisable options is 4.3 years.

The following table summarizes information about NQSOs outstanding for the year ended December 31, 2018:

	Outstanding			Exercisable	
Range of Exercise Prices (in millions, except per share amounts and life)	Number Outstanding at December 31, 2018	Weighted Average Remaining Contractual Life (in years)	Weighted Average Exercise Price	Number Exercisable at December 31, 2018	Weighted Average Exercise Price
10.01 - 20.00	0.1	0.3	$ 11.00	0.1	$ 11.00
20.01 - 30.00	0.1	2.3	24.17	0.1	24.17
30.01 - 40.00	2.0	2.8	36.89	2.0	36.89
40.01 - 50.00	1.5	5.0	44.01	1.4	43.86
50.01 - 60.00	1.7	7.1	54.64	1.0	53.45
60.01 - 70.00	1.0	7.8	62.00	0.4	61.86
	6.4	5.2	$ 46.80	5.0	$ 43.98

The following table summarizes the unvested RSU transactions for the year ended December 31, 2018:

	Unvested Restricted Stock Units	
(in millions, except per share amounts)	Shares	Weighted Average Grant Date Fair Value
Unvested at December 31, 2017	1.7	$ 56.05
Granted	0.6	54.22
Vested	(0.7)	52.59
Forfeited	(0.1)	55.23
Unvested at December 31, 2018	1.5	$ 56.93

NOTE 14 - INCOME TAXES

The components of (loss) income before income taxes for the years ended December 31 were as follows:

(in millions)	2018	2017	2016
United States	$ (279.6)	$ (145.0)	$ 28.9
Foreign	(678.8)	(1,458.5)	412.0
	$ (958.4)	$ (1,603.5)	$ 440.9

The components of the provision (benefit) for income taxes from operations for the years ended December 31 were as follows:

(in millions)	2018	2017	2016
Current:			
U.S. federal	$ 9.8	$ 1.7	$ 2.3
U.S. state	3.2	5.9	5.6
Foreign	101.5	83.0	111.7
Total	$ 114.5	$ 90.6	$ 119.6
Deferred:			
U.S. federal	$ 46.4	$ 2.8	$ 27.6
U.S. state	(3.0)	11.4	1.3
Foreign	(105.4)	(158.0)	(139.0)
Total	$ (62.0)	$ (143.8)	$ (110.1)
	$ 52.5	$ (53.2)	$ 9.5

The reconciliation of the U.S. federal statutory tax rate to the effective rate for the years ended December 31 is as follows:

	2018	2017	2016
Statutory U.S. federal income tax rate	21.0%	35.0%	35.0%
Effect of:			
State income taxes, net of federal benefit	(0.2)	(0.1)	1.1
Federal benefit of R&D and foreign tax credits	1.0	2.8	(12.6)
Tax effect of international operations	1.8	3.6	(3.9)
Net effect of tax audit activity	(1.0)	(0.6)	(0.6)
Tax effect of enacted statutory rate changes on Non-U.S. jurisdictions	0.3	(0.2)	(0.2)
Federal tax on unremitted earnings of certain foreign subsidiaries	(0.1)	—	0.1
Valuation allowance adjustments	(5.7)	(0.7)	(16.3)
U.S. tax reform - net impacts	0.4	(1.2)	—
Tax effect of impairment of goodwill and intangibles	(22.1)	(37.4)	—
Other	(0.9)	2.1	(0.4)
Effective income tax rate on operations	(5.5%)	3.3%	2.2%

The tax effect of significant temporary differences giving rise to deferred tax assets and liabilities for the years ended December 31 were as follows:

(in millions)	2018		2017	
	Deferred Tax Asset	Deferred Tax Liability	Deferred Tax Asset	Deferred Tax Liability
Commission and bonus accrual	$ 4.5	$ —	$ 5.4	$ —
Employee benefit accruals	56.8	—	62.7	—
Inventory	13.9	—	11.6	—
Identifiable intangible assets	—	686.0	—	880.1
Insurance premium accruals	3.2	—	3.7	—
Miscellaneous accruals	19.2	—	17.4	—
Other	3.0	—	10.3	—
Unrealized losses included in AOCI	24.4	—	46.3	—
Property, plant and equipment	—	56.1	—	55.0
Product warranty accruals	1.5	—	1.1	—
Foreign tax credit and R&D carryforward	78.8	—	69.0	—
Restructuring and other cost accruals	3.1	—	6.2	—
Sales and marketing accrual	5.3	—	5.9	—
Taxes on unremitted earnings of foreign subsidiaries	—	3.2	—	2.7
Tax loss carryforwards and other tax attributes	285.8	—	3,038.8	—
Subtotal	499.5	745.3	3,278.4	937.8
Valuation allowances	(288.4)	—	(3,014.8)	—
Total	$ 211.1	$ 745.3	$ 263.6	$ 937.8

Deferred tax assets and liabilities are included in the following Consolidated Balance Sheet line items at December 31:

(in millions)	2018	2017
Assets		
Other noncurrent assets, net	18.6	43.8
Liabilities		
Deferred income taxes	552.8	718.0

The Company has $78.4 million of foreign tax credit carryforwards at December 31, 2018, of which $38.6 million will expire in 2024, $38.9 million will expire in 2025, and $0.9 million will expire in 2028.

The Company has tax loss carryforwards related to certain foreign and domestic subsidiaries of approximately $1,427.3 million at December 31, 2018, of which $1,081.5 million expires at various times through 2038 and $345.8 million may be carried forward indefinitely, which is a significant decrease from the Company's accumulated losses at December 31, 2017. Various non-U.S. holding companies will be liquidated in 2019 and the net operating losses are not available for future use. Included in deferred income tax assets at December 31, 2018 are tax benefits totaling $261.6 million, before valuation allowances, for the tax loss carryforwards. In addition the Company has record a deferred tax asset of $24.2 million, related to tax attributes.

The Company has recorded $218.4 million of valuation allowance to offset the tax benefit of net operating losses, $59.2 million to offset the tax benefit of foreign tax credits, and $10.8 million of valuation allowance for other deferred tax assets. The Company has recorded these valuation allowances due to the uncertainty that these assets can be realized in the future.

The Company has provided $3.2 million of withholding taxes on certain undistributed earnings of its foreign subsidiaries that the Company anticipates will be repatriated.

Tax Contingencies

The Company applies a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The Company recognizes in the financial statements, tax benefits from an uncertain tax position only if is more likely than not that the position will be sustained upon examination by the taxing authorities based on the technical merits of the position.

The total amount of gross unrecognized tax benefits at December 31, 2018 is approximately $31.9 million, of this total, approximately $30.2 million represents the amount of unrecognized tax benefits that, if recognized, would affect the effective income tax rate. It is reasonably possible that certain amounts of unrecognized tax benefits will significantly increase or decrease within twelve months of the reporting date of the Company's consolidated financial statements. Final settlement and resolution of outstanding tax matters in various jurisdictions during the next twelve months could include unrecognized tax benefits of approximately $11.0 million. Of this approximately $9.0 million represents the amount of unrecognized tax benefits that, if recognized would affect the effective income tax rate.

The total amount of accrued interest and penalties were $4.1 million and $3.5 million at December 31, 2018 and 2017, respectively. The Company has consistently classified interest and penalties recognized in its consolidated financial statements as income taxes based on the accounting policy election of the Company. During the years ended December 31, 2018 and 2017, the Company recognized income tax expense of $0.6 million and $0.5 million respectively, related to interest and penalties. During the year ended December 31, 2016, the Company recognized income tax benefit of $3.4 million, related to interest and penalties.

The Company is subject to U.S. federal income tax as well as income tax of multiple state and foreign jurisdictions. The significant jurisdictions include the U.S., Germany, Sweden and Switzerland. The Company has substantially concluded all U.S. federal income tax matters for years through 2011. The Company is currently under audit for the tax years 2012 and 2013 and 2015 and 2016. For further information on the Internal Revenue Service ("IRS") Audit, see Note 19, Commitments and Contingencies. The tax years 2014 through 2017 are subject to future potential tax audit adjustments. The Company has concluded audits in Germany through the tax year 2011 and is currently under audit for the years 2012 through 2017. The taxable years that remain open for Sweden are 2013 through 2017. For information related to Sweden, see Note 19, Commitments and Contingencies. The taxable years that remain open for Switzerland are 2008 through 2017.

The Company had the following activity recorded for unrecognized tax benefits at December 31:

(in millions)	2018	2017	2016
Unrecognized tax benefits at beginning of period	$ 21.0	$ 10.8	$ 12.1
Gross change for prior period positions	7.5	8.6	(2.0)
Gross change for current year positions	0.3	0.3	2.2
Decrease due to settlements and payments	(0.3)	—	(1.3)
Decrease due to statute expirations	(0.1)	—	—
Increase due to effect of foreign currency translation	—	1.3	—
Decrease due to effect from foreign currency translation	(0.6)	—	(0.2)
Unrecognized tax benefits at end of period	$ 27.8	$ 21.0	$ 10.8

U.S. Federal Legislative Changes

On December 22, 2017, the Tax Cuts and Jobs Act (the "Act" or "U.S. tax reform") was enacted. U.S. tax reform, among other things, reduced the U.S. federal income tax rate to 21% in 2018 from 35%, instituted a dividends received deduction for foreign earnings with a related tax for the deemed repatriation of unremitted foreign earnings and created a new U.S. minimum tax on earnings of foreign subsidiaries. In addition, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118"), which provides guidance on accounting for enactment effects of the Act and provides a measurement period of up to one year from the Act's enactment date for companies to complete their accounting under Accounting Standards Codification No. 740 "Income Taxes", ("ASC 740"). In accordance with SAB 118, income tax effects of The Act were refined upon obtaining, preparing, and analyzing additional information during the measurement period. At December 31, 2018 the Company had completed its accounting for the tax effects of The Act.

The undistributed earnings of foreign subsidiaries that are deemed to be permanently invested amount to $1,137.2 million at December 31, 2018 and $1,071.1 million at December 31, 2017. The Act imposed U.S. tax on all post-1986 foreign unrepatriated earnings accumulated through December 31, 2017. Unrepatriated earnings generated after December 31, 2017, are now subject to tax in the current year under the Global Intangible Low Tax Income ("GILTI") provision of the Act. All undistributed earnings are still subject to certain taxes upon repatriation, primarily where foreign withholding taxes apply.

For the GILTI provision of the Act, the Company has made the policy election to record any liability associated with GILTI in the period in which it is incurred.

The U.S. Department of the Treasury continues to issue interpretative guidance and regulations associated with the Act.

NOTE 15 - BENEFIT PLANS

Defined Contribution Plans

The Company maintains both U.S. and non-U.S. employee defined contribution plans to help employees save for retirement. The primary U.S. plan, the Dentsply Sirona Inc. 401(k) Savings and Employee Stock Ownership Plan (the "Plan"), allows eligible employees to contribute a portion of their cash compensation to the plan on a tax-deferred basis, and in most cases, the Company provides a matching contribution. The Plan includes various investment funds, including common stock of the Company. Effective January 1, 2018, Dentsply Sirona no longer contributes the Company's common stock to the Plan, and participants are no longer allowed to contribute to the Company's common stock under the Plan. The common stock contribution was replaced by a discretionary cash contribution that is initially targeted to be 3% of compensation. Each eligible participant who elects to defer to the Plan will receive a matching contribution of 100% on the first 1% contributed and 50% on the next 5% contributed for a total maximum matching contribution of 3.5%. In addition to the primary U.S. plan, the Company also maintains various other U.S. and non-U.S. defined contribution and non-qualified deferred compensation plans. The annual expenses, net of forfeitures, were $35.1 million, $33.4 million and $28.0 million for the years ended December 31 2018, 2017, and 2016, respectively.

Defined Benefit Plans

The Company maintains a number of separate contributory and non-contributory qualified defined benefit pension plans for certain union and salaried employee groups in the United States. Pension benefits for salaried plans are based on salary and years of service; hourly plans are based on negotiated benefits and years of service. Annual contributions to the pension plans are sufficient to satisfy minimum funding requirements. Pension plan assets are held in trust and consist mainly of common stock and fixed income investments. The Company's funding policy for its U.S. plans is to make contributions that are necessary to maintain the plans on a sound actuarial basis and to meet the minimum funding standards prescribed by law. The Company may, at its discretion, contribute amounts in excess of the minimum required contribution.

In addition to the U.S. plans, the Company maintains defined benefit pension plans for certain employees in Austria, France, Germany, Italy, Japan, the Netherlands, Norway, Sweden, Switzerland and Taiwan. These plans provide benefits based upon age, years of service and remuneration. Other foreign plans are not significant individually or in the aggregate. Substantially all of the German and Swedish plans are unfunded book reserve plans. Most employees and retirees outside the U.S. are covered by government health plans.

The Company predominantly uses liability durations in establishing its discount rates, which are observed from indices of high-grade corporate bond yield curves in the respective economic regions of the plan. During the first quarter of 2016, the Company changed the method utilized to estimate the service cost and interest cost components of net periodic benefit costs for the Company's major defined benefit pension plans in Germany and Switzerland and for all defined benefit pension and other postemployment healthcare plans in the United States. Historically, the Company estimated the service cost and interest cost components using a single weighted average discount rate derived from the yield curve used to measure the benefit obligation at the beginning of the period. The Company has elected to use a spot rate approach for the estimation of these components of benefit cost by applying the specific spot rates along the yield curve to the relevant projected cash flows, as the Company believes this provides a better estimate of service and interest costs. The Company considers this a change in estimate and, accordingly, accounted for it prospectively. This change does not affect the measurement of the Company's total benefit obligation.

Defined Benefit Pension Plan Assets

The primary investment strategy is to ensure that the assets of the plans, along with anticipated future contributions, will be invested in order that the benefit entitlements of employees, pensioners and beneficiaries covered under the plan can be met when due with high probability. Pension plan assets consist mainly of common stock and fixed income investments. The target allocations for defined benefit plan assets are 30% to 65% equity securities, 30% to 65% fixed income securities, 0% to 15% real estate, and 0% to 25% in all other types of investments. Equity securities include investments in companies located both in and outside the U.S. Equity securities in the defined benefit pension plans do not include Company common stock contributed directly by the Company. Fixed income securities include corporate bonds of companies from diversified industries, government bonds, mortgage notes and pledge letters. Other types of investments include investments in mutual funds, common trusts, insurance contracts, hedge funds and real estate. These plan assets are not recorded in the Company's Consolidated Balance Sheet as they are held in trust or other off-balance sheet investment vehicles.

The defined benefit pension plan assets in the U.S. are held in trust and the investment policies of the plans are generally to invest the plans assets in equities and fixed income investments. The objective is to achieve a long-term rate of return in excess of 4% while at the same time mitigating the impact of investment risk associated with investment categories that are expected to yield greater than average returns. In accordance with the investment policies of the U.S. plans, the plans assets were invested in the following investment categories: interest-bearing cash, registered investment companies (e.g. mutual funds), common/collective trusts, master trust investment accounts and insurance company general accounts. The investment objective is for assets to be invested in a manner consistent with the fiduciary standards of the Employee Retirement Income Security Act of 1974, as amended ("ERISA").

The defined benefit pension plan assets maintained in Austria, France, Germany, Norway, the Netherlands, Switzerland and Taiwan all have separate investment policies but generally have an objective to achieve a long-term rate of return in excess of 4% while at the same time mitigating the impact of investment risk associated with investment categories that are expected to yield greater than average returns. In accordance with the investment policies for the plans outside the U.S., the plans' assets were invested in the following investment categories: interest-bearing cash, U.S. and foreign equities, foreign fixed income securities (primarily corporate and government bonds), insurance company contracts, real estate and hedge funds.

In Germany, Sirona traditionally had an unfunded defined benefit pension plan whose benefits are based primarily on years of service and wage and salary group. This plan is closed to new participants. Sirona replaced its unfunded defined benefit pension plan in Germany with a defined contribution plan. All new hires now receive defined contributions to a pension plan based on a percentage of the employee's eligible compensation. However, due to grandfathering provisions for certain existing employees hired before the new defined contribution plan was introduced, the Company continues to be obligated to provide pension benefits which are at a minimum equal to benefits that would have been available under the terms of the traditional defined benefit plans (the "Grandfathered Benefit"). The Grandfathered Benefit and contributions to the Sirona pension plan made for those employees are included in the disclosures for defined benefit plans. The Company accounts for the Grandfathered Benefit by recognizing the higher of the defined contribution obligation or the defined benefit obligation for the minimum benefit.

The Sirona plan assets in Germany consist of insurance policies with a guaranteed minimum return by the insurance company and an excess profit participation feature for a portion of the benefits. Sirona pays the premiums on the insurance policies, but does not manage the investment of the funds. The insurance company makes all decisions on investment of funds, including the allocation to asset groups. The fair value of the plan assets which include equity securities, fixed-income investments, and others is based on the cash surrender values reported by the insurance company.

Reconciliations of changes in the defined benefit obligations, fair value of assets and statement of funded status at December 31 were as follows:

(in millions)	Pension Benefits 2018	Pension Benefits 2017
Change in Benefit Obligation		
Benefit obligation at beginning of year	$ 545.5	$ 473.1
Service cost	16.2	15.7
Interest cost	7.3	6.5
Participant contributions	4.2	4.1
Actuarial losses (gains)	(11.1)	9.1
Plan amendments	(3.8)	0.4
Acquisitions/Divestitures	0.3	—
Effect of exchange rate changes	(20.3)	50.4
Plan curtailments and settlements	(17.5)	(0.2)
Benefits paid	(9.0)	(13.6)
Benefit obligation at end of year	$ 511.8	$ 545.5
Change in Plan Assets		
Fair value of plan assets at beginning of year	$ 185.7	$ 156.8
Actual return on assets	(7.5)	12.4
Plan settlements	(13.4)	(0.2)
Effect of exchange rate changes	(2.4)	8.8
Employer contributions	15.5	17.4
Participant contributions	4.2	4.1
Benefits paid	(9.0)	(13.6)
Fair value of plan assets at end of year	$ 173.1	$ 185.7
Funded status at end of year	$ (338.7)	$ (359.8)

The amounts recognized in the accompanying Consolidated Balance Sheets, net of tax effects, at December 31 are as follows:

(in millions)	Location On The Consolidated Balance Sheets	Pension Benefits 2018	Pension Benefits 2017
Deferred tax asset	Other noncurrent assets, net	$ 27.5	$ 34.8
Total assets		$ 27.5	$ 34.8
Current liabilities	Accrued liabilities	(8.4)	(8.7)
Other noncurrent liabilities	Other noncurrent liabilities	(330.3)	(351.1)
Deferred tax liability	Deferred income taxes	(0.4)	(0.6)
Total liabilities		$ (339.1)	$ (360.4)
Accumulated other comprehensive income	Accumulated other comprehensive loss	77.9	86.2
Net amount recognized		$ (233.7)	$ (239.4)

Amounts recognized in AOCI at December 31 consisted of:

(in millions)	Pension Benefits 2018	2017
Net actuarial loss	$ 109.7	$ 121.7
Net prior service cost	(4.6)	(1.3)
Before tax AOCI	$ 105.1	$ 120.4
Less: Deferred taxes	27.2	34.2
Net of tax AOCI	$ 77.9	$ 86.2

Information for pension plans with an accumulated benefit obligation in excess of plan assets at December 31:

(in millions)	2018	2017
Projected benefit obligation	$ 487.7	$ 517.0
Accumulated benefit obligation	465.0	491.7
Fair value of plan assets	149.0	160.0

Components of net periodic benefit cost for the years ended December 31:

(in millions)	Pension Benefits 2018	2017	2016	Location on Consolidated Statements of Operations
Service cost	$ 6.1	$ 6.0	$ 6.5	Cost of products sold
Service cost	10.1	9.7	9.2	Selling, general and administrative expenses
Interest cost	7.3	6.5	8.0	Other expense (income), net
Expected return on plan assets	(5.3)	(4.0)	(5.1)	Other expense (income), net
Amortization of transition obligation	—	—	—	Other expense (income), net
Amortization of prior service credit	(0.2)	(0.2)	(0.2)	Other expense (income), net
Amortization of net actuarial loss	6.2	6.9	5.1	Other expense (income), net
Curtailment and settlement (gains) loss	(1.2)	—	1.2	Other expense (income), net
Net periodic benefit cost	$ 23.0	$ 24.9	$ 24.7	

a) Prior period presented reflects adoption of ASU 2017-07. For further discussion on the reclassification, refer to Note 1, Significant Accounting Policies.

Other changes in plan assets and benefit obligations recognized in AOCI for the years ended December 31:

(in millions)	Pension Benefits 2018	2017	2016
Net actuarial (gain) loss	$ (5.8)	$ 13.3	$ 20.3
Net prior service (credit) cost	(3.5)	0.3	0.4
Amortization	(6.0)	(6.7)	(4.9)
Total recognized in AOCI	$ (15.3)	$ 6.9	$ 15.8
Total recognized in net periodic benefit cost and AOCI	$ 7.7	$ 31.8	$ 40.5

The expected amounts of net loss, prior service cost and transition obligation for defined benefit plans in AOCI that are expected to be amortized as net expense (income) during 2019 are as follows:

(in millions)	Pension Benefits
Amount of net prior service credit	$ (0.5)
Amount of net loss	5.6
Total amount to be amortized out of AOCI in 2019	$ 5.1

Assumptions

The assumptions used to determine benefit obligations and net periodic benefit cost for the Company's plans are similar for both U.S. and foreign plans.

The weighted average assumptions used to determine benefit obligations for the Company's plans, principally in foreign locations, for the years ended December 31, are as follows:

	Pension Benefits		
	2018	2017	2016
Discount rate	1.8%	1.6%	1.6%
Rate of compensation increase	2.5%	2.5%	2.6%

The weighted average assumptions used to determine net periodic benefit cost for the Company's plans, principally in foreign locations, for the years ended December 31, are as follows:

	Pension Benefits		
	2018	2017	2016
Discount rate	1.6%	1.6%	2.1%
Expected return on plan assets	2.9%	2.9%	3.3%
Rate of compensation increase	2.5%	2.6%	2.5%
Measurement Date	12/31/2018	12/31/2017	12/31/2016

To develop the assumptions for the expected long-term rate of return on assets, the Company considered the current level of expected returns on risk free investments (primarily U.S. government bonds), the historical level of the risk premium associated with the other asset classes in which the assets are invested and the expectations for future returns of each asset class. The expected return for each asset class was then weighted based on the target asset allocations to develop the assumptions for the expected long-term rate of return on assets.

Fair Value Measurements of Plan Assets

The fair value of the Company's pension plan assets at December 31, 2018 and 2017 is presented in the table below by asset category. Approximately 73% of the total plan assets are categorized as Level 1, and therefore, the values assigned to these pension assets are based on quoted prices available in active markets. For the other category levels, a description of the valuation is provided in Note 1, Significant Accounting Policies, under the "Fair Value Measurement" heading.

(in millions)	December 31, 2018 Total	Level 1	Level 2	Level 3
Assets Category				
Cash and cash equivalents	$ 12.4	$ 12.4	$ —	$ —
Equity securities:				
International	47.2	47.2	—	—
Fixed income securities:				
Fixed rate bonds (a)	49.2	49.2	—	—
Other types of investments:				
Mutual funds (b)	17.4	17.4	—	—
Common trusts (c)	11.8	—	11.8	—
Insurance contracts	27.7	—	—	27.7
Hedge funds	7.1	—	—	7.1
Real estate	0.3	—	—	0.3
Total	$ 173.1	$ 126.2	$ 11.8	$ 35.1

(in millions)	December 31, 2017 Total	Level 1	Level 2	Level 3
Assets Category				
Cash and cash equivalents	$ 18.2	$ 18.2	$ —	$ —
Equity securities:				
International	53.0	53.0	—	—
Fixed income securities:				
Fixed rate bonds (a)	48.5	48.5	—	—
Other types of investments:				
Mutual funds (b)	16.3	16.3	—	—
Common trusts (c)	13.3	—	13.3	—
Insurance contracts	29.0	—	—	29.0
Hedge funds	7.1	—	—	7.1
Real estate	0.3	—	—	0.3
Total	$ 185.7	$ 136.0	$ 13.3	$ 36.4

(a)This category includes fixed income securities invested primarily in Swiss bonds, foreign bonds denominated in Swiss francs, foreign currency bonds, mortgage notes and pledged letters.
(b) This category includes mutual funds balanced between moderate-income generation and moderate capital appreciation with investment allocations of approximately 50% equities and 50% fixed income investments.
(c)This category includes common/collective funds with investments in approximately 65% equities and 35% in fixed income investments.

The following table provides a reconciliation from December 31, 2017 to December 31, 2018 for the plan assets categorized as Level 3. During the year ended December 31, 2018, no assets were transferred in or out of the Level 3 category.

(in millions)	December 31, 2018 Insurance Contracts	Hedge Funds	Real Estate	Total
Balance at December 31, 2017	$ 29.0	$ 7.1	$ 0.3	$ 36.4
Actual return on plan assets:				
Relating to assets still held at the reporting date	(1.1)	(0.6)	—	(1.7)
Purchases, sales and settlements, net	1.1	0.7	—	1.8
Effect of exchange rate changes	(1.3)	(0.1)	—	(1.4)
Balance at December 31, 2018	$ 27.7	$ 7.1	$ 0.3	$ 35.1

The following tables provide a reconciliation from December 31, 2016 to December 31, 2017 for the plan assets categorized as Level 3. During the year ended December 31, 2017, no assets were transferred out of the Level 3 category.

	December 31, 2017			
(in millions)	Insurance Contracts	Hedge Funds	Real Estate	Total
Balance at December 31, 2016	$ 25.1	$ 4.0	$ 0.3	$ 29.4
Actual return on plan assets:				
Relating to assets still held at the reporting date	0.8	0.2	—	1.0
Purchases, sales and settlements, net	(0.3)	2.7	—	2.4
Effect of exchange rate changes	3.4	0.2	—	3.6
Balance at December 31, 2017	$ 29.0	$ 7.1	$ 0.3	$ 36.4

Fair values for Level 3 assets are determined as follows:

Common Trusts and Hedge Funds: The investments are valued using the net asset value provided by the administrator of the trust or fund, which is based on the fair value of the underlying securities.

Real Estate: Investment is stated by its appraised value.

Insurance Contracts: The value of the asset represents the mathematical reserve of the insurance policies and is calculated by the insurance firms using their own assumptions.

Cash Flows

In 2019, the Company expects to make employer contributions of $15.2 million to its defined benefit pension plans.

Estimated Future Benefit Payments

(in millions)	Pension Benefits
2019	$ 16.6
2020	18.8
2021	18.4
2022	19.4
2023	20.2
2024-2028	115.5

The above table reflects the total benefits expected to be paid from the plans in the future.

NOTE 16 - RESTRUCTURING AND OTHER COSTS

Restructuring Costs

Restructuring costs of $32.1 million, $55.4 million and $20.9 million for the years ended 2018, 2017 and 2016, respectively, are reflected in Restructuring and other costs in the Consolidated Statements of Operations and the associated liabilities are recorded in Accrued liabilities and Other noncurrent liabilities in the Consolidated Balance Sheets. These costs consist of employee severance benefits, payments due under operating contracts, and other restructuring costs.

For the year ended December 31, 2018, the Company recorded restructuring costs of $32.1 million of which $1.9 million is related to restructuring programs started during 2017.

On November 5, 2018, the Board of Directors of the Company approved a plan to restructure the Company's business to support revenue growth and margin expansion and to simplify the organization. The Company expects to incur approximately $275 million in one-time expenditures and charges through 2021. There can be no assurance that the cost reductions and results will be achieved.

In 2017, the Company received all necessary approvals and proceeded with plans in Germany to reorganize and combine portions of its manufacturing, logistics and distribution networks within the Company's two segments. The Company estimated the cost of these initiatives to be approximately $65.0 million, primarily for severance related benefits for employees, which is expected to be incurred as actions are implemented in 2017 and 2018. For the year ended December 31, 2017, the Company recorded restructuring costs of $55.4 million of which approximately $29.0 million was associated with these plans.

The Company's restructuring accruals at December 31, 2018 were as follows:

	Severances			
(in millions)	2016 and Prior Plans	2017 Plans	2018 Plans	Total
Balance at December 31, 2017	$ 7.7	$ 48.2	$ —	$ 55.9
Provisions and adjustments	2.0	1.0	28.5	31.5
Amounts applied	(7.0)	(20.2)	(10.2)	(37.4)
Change in estimates	(0.1)	(4.8)	(1.9)	(6.8)
Balance at December 31, 2018	$ 2.6	$ 24.2	$ 16.4	$ 43.2

	Lease/Contract Terminations			
(in millions)	2016 and Prior Plans	2017 Plans	2018 Plans	Total
Balance at December 31, 2017	$ 0.4	$ 0.2	$ —	$ 0.6
Provisions and adjustments	1.7	0.3	0.2	2.2
Amounts applied	(1.3)	(0.5)	(0.1)	(1.9)
Change in estimates	(0.3)	—	—	(0.3)
Balance at December 31, 2018	$ 0.5	$ —	$ 0.1	$ 0.6

	Other Restructuring Costs			
(in millions)	2016 and Prior Plans	2017 Plans	2018 Plans	Total
Balance at December 31, 2017	$ 2.1	$ 1.7	$ —	$ 3.8
Provisions and adjustments	1.4	0.6	3.4	5.4
Amounts applied	(2.6)	(1.1)	(3.0)	(6.7)
Change in estimates	(0.1)	—	—	(0.1)
Balance at December 31, 2018	$ 0.8	$ 1.2	$ 0.4	$ 2.4

The following table provides the cumulative amounts for the provisions and adjustments and amounts applied for all the plans by segment:

(in millions)	December 31, 2017	Provisions and Adjustments	Amounts Applied	Change in Estimates	December 31, 2018
Technologies & Equipment	$ 46.9	$ 24.1	$ (24.0)	$ (5.6)	$ 41.4
Consumables	13.3	8.8	(16.9)	(0.1)	5.1
All Other	0.1	6.2	(5.1)	(1.5)	(0.3)
Total	$ 60.3	$ 39.1	$ (46.0)	$ (7.2)	$ 46.2

The Company's restructuring accruals at December 31, 2017 were as follows:

	Severances			
(in millions)	2015 and Prior Plans	2016 Plans	2017 Plans	Total
Balance at December 31, 2016	$ 20.6	$ 8.2	$ —	$ 28.8
Provisions and adjustments	0.6	—	50.6	51.2
Amounts applied	(10.4)	(5.8)	(4.2)	(20.4)
Change in estimates	(4.8)	(0.7)	1.8	(3.7)
Balance at December 31, 2017	$ 6.0	$ 1.7	$ 48.2	$ 55.9

	Lease/Contract Terminations			
(in millions)	2015 and Prior Plans	2016 Plans	2017 Plans	Total
Balance at December 31, 2016	$ 2.7	$ 0.3	$ —	$ 3.0
Provisions and adjustments	0.7	—	0.5	1.2
Amounts applied	(2.3)	(0.3)	(0.3)	(2.9)
Change in estimates	(0.5)	(0.2)	—	(0.7)
Balance at December 31, 2017	$ 0.6	$ (0.2)	$ 0.2	$ 0.6

	Other Restructuring Costs			
(in millions)	2015 and Prior Plans	2016 Plans	2017 Plans	Total
Balance at December 31, 2016	$ 0.5	$ 0.2	$ —	$ 0.7
Provisions and adjustments	2.4	2.0	3.0	7.4
Amounts applied	(1.5)	(2.0)	(1.3)	(4.8)
Change in estimates	0.5	—	—	0.5
Balance at December 31, 2017	$ 1.9	$ 0.2	$ 1.7	$ 3.8

The following table provides the cumulative amounts for the provisions and adjustments and amounts applied for all the plans by segment:

(in millions)	December 31, 2016	Provisions and Adjustments	Amounts Applied	Change in Estimates	December 31, 2017
Technologies & Equipment	$ 22.1	$ 44.2	$ (17.5)	$ (1.9)	$ 46.9
Consumables	10.3	13.8	(9.3)	(1.5)	13.3
All Other	0.1	1.8	(1.3)	(0.5)	0.1
Total	$ 32.5	$ 59.8	$ (28.1)	$ (3.9)	$ 60.3

Other Costs

For the year ended December 31, 2018, the Company recorded other costs of $188.9 million, which consist of impairment charges of $179.2 million and $9.7 million primarily related to legal settlements. For further information on the impairment charges, see Note 9, Goodwill and Intangible Assets.

For the year ended December 31, 2017, the Company recorded other costs of $369.8 million, which consist of impairment charges of $346.7 million and legal settlements of $23.1 million. For further information on the impairment charges, see Note 9, Goodwill and Intangible Assets.

For the year ended December 31, 2016, the Company recorded other costs of $2.3 million, which were primarily related to legal costs.

NOTE 17 - FINANCIAL INSTRUMENTS AND DERIVATIVES

Derivative Instruments and Hedging Activities

The Company's activities expose it to a variety of market risks, which primarily include the risks related to the effects of changes in foreign currency exchange rates, interest rates and commodity prices. These financial exposures are monitored and managed by the Company as part of its overall risk management program. The objective of this risk management program is to reduce the volatility that these market risks may have on the Company's operating results and equity. The Company currently employs foreign currency forward contracts and cross currency basis swap contracts to hedge certain anticipated transactions or assets and liabilities denominated in foreign currencies. Additionally, the Company currently utilizes interest rate swaps to convert variable rate debt to fixed rate debt.

Derivative Instruments Designated as Hedging

Cash Flow Hedges

The following table summarizes the notional amounts of cash flow hedges by derivative instrument type at December 31, 2018 and the notional amounts expected to mature during the next 12 months, with a discussion of the various cash flow hedges by derivative instrument type following the table:

(in millions)	Aggregate Notional Amount	Aggregate Notional Amount Maturing within 12 Months
Foreign exchange forward contracts	$ 384.8	$ 291.2
Interest rate swaps	114.6	114.6
Total derivative instruments designated as cash flow hedges	$ 499.4	$ 405.8

Foreign Exchange Risk Management

The Company uses a layered hedging program to hedge select anticipated foreign currency cash flows to reduce volatility in both cash flows and reported earnings of the consolidated Company. The Company accounts for the designated foreign exchange forward contracts as cash flow hedges. As a result, the Company records the fair value of the contracts primarily through AOCI based on the tested effectiveness of the foreign exchange forward contracts. The Company measures the effectiveness of cash flow hedges of anticipated transactions on a spot-to-spot basis rather than on a forward-to-forward basis. Accordingly, the spot-to-spot change in the derivative fair value will be deferred in AOCI and released and recorded in the Consolidated Statements of Operations in the same period that the hedged transaction is recorded. The time value component of the fair value of the derivative is excluded and is reported in Other expense (income), net in the Consolidated Statements of Operations in the period which it is applicable. Any cash flows associated with these instruments are included in cash from operating activities in the Consolidated Statements of Cash Flows. The Company hedges various currencies, primarily in euros, Swedish kronor, Canadian dollars, British pounds, Swiss francs, Japanese yen and Australian dollars.

These foreign exchange forward contracts generally have maturities up to 18 months and the counterparties to the transactions are typically large international financial institutions.

Interest Rate Risk Management

The Company uses interest rate swaps to convert a portion of its variable interest rate debt to fixed interest rate debt. At December 31, 2018, the Company has one significant exposure hedged with interest rate contracts. The exposure is hedged with derivative contracts having notional amounts totaling 12.6 billion Japanese yen, which effectively converts the underlying variable interest rate debt facility to a fixed interest rate of 0.9% for a term of 5 years ending September 2019.

The Company enters into interest rate swap contracts infrequently as they are only used to manage interest rate risk on long-term debt instruments and not for speculative purposes. Any cash flows associated with these instruments are included in cash from operating activities in the Consolidated Statements of Cash Flows.

Cash Flow Hedge Activity

The following tables summarize the amount of gains (losses) recorded in AOCI in the Consolidated Balance Sheets and income (expense) in the Company's Consolidated Statements of Operations related to all cash flow hedges for the years ended December 31, 2018, 2017 and 2016:

	December 31, 2018			
(in millions)	(Loss) Gain Recognized in AOCI	Location on the Consolidated Statements of Operations	Effective Portion Reclassified from AOCI into (Expense) Income	Ineffective Portion Recognized in (Expense) Income
Effective Portion:				
Interest rate swaps	$ (0.1)	Interest expense	$ (2.3)	$ —
Foreign exchange forward contracts	5.2	Cost of products sold	(8.9)	—
Ineffective Portion:				
Foreign exchange forward contracts	$ —	Other expense (income), net	$ —	$ 1.3
Total in cash flow hedging	$ 5.1		$ (11.2)	$ 1.3

	December 31, 2017			
(in millions)	(Loss) Gain Recognized in AOCI	Location on the Consolidated Statements of Operations	Effective Portion Reclassified from AOCI into (Expense) Income	Ineffective Portion Recognized in (Expense) Income
Effective Portion:				
Interest rate swaps	$ (0.1)	Interest expense	$ (2.3)	$ —
Foreign exchange forward contracts	(14.6)	Cost of products sold	(3.0)	—
Ineffective Portion:				
Foreign exchange forward contracts	$ —	Other expense (income), net	$ —	$ (0.9)
Total for cash flow hedging	$ (14.7)		$ (5.3)	$ (0.9)

	December 31, 2016			
(in millions)	(Loss) Gain Recognized in AOCI	Location on the Consolidated Statements of Operations	Effective Portion Reclassified from AOCI into (Expense) Income	Ineffective Portion Recognized in (Expense) Income
Effective Portion:				
Interest rate swaps	$ (0.4)	Interest expense (a)	$ (2.9)	$ —
Foreign exchange forward contracts	(0.3)	Cost of products sold	4.8	—
Foreign exchange forward contracts	(0.2)	SG&A expenses	0.1	—
Commodity contracts	0.1	Cost of products sold	(0.1)	—
Ineffective Portion:				
Foreign exchange forward contracts	$ —	Other expense (income), net	$ —	$ (0.6)
Total for cash flow hedging	$ (0.8)		$ 1.9	$ (0.6)

Overall, the derivatives designated as cash flow hedges are considered to be highly effective for accounting purposes. At December 31, 2018, the Company expects to reclassify $2.0 million of deferred net gains on cash flow hedges recorded in AOCI in the Consolidated Statements of Operations during the next 12 months. The term over which the Company is hedging exposures to variability of cash flows (for all forecasted transactions, excluding interest payments on variable interest rate debt) is typically 18 months.

For the rollforward of derivative instruments designated as cash flow hedges in AOCI see Note 3, Comprehensive Income.

Hedges of Net Investments in Foreign Operations

The Company has significant investments in foreign subsidiaries the most significant of which are denominated in euros, Swiss francs, Japanese yen and Swedish kronor. The net assets of these subsidiaries are exposed to volatility in currency exchange rates. To hedge a portion of this exposure the Company employs both derivative and non-derivative financial instruments. The derivative instruments consist of foreign exchange forward contracts and cross currency basis swaps. The non-derivative instruments consist of foreign currency denominated debt held at the parent company level. Translation gains and losses related to the net assets of the foreign subsidiaries are offset by gains and losses in derivative and non-derivative financial instruments designated as hedges of net investments, which are included in AOCI. The time value component of the fair value of the derivative is excluded and is reported in Other expense (income), net in the Consolidated Statements of Operations in the period which it is applicable. Any cash flows associated with these instruments are included in investing activities in the Consolidated Statements of Cash Flows except for derivative instruments that include an other-than-insignificant financing element, in which case all cash flows will be classified as financing activities in the Consolidated Statements of Cash Flows.

On January 2, 2018, the Company entered into a 245.6 million euro cross currency basis swap maturing in August 2021, that was designated as a hedge of net investments. This contract effectively converts the $295.7 million bond coupon from 4.1% to 1.7%.

The following table summarizes the notional amounts of hedges of net investments by derivative instrument type at December 31, 2018 and the notional amounts expected to mature during the next 12 months:

(in millions)	Aggregate Notional Amount	Aggregate Notional Amount Maturing within 12 Months
Foreign exchange forward contracts	$ 600.5	$ 300.3
Cross currency basis swaps	281.4	—
Total derivative instruments designated as hedges of net investment	$ 881.9	$ 300.3

The fair value of the foreign exchange forward contracts and cross currency basis swaps is the estimated amount the Company would receive or pay at the reporting date, taking into account the effective interest rates, cross currency swap basis rates and foreign exchange rates. The effective portion of the change in the value of these derivatives is recorded in AOCI, net of tax effects.

The following tables summarize the amount of gains (losses) recorded in AOCI in the Consolidated Balance Sheets and income (expense) in the Company's Consolidated Statements of Operations related to the hedges of net investments for the year ended December 31, 2018, 2017 and 2016:

	December 31, 2018		
(in millions)	Gain Recognized in AOCI	Location on the Consolidated Statements of Operations	Recognized in Income
Effective Portion:			
Cross currency basis swaps	$ 14.7	Interest expense	$ 7.3
		Other expense (income), net	(3.0)
Foreign exchange forward contracts	$ 21.5	Other expense (income), net	$ 15.3
Total for net investment hedging	$ 36.2		$ 19.6

(in millions)	December 31, 2017 Loss Recognized in AOCI	Location on the Consolidated Statements of Operations	Recognized in Income
Effective Portion:			
Foreign exchange forward contracts	$ (14.1)	Other expense (income), net	$ 3.7
Total for net investment hedging	$ (14.1)		$ 3.7

(in millions)	December 31, 2016 Gain Recognized in AOCI	Location on the Consolidated Statements of Operations	Recognized in Income
Effective Portion:			
Foreign exchange forward contracts	$ (13.2)	Interest expense	$ 6.7
Total for net investment hedging	$ (13.2)		$ 6.7

Fair Value Hedges

The Company used interest rate swaps to convert a portion of its fixed interest rate debt to variable interest rate debt. The Company had U.S. dollar denominated interest rate swaps with an initial total notional value of $150.0 million to effectively convert the underlying fixed interest rate of 4.1% on the Company's $250.0 million private placement notes ("PPN") to variable rate, the debt and interest rate swap matured in February 2016. The notional value of the swaps declined proportionately as portions of the PPN matured. These interest rate swaps were designated as fair value hedges of the interest rate risk associated with the hedged portion of the fixed rate PPN. Accordingly, the Company carried the portion of the hedged debt at fair value, with the change in debt and swaps offsetting each other in the Consolidated Statements of Operations. Any cash flows associated with these instruments were included in operating activities in the Consolidated Statements of Cash Flows.

Derivative Instruments Not Designated as Hedges

The Company enters into derivative instruments with the intent to partially mitigate the foreign exchange revaluation risk associated with recorded assets and liabilities that are denominated in a non-functional currency. The gains and losses on these derivative transactions offset the gains and losses generated by the revaluation of the underlying non-functional currency balances and are recorded in Other expense (income), net in the Consolidated Statements of Operations. The Company primarily uses foreign exchange forward contracts and cross currency basis swaps to hedge these risks. Any cash flows associated with the foreign exchange forward contracts and interest rate swaps not designated as hedges are included in cash from operating activities in the Consolidated Statements of Cash Flows. Any cash flows associated with the cross currency basis swaps not designated as hedges are included in investing activities in the Consolidated Statements of Cash Flows except for derivative instruments that include an other-than-insignificant financing element, in which case the cash flows will be classified as financing activities in the Consolidated Statements of Cash Flows.

The following tables summarize the aggregate notional amounts of the Company's economic hedges not designated as hedges by derivative instrument types at December 31, 2018 and the notional amounts expected to mature during the next 12 months:

(in millions)	Aggregate Notional Amount	Aggregate Notional Amount Maturing within 12 Months
Foreign exchange forward contracts	$ 324.9	$ 324.9
Total for instruments not designated as hedges	$ 324.9	$ 324.9

Derivative Instruments not Designated as Hedges Activity

The following table summarizes the amounts of gains (losses) recorded in the Company's Consolidated Statements of Operations related to the economic hedges not designated as hedging for the years ended December 31, 2018, 2017, and 2016:

(in millions)	Location on the Consolidated Statements of Operations	(Loss) Gain Recognized December 31, 2018	2017	2016
Foreign exchange forward contracts (a)	Other expense (income), net	$ (6.2)	$ (7.7)	$ (0.6)
Total for instruments not designated as hedges		$ (6.2)	$ (7.7)	$ (0.6)

(a) The gains and losses on these derivative transactions offset the gains and losses generated by the revaluation of the underlying non-functional currency balances which are recorded in Other expense (income), net in the Consolidated Statements of Operations.

Consolidated Balance Sheets Location of Derivative Fair Values

The following tables summarize the fair value and Consolidated Balance Sheets location of the Company's derivatives at December 31, 2018 and 2017:

(in millions)	December 31, 2018 Prepaid Expenses and Other Current Assets, Net	Other Noncurrent Assets, Net	Accrued Liabilities	Other Noncurrent Liabilities
Designated as Hedges				
Foreign exchange forward contracts	$ 18.9	$ 12.4	$ —	$ 0.6
Interest rate swaps	—	—	0.2	—
Cross currency basis swaps	—	11.6	—	—
Total	$ 18.9	$ 24.0	$ 0.2	$ 0.6
Not Designated as Hedges				
Foreign exchange forward contracts	$ 2.4	$ —	$ 2.6	$ —
Total	$ 2.4	$ —	$ 2.6	$ —

(in millions)	December 31, 2017 Prepaid Expenses and Other Current Assets, Net	Other Noncurrent Assets, Net	Accrued Liabilities	Other Noncurrent Liabilities
Designated as Hedges				
Foreign exchange forward contracts	$ 1.4	$ —	$ 13.4	$ 4.5
Interest rate swaps	—	—	0.3	0.1
Total	$ 1.4	$ —	$ 13.7	$ 4.6
Not Designated as Hedges				
Foreign exchange forward contracts	$ 3.4	$ —	$ 3.7	$ —
Total	$ 3.4	$ —	$ 3.7	$ —

Balance Sheet Offsetting

Substantially all of the Company's derivative contracts are subject to netting arrangements, whereby the right to offset occurs in the event of default or termination in accordance with the terms of the arrangements with the counterparty. While these contracts contain the enforceable right to offset through netting arrangements with the same counterparty, the Company elects to present them on a gross basis in the Consolidated Balance Sheets.

Offsetting of financial assets and liabilities under netting arrangements at December 31, 2018:

(in millions)	Gross Amounts Recognized	Gross Amount Offset in the Consolidated Balance Sheets	Net Amounts Presented in the Consolidated Balance Sheets	Gross Amounts Not Offset in the Consolidated Balance Sheets		Net Amount
				Financial Instruments	Cash Collateral Received/Pledged	
Assets						
Foreign exchange forward contracts	$ 33.7	$ —	$ 33.7	$ (1.8)	$ —	$ 31.9
Cross currency basis swaps	11.6	—	11.6	(1.6)	—	10.0
Total Assets	$ 45.3	$ —	$ 45.3	$ (3.4)	$ —	$ 41.9

(in millions)	Gross Amounts Recognized	Gross Amount Offset in the Consolidated Balance Sheets	Net Amounts Presented in the Consolidated Balance Sheets	Gross Amounts Not Offset in the Consolidated Balance Sheets		Net Amount
				Financial Instruments	Cash Collateral Received/Pledged	
Liabilities						
Foreign exchange forward contracts	$ 3.2	$ —	$ 3.2	$ (3.2)	$ —	$ —
Interest rate swaps	0.2	—	0.2	(0.2)	—	—
Total Liabilities	$ 3.4	$ —	$ 3.4	$ (3.4)	$ —	$ —

Offsetting of financial assets and liabilities under netting arrangements at December 31, 2017:

(in millions)	Gross Amounts Recognized	Gross Amount Offset in the Consolidated Balance Sheets	Net Amounts Presented in the Consolidated Balance Sheets	Gross Amounts Not Offset in the Consolidated Balance Sheets		Net Amount
				Financial Instruments	Cash Collateral Received/Pledged	
Assets						
Foreign exchange forward contracts	$ 4.8	$ —	$ 4.8	$ (3.9)	$ —	$ 0.9
Total Assets	$ 4.8	$ —	$ 4.8	$ (3.9)	$ —	$ 0.9

(in millions)	Gross Amounts Recognized	Gross Amount Offset in the Consolidated Balance Sheets	Net Amounts Presented in the Consolidated Balance Sheets	Gross Amounts Not Offset in the Consolidated Balance Sheets		Net Amount
				Financial Instruments	Cash Collateral Received/Pledged	
Liabilities						
Foreign exchange forward contracts	$ 21.6	$ —	$ 21.6	$ (3.8)	$ —	$ 17.8
Interest rate swaps	0.4	—	0.4	(0.1)	—	0.3
Total Liabilities	$ 22.0	$ —	$ 22.0	$ (3.9)	$ —	$ 18.1

NOTE 18 - FAIR VALUE MEASUREMENT

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The Company records financial instruments at fair value with unrealized gains and losses related to certain financial instruments reflected in AOCI in the Consolidated Balance Sheets. In addition, the Company has recognized certain liabilities at fair value. The Company applies the market approach for recurring fair value measurements. Accordingly, the Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities that are recorded at fair value as of the balance sheet date are classified in their entirety based on the lowest level of input that is significant to the fair value measurement.

The fair value of financial instruments is determined by reference to various market data and other valuation techniques as appropriate. The Company believes the carrying amounts of cash and cash equivalents, accounts receivable (net of allowance for doubtful accounts), prepaid expenses and other current assets, accounts payable, accrued liabilities, income taxes payable and notes payable approximate fair value due to the short-term nature of these instruments. The Company estimated the fair value and carrying value of its total long-term debt, including current portion, was $1,577.1 million and $1,575.5 million, respectively, at December 31, 2018. At December 31, 2017, the Company estimated the fair value and carrying value was $1,629.9 million and $1,620.8 million, respectively. The interest rate on the outstanding principal of the $450.0 million Senior Notes is a fixed rate of 4.1% and the fair value is based on interest rates at December 31, 2018. For additional details on interest rates of long term debt, please see Note 12, Financing Arrangements. The variable interest rate on the Japanese yen term loan is consistent with current market conditions, therefore the fair value approximates the loan's carrying value.

The following tables set forth by level within the fair value hierarchy the Company's financial assets and liabilities that were accounted for at fair value on a recurring basis at December 31:

	2018			
(in millions)	Total	Level 1	Level 2	Level 3
Assets				
Cross currency interest rate swaps	$ 11.6	$ —	$ 11.6	$ —
Foreign exchange forward contracts	33.7	—	33.7	—
Total assets	$ 45.3	$ —	$ 45.3	$ —
Liabilities				
Interest rate swaps	$ 0.2	$ —	$ 0.2	$ —
Foreign exchange forward contracts	3.2	—	3.2	—
Contingent considerations on acquisitions	9.1	—	—	9.1
Total liabilities	$ 12.5	$ —	$ 3.4	$ 9.1

	2017			
(in millions)	Total	Level 1	Level 2	Level 3
Assets				
Foreign exchange forward contracts	$ 4.8	$ —	$ 4.8	$ —
Available-for-sale security	54.4	—	54.4	—
Total assets	$ 59.2	$ —	$ 59.2	$ —
Liabilities				
Interest rate swaps	$ 0.4	$ —	$ 0.4	$ —
Foreign exchange forward contracts	21.6	—	21.6	—
Contingent considerations on acquisitions	8.6	—	—	8.6
Total liabilities	$ 30.6	$ —	$ 22.0	$ 8.6

Derivative valuations are based on observable inputs to the valuation model including interest rates, foreign currency exchange rates, future commodities prices and credit risks. The Company utilizes commodity contracts, certain interest rates swaps and foreign exchange forward contracts that are considered cash flow hedges. In addition, the Company at times employs certain cross currency interest rate swaps and forward exchange contracts that are considered hedges of net investment in foreign operations. Both types of designated derivative instruments are further discussed in Note 17, Financial Instruments and Derivatives.

Liabilities Measured at Fair Value on a Recurring Basis Using Significant Unobservable Inputs (Level 3)

The Company's Level 3 liabilities at December 31, 2018 are related to earn-out obligations on prior acquisitions that were assumed as part of the merger with Sirona. The following table presents a reconciliation of the Company's Level 3 holdings measured at fair value on a recurring basis using unobservable inputs:

(in millions)	Level 3
Balance, December 31, 2016	$ 7.6
Unrealized gain:	
Reported in Other expense (income), net	0.1
Effect of exchange rate changes	0.9
Balance, December 31, 2017	$ 8.6
Unrealized gain:	
Reported in Other expense (income), net	0.9
Effect of exchange rate changes	(0.4)
Balance, December 31, 2018	$ 9.1

There were no additional purchases, issuances or transfers of Level 3 financial instruments in 2018 and 2017.

NOTE 19 - COMMITMENTS AND CONTINGENCIES

Leases

The Company leases automobiles machinery, equipment and certain office, warehouse and manufacturing facilities under non-cancelable leases. The leases generally require the Company to pay insurance, taxes and other expenses related to the leased property. Total rental expense for all operating leases was $38.7 million, $28.3 million and $33.3 million for 2018, 2017 and 2016, respectively.

Rental commitments, principally for real estate (exclusive of taxes, insurance and maintenance), automobiles and office equipment at December 31, 2018 are as follows:

(in millions)	
2019	$ 40.8
2020	32.7
2021	24.6
2022	18.2
2023	14.0
2024 and thereafter	18.0
	$ 148.3

Litigation

The SEC's Division of Enforcement has asked the Company to provide documents and information concerning the Company's accounting and disclosures. The Company is cooperating with the SEC's investigation. The Company is unable to predict the ultimate outcome of this matter, or whether it will have a material adverse effect on the Company's consolidated financial position, results of operations or cash flows.

On May 5, 2015, Roth Licensing, LLC ("Roth Licensing") filed a demand for arbitration alleging that GAC International, LLC, a subsidiary of the Company ("GAC"), infringes a registered trademark of Roth Licensing pursuant to the Lanham Act, California Civil Code Section 3344.1, and certain other common law causes of action. On August 9, 2017, the arbitrator issued an interim decision on liability finding that GAC had willfully infringed the registered trademark of Roth Licensing. On November 8, 2017, the arbitrator served his Final Award on damages awarding Roth Licensing approximately $16.0 million for damages, attorneys' fees and costs as well as injunctive relief regarding the ROTH mark and any reproduction, counterfeit, copy, or colorable imitation of the ROTH mark and Dr. Roth's image. The Company filed a Motion to Vacate Arbitration Award with the Eastern District of New York and on January 11, 2019, the court confirmed the arbitration award and the Judgment was entered by the court on January 25, 2019. The Company has paid the final award to the plaintiff.

On January 11, 2018, Tom Redlich, a former employee, filed a lawsuit against the Company, demanding supplemental compensation pursuant to an agreement allegedly entered into with Sirona Dental GmbH which was intended to entice Mr. Redlich to continue to work for the company for no less than eight years following the date of this agreement. The Company filed its response on April 4, 2018, denying the authenticity and enforceability of, and all liability under, the alleged agreement. The court held an initial hearing on the matter on April 11, 2018. Mr. Redlich filed his reply on July 9, 2018. The Company filed its response to that reply on August 23, 2018, refuting the allegations in Mr. Redlich's reply and continuing to deny liability under the alleged agreement. Following that, Mr. Jost Fischer, upon invitation of the Company, joined the litigation against Mr. Redlich as a third party. The court held a hearing on August 30, 2018 where the parties outlined their respective legal positions. In late November 2018, Mr. Fischer filed a statement to the court in which he disputed the central allegations raised by Mr. Redlich in his lawsuit and his supplemental submissions to the court. Based on Mr. Fischer's statement, the Company filed a further written statement to the court, therein insisting on its previous legal position and presenting new factual submissions and evidence. In response, Mr. Redlich filed a written statement rejecting the positions of Mr. Fischer and the Company. In late January 2019 the court held hearings in which Mr. Redlich and a number of witnesses provided oral testimony to the court. The court plans to conduct a further hearing in the matter in late March/early April 2019. The Company continues to defend against this claim vigorously.

On January 25, 2018, Futuredontics, Inc. received service of a purported class action lawsuit brought by Henry Olivares and other similarly situated individuals in the Superior Court of the State of California for the County of Los Angeles. In January 2019, an amended complaint was filed adding another named plaintiff, Rachael Clarke, and various claims. The plaintiff class alleges several violations of the California wage and hours laws, including, but not limited to, failure to provide rest and meal breaks and the failure pay overtime. The parties have engaged in written and other discovery. The Company continues to vigorously defend against this matter. On February 5, 2019, Plaintiff Calethia Holt (represented by the same counsel as Mr. Olivares and Ms. Clarke) filed a separate representative action in Los Angeles Superior Court alleging a single violation of the Private Attorneys' General Act that is based on the same underlying claims as the Olivares/Clarke lawsuit. The Company has not yet been served in connection with this action.

On June 7, 2018, and August 9, 2018, John Castronovo and Irving Golombeck, respectively, filed substantially identical putative class action suits in the Supreme Court of the State of New York, County of New York claiming that the Company, certain of its present and former officers and directors, and former officers and directors of Sirona violated U.S. securities laws (together, the "State Court Class Action"). The plaintiffs allege that the registration statement/joint proxy statement filed with the SEC on December 4, 2015 (the "Registration Statement") in connection with the Merger contained material misrepresentations and omitted required information by failing to disclose, among other things, that a distributor had allegedly purchased excessive inventory of legacy Sirona products and that three distributors of the Company's and Sirona's products and equipment had allegedly been engaging in anticompetitive conduct. The plaintiffs assert these claims on behalf of a putative class of former shareholders of Sirona who exchanged their shares of Sirona stock for shares of the Company's stock in the Merger. On September 19, 2018, the Court consolidated the two actions.

On October 9, 2018, defendants filed a motion to stay discovery pending determination of their motion to dismiss. Plaintiffs filed an amended complaint on November 2, 2018 and defendants moved to dismiss the amended complaint on December 17, 2018. Oral argument on the motion to stay discovery took place on January 2, 2019. Plaintiffs filed their opposition to the motion to dismiss on January 31, 2019, and defendants' reply in further support was filed on March 1, 2019.

On December 19, 2018, Boynton Beach Employees' Pension Plan filed a putative class action in the U.S. District Court for the Eastern District of New York, alleging that the Company, certain of its present and former officers and directors, and former officers and directors of Sirona violated U.S. securities laws (the "Federal Class Action"). The plaintiff alleges the same claims as those asserted in the State Court Class Action, relating to the alleged material misrepresentations and omissions of required information in the Registration Statement. In addition, the plaintiff alleges that the defendants made false and misleading statements in quarterly and annual reports and other public statements between February 20, 2014, and August 7, 2018. The plaintiff asserts claims on behalf of a putative class consisting of (a) all purchasers of the Company's stock during the period February 20, 2014 through August 7, 2018, (b) former shareholders of Sirona who exchanged their shares of Sirona stock for shares of the Company's stock in the Merger, and (c) holders of the Company's shares who held shares as of the record date of December 2, 2015 and were entitled to vote with respect to the Merger. Motions for appointment of lead plaintiff and lead counsel were filed on February 19, 2019.

On January 25, 2019, defendants moved to stay all proceedings in the State Court Class Action pending final disposition of the Federal Class Action. The Company intends to defend itself vigorously in both actions.

As a result of an audit by the IRS for fiscal years 2012 through 2013, on February 11, 2019, the IRS issued to the Company a "30-day letter" and a Revenue Agent's Report ("RAR"), relating to the Company's worthless stock deduction in 2013 in the amount of $546.0 million. The RAR disallows the deduction and, after adjusting the Company's net operating loss carryforward, asserts that the Company is entitled to refund of $4.7 million for 2012, has no tax liability for 2013, and owes a deficiency of $17.1 million in tax for 2014, excluding interest. In accordance with ASC 740, the Company recorded the tax benefit associated with the worthless stock deduction in the Company's 2012 financial statements. The Company will submit a formal protest disputing on multiple grounds the proposed taxes.

The Company believes the IRS position is without merit and believes that it is more likely-than-not the Company's position will be sustained upon further review. The Company has not accrued a liability relating to the proposed tax adjustments. However, the outcome of this dispute involves a number of uncertainties, including those inherent in the valuation of various assets at the time of the worthless stock deduction, and those relating to the application of the Internal Revenue Code and other federal income tax authorities and judicial precedent. Accordingly, there can be no assurance that the dispute with the IRS will be resolved favorably. If determined adversely, the dispute would result in a current period charge to earnings and could have a material adverse effect on the consolidated results of operations, financial position and liquidity of the Company.

The Swedish Tax Agency has disallowed certain of the Company's interest expense deductions for the tax years from 2013 to 2017 and is also expected to do the same for the 2018 tax year. If such interest expense deductions were disallowed, the Company would be subject to an additional $41.0 million in tax expense. The Company has appealed the disallowance to the Swedish administrative court. With respect to such deductions taken in the tax years from 2013 to 2014, the court ruled against the Company on July 5 2017. On August 7, 2017, the Company appealed the unfavorable decision of the Swedish administrative court. On November 5, 2018, the Company delivered its final argument to the administrative court of appeal at a hearing. The European Union Commission has taken the view that Sweden's interest deduction limitation rules are incompatible with European Union law and supporting legal opinions, and therefore the Company has not paid the tax or made provision in its financial statements for such potential expense. The Company intends to vigorously defend its position and pursue related appeals.

In addition to the matters discussed above, the Company is, from time to time, subject to a variety of litigation and similar proceedings incidental to its business. These legal matters primarily involve claims for damages arising out of the use of the Company's products and services and claims relating to intellectual property matters including patent infringement, employment matters, tax matters, commercial disputes, competition and sales and trading practices, personal injury and insurance coverage. The Company may also become subject to lawsuits as a result of past or future acquisitions or as a result of liabilities retained from, or representations, warranties or indemnities provided in connection with, divested businesses. Some of these lawsuits may include claims for punitive and consequential, as well as compensatory damages. Based upon the Company's experience, current information and applicable law, it does not believe that these proceedings and claims will have a material adverse effect on its consolidated results of operations, financial position or liquidity. However, in the event of unexpected further developments, it is possible that the ultimate resolution of these matters, or other similar matters, if unfavorable, may be materially adverse to the Company's business, financial condition, results of operations or liquidity.

While the Company maintains general, product, property, workers' compensation, automobile, cargo, aviation, crime, fiduciary and directors' and officers' liability insurance up to certain limits that cover certain of these claims, this insurance may be insufficient or unavailable to cover such losses. In addition, while the Company believes it is entitled to indemnification from third parties for some of these claims, these rights may also be insufficient or unavailable to cover such losses.

Purchase and Other Commitments

From time to time, the Company enters into long-term inventory purchase commitments with minimum purchase requirements for raw materials and finished goods to ensure the availability of products for production and distribution. These commitments may have a significant impact on levels of inventory maintained by the Company.

NOTE 20 - QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

DENTSPLY SIRONA INC.
Quarterly Financial Information (Unaudited)
(in millions, except per share amounts)

2018	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Rounding and Other	Total Year
Net sales	$ 956.1	$ 1,042.1	$ 928.4	$ 1,059.7	$ —	$ 3,986.3
Gross profit	514.1	552.8	476.1	524.8	—	2,067.8
Goodwill impairment (a)	—	1,085.8	—	—	—	1,085.8
Operating income (loss)	68.7	(1,154.1)	45.5	81.8	—	(958.1)
Net (loss) income attributable to						
Dentsply Sirona	81.2	(1,122.0)	28.0	1.8	—	(1,011.0)
Net (loss) income per common share - basic	$ 0.36	$ (4.98)	$ 0.13	$ 0.01	$ (0.03)	$ (4.51)
Net (loss) income per common share - diluted	$ 0.35	$ (4.98)	$ 0.13	$ 0.01	$ (0.02)	$ (4.51)
Cash dividends declared per common share	$ 0.0875	$ 0.1750	$ —	$ 0.0875	$ —	$ 0.3500

(a) During the quarter ended June 30, 2018, the Company recorded goodwill and intangible asset impairments. See Note 9, Goodwill and Intangible Assets for further information.

2017	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Rounding and Other	Total Year
Net sales	$ 900.5	$ 992.7	$ 1,009.2	$ 1,091.0	$ —	$ 3,993.4
Gross profit	492.0	544.2	559.0	593.3	—	2,188.5
Goodwill impairment (a)	—	1,092.9	—	558.0	—	1,650.9
Operating income	84.2	(1,048.0)	107.9	(706.4)	—	(1,562.3)
Net (loss) income attributable to						
Dentsply Sirona	59.7	(1,050.0)	90.6	(650.4)	0.1	(1,550.0)
Net (loss) income per common share - basic	$ 0.26	$ (4.58)	$ 0.39	$ (2.85)	$ 0.02	$ (6.76)
Net (loss) income per common share - diluted	$ 0.26	$ (4.58)	$ 0.39	$ (2.85)	$ 0.02	$ (6.76)
Cash dividends declared per common share	$ 0.0875	$ 0.0875	$ 0.0875	$ 0.0875	$ —	$ 0.3500

(a) During the quarters ended June 30, 2017, December 31, 2017 and June 30, 2018, the Company recorded goodwill and intangible asset impairments. See Note 9, Goodwill and Intangible Assets for further information.

Item 16. Form 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.

DENTSPLY SIRONA INC.

By: /s/ *Donald M. Casey, Jr.*
Donald M. Casey, Jr.
Chief Executive Officer

Date: March 8, 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.

/s/ *Donald M. Casey, Jr.*	March 8, 2019
Donald M. Casey, Jr. Chief Executive Officer and Director (Principal Executive Officer)	Date
/s/ *Nicholas W. Alexos*	March 8, 2019
Nicholas W. Alexos Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	Date
/s/ *Eric K. Brandt*	March 8, 2019
Eric K. Brandt Chairman of the Board of Directors	Date
/s/ *Dr. Michael C. Alfano*	March 8, 2019
Dr. Michael C. Alfano Director	Date
/s/ *David K. Beecken*	March 8, 2019
David K. Beecken Director	Date
/s/ *Michael J. Coleman*	March 8, 2019
Michael J. Coleman Director	Date
/s/ *Willie A. Deese*	March 8, 2019
Willie A. Deese Director	Date

/s/	*Betsy D Holden*	March 8, 2019
	Betsy D Holden Director	Date
/s/	*Harry M. Jansen Kraemer, Jr.*	March 8, 2019
	Harry M. Jansen Kraemer, Jr. Director	Date
/s/	*Thomas Jetter*	March 8, 2019
	Thomas Jetter Director	Date
/s/	*Arthur D. Kowaloff*	March 8, 2019
	Arthur D. Kowaloff Director	Date
/s/	*Francis J. Lunger*	March 8, 2019
	Francis J. Lunger Director	Date
/s/	*Leslie F Varon*	March 8, 2019
	Leslie F Varon Director	Date

DENTSPLY SIRONA INC.
DIRECTORS' DEFERRED COMPENSATION PLAN
AS AMENDED AND RESTATED
EFFECTIVE JANUARY 1, 2019

1 PURPOSE

The purpose of the DENTSPLY SIRONA Inc. ("Dentsply Sirona") Directors' Deferred Compensation Plan (the "Plan") is to provide the Directors of Dentsply Sirona (the "Directors") with the opportunity to defer receipt of their compensation to a future date. Dentsply Sirona has adopted this program in recognition of the valuable services of its Directors and the desire to provide them with additional flexibility in their personal financial planning.

2 ELIGIBILITY

Any Director of the Board of Dentsply Sirona (the "Board") who receives compensation for his/her services on the Board is eligible to participate in the Plan.

3 ELECTION TO PARTICIPATE

a Any eligible Director may elect prior to the beginning of each calendar year but no later than December 15th, to participate in the Plan and defer receipt of either all or part of the annual retainer, committee and meeting fees that he or she may receive that year to a distribution date defined in Section 5. A new Director may make an election with respect to future fees, including fees earned in the first year of eligibility, within 30 days after becoming eligible.

b The election may be made on a written form signed by the Director or electronically by online submission. This election will continue in effect for future years unless the Director submits a written request changing his/her election, in accordance with the procedures established by Dentsply Sirona. A revised deferral election cannot change the form of a previous election, and will be effective as of January 1st of the year specified, provided the revised election has been received by Dentsply Sirona by December 15th of the previous calendar year.

c Nothing within this Section prevents a Director from filing a revised election for a calendar year and thereafter filing another election to participate in the Plan for any subsequent calendar year.

1 DEFERRAL ACCOUNTS

A deferred compensation account will be established for each participating Director ("Participant"). Credits will be made to a Participant's account on the first day of each calendar quarter (the "Contribution Date"). At the election of a Participant, the deferred

compensation will either (i) earn interest, compounded quarterly, until distribution is made in full; or, (ii) be converted into stock units utilizing the price of Dentsply Sirona common stock determined as of the Contribution Date and receive credit for dividends which will be converted to stock units on dividend payment dates. An election for stock units will be tracked based on the number of shares of Dentsply Sirona stock allocated to the Participant's account and cannot be changed to an interest account. The interest rate for purposes of the Plan will be a rolling average of the rates reported in Federal Reserve Statistical Release H-15 under the caption "Treasury Constant Maturities, 10-year" under the column captioned "Week Ending" for the most recent 120 months.

2 DISTRIBUTION OF DEFERRED

Amounts deferred and accumulated interest or stock units credited to a Participant's account will be paid out according to either of two schedules: a lump sum or in annual installments not to exceed 10 years. The payout of stock units will be in the form of shares of stock based on the number of shares in the Participant's account determined as of the date of distribution. The Participant will indicate his/her choice of payment schedule on the election form. A Participant may indicate a different schedule of distribution with respect to each year for which the Participant makes a deferral election. Payment(s) will commence, at the election of the Participant, (a) within thirty (30) days after January 1st of the following year in which the Participant ceases to be a Director of Dentsply Sirona, or (b) within thirty (30) days after the later of (i) January 1st of the following year in which the Participant ceases to be a Director of Dentsply Sirona or (ii) the Participant's attainment of a specified age (but not later than age 75).

3 DESIGNATION OF BENEFICIARY

Each Participant will designate one or more beneficiaries to receive all amounts due upon his/her death. A Participant may from time to time change his/her designated beneficiary without the consent of such beneficiary by filing a new designation (either in writing or electronically). If no beneficiary designation is in effect at the time of the Participant's death, or if the designated beneficiary is missing or has predeceased the Participant, distribution shall be made to the Participant's surviving spouse, or if none, to his/her surviving children per stirpes, and if none, to his/her estate.

4 CHANGE IN DISTRIBUTION SCHEDULE

a In the event of a Participant's Disability, as defined in subsection (b) below, or death before full payment has been made, the balance of any deferred amount shall be paid in one lump sum to the Participant or the Participant's designated beneficiary within 60 days following the Participant's Disability or death, regardless of any distribution schedule the Participant has requested.

b "Disability" shall mean that a Participant either (i) is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than 12 months, or (ii) by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than 12 months, is receiving (and has received for at least three months) income replacement benefits under any Dentsply Sirona-sponsored disability benefit plan. A Participant who has been determined to be eligible for Social Security disability benefits shall be presumed to have a Disability as defined herein.

1 ADMINISTRATION OF THE PLAN

The Plan will be administered by the Human Resources Committee of the Board of Directors. The Committee will have the right to interpret the provisions of the Plan. However, no Director may participate in any decision which would specifically affect his/her own Account. All final decisions regarding payments or amendments to the Plan will be subject to the approval of the Board of Directors of Dentsply Sirona.

2 RIGHTS OF A PARTICIPANT

Income deferred under this Plan will not be segregated from the general funds of Dentsply Sirona and no Participant will have any claim on any specific Dentsply Sirona assets. To the extent that any Participant acquires a right to receive benefits under this Plan, his/her right will be no greater than the right of any unsecured general creditor of Dentsply Sirona and is not assignable or transferrable except to his/her beneficiary or estate as defined in Section 6.

3 CLAIMS PROCEDURES

Claims for benefits shall be administered in accordance and compliance the claims procedure set forth in Appendix A.

4 SECTION 409A

Notwithstanding anything in the Plan to the contrary, all provisions of the Plan shall be construed and interpreted to comply with Section 409A of the Internal Revenue Code of 1986, as amended ("Section 409A"), and, if necessary, any provision shall be held null and void to the extent such provision (or part thereof) fails to comply with Section 409A or regulations thereunder. For purposes of the limitations on nonqualified deferred compensation under Section 409A, each payment of compensation under the Plan shall be treated as a separate payment of compensation for purposes of applying the Section 409A deferral election rules and the exclusion from Section 409A for certain short-term deferral amounts.

Appendix A

Claims Procedure

a Filing a Claim for Benefits Not Involving a Disability Determination. A Participant or Beneficiary or the authorized representative (the "Claimant") shall notify the Committee of a claim for benefits under the Plan. Such request shall be deemed filed when made in writing, addressed or hand-delivered to the Committee.

(1) Denial of Claim. Whenever a claim for benefits by any Claimant has been denied, the Committee shall provide the Claimant written or electronic notice within 90 days containing the following information:

(i) the specific reason or reasons for the denial;

(ii) specific reference to those Plan provisions on which the denial is based;

(iii) a description of any additional material or information necessary to perfect the claim and an explanation of why such material or information is necessary; and

(iv) a description of the Plan's review procedures and the time limits applicable to such procedures, including a statement of the Claimant's right to bring a civil action under section 502(a) of ERISA following an adverse benefit determination on review.

If the Committee determines that an extension of time for processing is required, written notice of the extension shall be furnished to the Claimant prior to the termination of the initial 90-day period. In no event shall such extension exceed a period of 90 days from the end of such initial period. The extension notice shall indicate the special circumstances requiring an extension of time and the date by which the Plan expects to render the benefit determination.

(2) Appeal. A Claimant whose claim for benefits is denied, in whole or in part, or who is otherwise adversely affected by any action of the Committee shall be entitled to request the Committee to give further consideration to his claim by filing with the Committee a written request for review. A Claimant who files a timely written request for review shall be entitled to:

i submit written comments, documents, records, and other information relating to the claim for benefits;

ii upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant (as defined under DOL Regulation Section 2560.503-1(m)(8)) to the Claimant's claim for benefits; and

iii a review that takes into account all comments, documents, records, and other information submitted by the Claimant relating to the claim, without regard to whether such information was submitted or considered in the initial benefit determination.

The Committee shall review the Claimant's appeal and shall render its decision within sixty (60) days after the receipt of the request for review, unless special circumstances require an extension of time for processing.

The Committee may extend the 60-day period where the nature of the claim involved or other attendant circumstance make such extension appropriate. In connection with any appeal, the Claimant or his duly authorized representative may review pertinent documents and submit written comments. The Committee's decision on review shall be in writing or in electronic format and shall include:

i the specific reason or reasons for the adverse determination;

ii reference to the specific Plan provisions on which the benefit determination is based;

iii a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant (as defined under DOL Regulation Section 2560.503-1(m)(8)), to the Claimant's claim for benefits; and

iv a statement describing any voluntary appeal procedures offered by the Plan and the Claimant's right to obtain the information about such procedures, and a statement of the Claimant's right to bring an action under section 502(a) of ERISA.

(b) Filing a Claim for Benefits Involving a Disability Determination. The Claimant shall notify the Committee of a claim for disability benefits under the Plan. Such request may be in any form adequate to give reasonable notice to the Committee, shall set forth the basis of such claim, and shall authorize the Committee to conduct such examinations as may be necessary to determine the validity of the claim and to take such steps as may be necessary to facilitate the payment of any benefits to which the Claimant may be entitled under the Plan.

1 Denial of Claim. Whenever a claim for disability benefits by any Claimant has been denied, the Committee shall provide the Claimant written or electronic notice, in a culturally and linguistically appropriate manner as required by DOL Regulation Section 2560.503-1(o), within 45 days containing the following:

i specific reason or reasons for the denial;

ii specific reference to the Plan provisions upon which the denial is based;

iii a description of any additional material or information necessary to perfect the claim and an explanation of why such material or information is necessary;

iv a discussion of the decision, including an explanation of the basis for disagreeing with or not following:

a the views presented by the Claimant to the Plan of health care professionals treating the Claimant and vocational professionals who evaluated the Claimant;

b the views of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with a Claimant's adverse benefit determination without regard to whether the advice was relied upon in making the benefit determination; and

c a disability determination regarding the Claimant presented by the Claimant to the Plan made by the Social Security Administration.

i if the denial is based on a medical necessity or experimental treatment or similar exclusion or limit, either an explanation of the scientific or clinical judgment for the determination, applying the terms of the Plan to your medical circumstances, or a statement that such explanation will be provided to the Claimant free of charge upon request;

ii either the specific internal rules, guidelines, protocols, standards, or other similar criteria of the Plan relied upon in making the initial adverse determination, or alternatively, a statement that such rules, guidelines, protocols, standards, or other similar criteria of the Plan do not exist;

iii a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant (as the term is defined under DOL Regulation Section 2560.523-1(m)(8)) to the Claimant's claim for benefits; and

iv a description of the Plan's review procedures and the time limits applicable to such procedures, including a statement of the Claimant's right to bring a civil action under section 502(a) of ERISA following an adverse benefit determination on review.

If the Committee determines that an extension of time for processing is required, written notice of the extension shall be furnished to the Claimant prior to the termination of the initial 45-day period. The initial period may be extended for up to 30 days. If prior to the end of the first 30-day extension period, the Committee determines that, due to matters beyond the control of the Plan, a decision cannot be rendered within the extension period, the decision making period can be extended for up to an additional 30 days. The extension notice shall specifically explain the standards on which entitlement to a benefit is based, the unresolved issues that prevent a decision on the claim, and the additional information needed to resolve those issues. The Claimant shall be given at least 45 days in which to respond.

1 Appeal. A Claimant whose claim for benefits is denied in whole or in part, or who is otherwise adversely affected by any action of the Committee, shall have the right to request a review of the Committee's denial of claim within 180 days after he receives written notice of the action. A Claimant who files a timely written request for a hearing shall be entitled to:

i submit written comments, documents, records, and other information relating to the claim for benefits;

ii upon request and free of charge, reasonable access to, and copies of all documents, records, and other information relevant (as defined under DOL Regulation Section 2560.503-1(m)(8)) to the Claimant's claim for benefits;

iii a review that takes into account all comments, documents, records, and other information submitted by the Claimant relating to the claim, without regard to whether such information was submitted or considered in the initial benefit determination;

iv a review that does not afford deference to the initial adverse benefit determination and that is conducted by an appropriate named fiduciary of the Plan, who is neither the individual who made the adverse benefit determination that is the subject of the appeal, nor the subordinate of such individual;

v that, in deciding an appeal of any adverse benefit determination that is based, in whole or in part, on a medical judgment, including determinations with regard to whether a particular treatment, drug or other item is experimental, investigational or not medically necessary or appropriate, the appropriate named fiduciary shall consult with a health care professional who has appropriate training and experience in the field of medicine involved in the medical judgment;

vi the identification of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with a Claimant's adverse benefit determination, without regard to whether the advice was relied upon in making the benefit determination;

vii that for purposes of a healthcare professional consultation such professional shall be an individual who is neither an individual who was consulted in connection with the adverse benefit determination that is the subject of the appeal, nor the subordinate of any such individual;

viii that before the Plan can issue an adverse benefit determination on review on a disability benefit claim, the Committee will provide the Claimant, free of charge, with any new or additional evidence considered, relied upon, or generated by the Plan, insurer, or other person making the benefit determination (or at the direction of the Plan, insurer or such other person) in connection with the claim; such evidence must be provided as soon as possible and sufficiently in advance of the date on which the notice of adverse benefit determination on review is required to be provided to give the Claimant a reasonable opportunity to respond prior to that date; and

ix provide that, before the Plan can issue an adverse benefit determination on review on a disability benefit claim based on a new or additional rationale, the Committee will provide the Claimant, free of charge, with the rationale; the rationale must be provided as soon as possible and sufficiently in advance of the date on which the notice of adverse benefit determination on review is required to be provided to give the Claimant a reasonable opportunity to respond prior to that date.

The Committee shall review the Claimant's appeal and notify the Claimant in writing of the final decision within 45 days of the Committee's receipt of the written request for review.

In connection with any appeal, the Claimant or his duly authorized representative may review pertinent documents and submit written comments. The Committee's decision shall be in writing or provided as an electronic notification, in a culturally and linguistically appropriate manner as required by DOL Regulation Section 2560.503-1(o) and shall include:

(i) the specific reason or reasons for the adverse determination;

(ii) reference to the specific Plan provisions on which the benefit determination is based;

(iii) a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant (as defined under DOL Regulation Section 2560.503-1(m)(8)) to the Claimant's claim for benefits;

(iv) a discussion of the decision, including an explanation of the basis for disagreeing with or not following:

(a) the views presented by the Claimant to the Plan of health care professionals treating the Claimant and vocational professionals who evaluated the Claimant;

(b) the views of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with a Claimant's adverse benefit determination without regard to whether the advice was relied upon in making the benefit determination; and

(c) a disability determination regarding the Claimant presented by the Claimant to the Plan made by the Social Security Administration.

(v) if the denial is based on a medical necessity or experimental treatment or similar exclusion or limit, either an explanation of the scientific or clinical judgment for the determination, applying the terms of the Plan to your medical circumstances, or a statement that such explanation will be provided to the Claimant free of charge upon request;

(vi) either the specific internal rules, guidelines, protocols, standards, or other similar criteria of the Plan relied upon in making the initial adverse determination, or, alternatively, a statement that such rules, guidelines, protocols, standards, or other similar criteria of the Plan do not exist; and

(vii) a statement describing any voluntary appeal procedures offered by the Plan and the Claimant's right to obtain the information about such procedures, and a statement of the Claimant's right to bring an action under Section 502(a) of ERISA. The statement of the Claimant's right to bring action under Section 502(a) of ERISA shall also describe any applicable contractual limitations period that applies to the Claimant's right to bring such action, including the calendar date on which the contractual limitations period expires for the claim.

A Claimant must follow the claims review procedures under the Plan and exhaust his administrative remedies before taking any further action with respect to a claim for benefits. If the Plan fails to strictly adhere to all the requirements of this claims procedure with respect to a disability claim, the Claimant is deemed to have exhausted the administrative remedies available under the Plan, and shall be entitled to pursue any available remedies under ERISA Section 502(a) on the basis that the Plan has failed to provide a reasonable claims procedure that would yield a decision on the merits of the claim, except where the violation was: (a) de minimis; (b) non-prejudicial; (c) attributable to good cause or matters beyond the Plan's control; (d) in the context of an ongoing food-faith exchange of information; and (e) not reflective of a pattern or practice of non-compliance. The Claimant may request a written explanation of the violation

from the Plan, and the Plan must provide such explanation within ten (10) days, including a specific description of its basis, if any, for asserting that the violation should not cause the administrative remedies to be deemed exhausted. If a court rejects the Claimant's request for immediate review on the basis that the Plan met the standards for the exception, the claim shall be considered as re-filed on appeal upon the Plan's receipt of the decision of the court. Within a reasonable time after the receipt of the decision, the Plan shall provide the Claimant with notice of the resubmission.

DENTSPLY SIRONA INC.

SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN

(As Amended and Restated Effective January 1, 2019)

DENTSPLY SIRONA INC.

SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN

DENTSPLY SIRONA INC.
SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN

ARTICLE I

INTRODUCTION

1.1 Name. The name of this Plan is the DENTSPLY SIRONA Inc. Supplemental Executive Retirement Plan (the "Plan").

1.2 Effective Date. The effective date of this amendment and restatement of the Plan is January 1, 2019. This amendment and restatement incorporates all prior amendments to the Plan and incorporates certain other changes to the Plan that are effective January 1, 2019. This amendment and restatement of the Plan does not have any effect on any amounts that were fully vested under the Plan as of December 31, 2004.

1.3 Purpose. This Plan is maintained by DENTSPLY SIRONA Inc. (f/k/a DENTSPLY International Inc.) ("Dentsply Sirona") for the purposes of providing additional retirement benefits for a select group of management and/or highly compensated employees of the Company.

This Plan provides for the crediting by Dentsply Sirona of retirement funds to accounts established under this plan for Eligible Employees. All contributions under the Plan credited to Participants shall be in the form of unfunded recordkeeping entries that shall be credited with earnings as specified in the Plan.

ARTICLE II

DEFINITIONS

Capitalized terms which are not defined herein shall have the same meaning as ascribed to them in the DENTSPLY SIRONA Inc. 401(k) Savings Plan and Employee Stock Ownership Plan (the "Retirement Plan"). Whenever the following initially capitalized words and phrases are used in this Plan, they have the meanings specified below unless the context clearly indicated to the contrary:

2.1 "Administrator" shall be the individual or individuals appointed by the Committee to assist in administration of this Plan.

2.2 "Affiliates" shall mean any organization which is controlled by or under common control with Dentsply Sirona.

2.3 "Beneficiary" shall mean such person or legal entity as may be designated by a Participant under Section 5.3 to receive benefits hereunder after such Participant's death.

2.4 "Board" shall mean the Board of Directors of Dentsply Sirona, as constituted from time to time.

2.5 "Change in Control" shall mean the occurrence, at any time during the term of the Plan, of any of the following events:

(a) The acquisition by any individual, entity or group (within the meaning of Section 12(d)(3) of the Exchange Act) (a "Person") (other than Dentsply Sirona or any benefit plan sponsored by Dentsply Sirona) of beneficial ownership (within the

meaning of Rule 13d-3 under the Exchange Act), within a consecutive twelve (12) month period, of 30% or more of either (i) the then outstanding shares of the Common Stock (the "Outstanding Common Stock") or (ii) the combined voting power of the then outstanding securities of Dentsply Sirona entitled to vote generally in the election of directors (the "Voting Securities"); or

(b) Individuals who, as of the effective date of the Plan, constitute the Board (the "Incumbent Board") cease for any reason to constitute at least one-half (1/2) of the Board (rounded down to the nearest whole number) within a consecutive twelve (12) month period, provided that any individual whose election or nomination for election was approved by a vote of at least a majority of the directors then comprising the Incumbent Board shall be considered as though such individual was a member of the Incumbent Board, but excluding, for this purpose, any such individual whose initial assumption of office is in connection with an actual or threatened election contest relating to the election of the Directors of Dentsply Sirona (as such terms are used in Rule 14a-11 of Regulation 14A under the Exchange Act); or

(c) Consummation by Dentsply Sirona of a reorganization, merger, or consolidation (a "Business Combination"), in each case, with respect to which all or substantially all of the individuals and entities who were the respective beneficial owners of the outstanding common stock and voting securities immediately prior to such Business Combination, do not, following such Business Combination, beneficially own, directly or indirectly, more than 50% of, respectively, the then outstanding voting securities entitled to vote generally in the election of directors, as the case may be, of the corporation resulting from such Business Combination in substantially the same proportion as their ownership immediately prior to such Business Combination of the outstanding common stock and voting securities, as the case may be; or

(d) Consummation of a complete liquidation or dissolution of Dentsply Sirona, or sale or other disposition of all or substantially all of the assets of Dentsply Sirona other than to a corporation with respect to which, following such sale or disposition, more than 50% of, respectively, the then outstanding shares of common stock and the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors is then owned beneficially, directly, or indirectly, by all or substantially all of the individuals and entities who were the beneficial owners, respectively, of the outstanding common stock and voting securities immediately prior to such sale or disposition in substantially the same proportions as their ownership of the outstanding common stock and voting securities, as the case may be, immediately prior to such sale or disposition.

2.6 "Committee" shall mean the Human Resources Committee of the Board.

2.7 "Company" shall mean Dentsply Sirona and any of its Affiliates.

2.8 "Compensation" shall mean a Participant's base salary plus any incentive awards and bonuses payable for a Plan Year but not including any income from or pertaining to stock options.

2.9 "Credited Service" shall have the same meaning as defined in the Retirement Plan; however, Credited Service prior to January 1, 1992 shall be ignored for purposes of this Plan.

2.10 "Dentsply Sirona Contribution Account" shall mean the recordkeeping account established by the Administrator for each Participant to which the Dentsply Sirona contribution on each Participant's behalf shall be allocated.

2.11 "Disability" shall mean, except as may otherwise be required by Section 409A of the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder ("Section 409A"), that a Participant either (i) is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than twelve (12) months; or (ii) by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than twelve (12) months, is receiving (and has received for at least three (3) months) income replacement benefits under any Company-sponsored disability benefit plan. A Participant who has been determined to be eligible for Social Security disability benefits shall be presumed to have a Disability as defined herein.

2.12 "Eligible Employee" shall mean any U.S. employee who (i) is an executive officer of the Company within the meaning of Rule 3b-7 under the Securities Exchange Act of 1934, as amended, (ii) is a corporate vice president and has a global pay grade of 60 or above, or (iii) has a global pay grade of 61 or above.

2.13 "Participant" shall mean an individual on whose behalf Dentsply Sirona contributions have been credited under this Plan.

2.14 "Plan Year" shall mean the calendar year.

2.15 "Plan" shall mean DENTSPLY SIRONA Inc. Supplemental Executive Retirement Plan.

2.16 "Separation from Service" shall have the meaning set forth in Treasury Regulations Section 1.409A-2(a)(8). For purposes of this definition, a Participant shall be deemed to have a Separation from Service on the date on which he and the Company reasonably anticipate that no further services would be performed after such date or that the level of bona fide services he would perform after such date would permanently decrease to no more than 20% of the average level of bona fide services performed over the immediately preceding thirty-six (36) month period (or the full period of employment if less than thirty-six (36) months). Notwithstanding the above, no Separation from Service shall be deemed to occur while the Participant is on military leave, sick leave or other bona fide leave of absence until the latest of (i) six (6) months after commencement of the leave, other than for a Disability, (ii) twenty-nine (29) months after commencement of leave as the result of a Disability, or (iii) the date on which the Participant ceases to have a legally protected right to reemployment under the applicable statute or by contract.

ARTICLE III

PARTICIPATION BY ELIGIBLE EMPLOYEES

3.1 Participation. Participation in this Plan is limited to Eligible Employees and participation in the Plan will commence as soon as administratively practicable following an employee becoming an Eligible Employee. Employees who were previously eligible to participate in this Plan may continue to maintain account balances under this Plan. A Participant who separates from service with the Company will cease participation hereunder.

3.2 Ineligible Employee. The Plan is intended to be an unfunded "top-hat" plan, maintained primarily for the purpose of providing retirement benefits for a select group of management or highly compensated employees. If a Participant ceases to be an Eligible Employee, the Participant's account balance shall continue to be deferred until the earliest occurrence of an event specified in Section 5, and no further contributions shall be made on such Participant's behalf until and unless he resumes his or her status as an Eligible Employee.

ARTICLE IV

DENTSPLY SIRONA CONTRIBUTIONS

4.1 Annual Dentsply Sirona Contributions. The following contributions shall be made to the Dentsply Sirona Contribution Account for each Participant for each Plan Year:

(i) A contribution equal to the percentage allocated under the Retirement Plan for the same Plan Year. For purposes of the allocation under this Section 4.1(i) only Compensation in excess of the limitations on Compensation imposed by Internal Revenue Code 401(a)(17) for a Plan Year shall be taken into account.

(ii) A contribution equal to 11.7% of Compensation. For purposes of the allocation under this Section 4.1(ii), total Compensation shall be taken into account. The contribution provided by this Section 4.1(ii) shall be reduced by the contribution provided by the sum of Section 4.1(i) above, plus the contribution allocated to the Participant under the Retirement Plan for the Plan Year.

4.2 Vesting of Dentsply Sirona Contributions. A Participant as of January 1, 1999 became 100% vested in his or her Dentsply Sirona Contribution Account upon the completion of three years of Credited Service. A Participant who first becomes a Participant after January 1, 1999 shall be 100% vested in his or her Dentsply Sirona Contribution Account following the Participant's completion of seven years of Credited Service. A Participant who terminates employment prior to completing seven years of Credited Service shall be partially vested in his or her Dentsply Sirona Contribution Account, in accordance with the following schedule:

Total Credited Service	Vested Percentage
Less than 3 years	0%
3 years	20%
4 years	40%
5 years	60%
6 years	80%
7 years	100%

Notwithstanding the above, a Participant shall become 100% vested upon Disability, Change in Control or death while actively employed.

4.3 Foreign Participants. In calculating the contribution for foreign Participants, any contribution shall be reduced by the value of pension benefits or allocations made for such Participant by the Company under other pension or retirement plans or benefit programs.

4.4 Forfeiture of Benefits. Notwithstanding anything herein contained to the contrary, no payment of any retirement benefits hereunder shall be made and all rights under this Plan shall be forfeited if the Committee unanimously determines that any of the following events occur:

a The Participant is terminated for gross or willful misconduct or becomes employed with a competitor within two years of termination of employment.

b The Participant has committed or participated in an act of fraud or dishonesty against Dentsply Sirona; or

c The Participant has willfully and intentionally engaged in any activity or conduct which is adverse to the best interests of Dentsply Sirona and could result in a material loss to Dentsply Sirona or its business.

ARTICLE V

DISTRIBUTIONS

5.1 Distribution Date. Effective for distributions of amounts contributed on or after January 1, 2019, distribution of a Participant's vested Dentsply Sirona Contribution Account, subject to the elections provided for in Section 5.2, shall be made, or shall commence, following the Participant's termination of employment for any reason; provided, however, that no payment shall be permitted unless such termination qualifies as a Separation from Service; and, provided further, however, that, notwithstanding anything in the Plan or election by the Participant to the contrary, any amounts that become payable upon such Participant's termination from employment shall be held for delayed payment and shall be distributed within thirty (30) days from the date which is six (6) months after the date of such Participant's termination of employment (and shall be adjusted for earnings or losses in accordance with Section 6.2 pending payment).

5.2 Method of Payment.

d Distributions under this Plan of an account which is based on the interest election under Section 6.2 shall be paid in cash. A distribution of a Participant's vested account balance invested in Dentsply Sirona Common Stock shall be paid in shares of such Common Stock (and fractional shares paid in cash).

e The Participant may make an irrevocable election to have his or her benefit distributed in annual installments for a period of up to five (5) years from the date of the first distribution, which shall be a date designated in the election form no later than one (1) year from the date of termination of employment. This irrevocable election shall be made by submitting a completed Election of Payment Form to the Administrator (either in writing or electronically) as soon as practicable upon the Eligible Employee becoming a Participant, but, in any event, no later than thirty (30) days after the Eligible Employee first becomes a Participant. In the absence of a timely election, the Participant shall be deemed to have elected to receive his or her distribution in a single lump-sum payment at termination of employment. Notwithstanding the foregoing, a Participant's Election of Payment Form most recently filed on or before December 31, 2008 with respect to his or her Dentsply Sirona Contribution Account and not revoked or modified on or before such date shall be deemed effective with respect thereto and shall be irrevocable after December 31, 2008.

5.3 Distributions on Death. In the event of a Participant's death before his or her Dentsply Sirona Contribution Account has been distributed, distribution shall be made to the Beneficiary selected by the Participant within thirty (30) days after the date of death (or, if later, after the proper Beneficiary has been identified). A Participant may from time to time change his or her designated Beneficiary without the consent of such Beneficiary by filing a new designation (either in writing or electronically) with the Administrator. If no Beneficiary designation is in effect at the time of the Participant's death, or if the designated Beneficiary is missing or has predeceased the Participant, distribution shall be made to the Participant's surviving spouse, or if none, to his or her surviving children per stirpes, and if none, to his or her estate.

5.4 Distribution on Change in Control. In the event of a Change in Control as defined in this Plan, each Participant shall receive the value of his or her Dentsply Sirona Contribution Account in a single lump-sum payment no later than sixty (60) days after the effective date of such Change in Control.

5.5 Valuation of Distributions. All distributions under this Plan shall be based upon the amount credited to a Participant's Dentsply Sirona Contribution Account as of the date of the distribution. The amount of installments payable to a Participant electing distribution through installments shall be determined by dividing the amount credited to the

Participant's vested Dentsply Sirona Contribution Account by the remaining number of installments, including the current installment, to be paid. It is understood that administrative requirements may lead to a delay between such valuation date and the date of distribution, not to exceed thirty (30) days.

ARTICLE VI

ACCOUNTS

6.1 Dentsply Sirona Contribution Account. The Administrator shall establish and maintain, or cause to be established and maintained, a separate Dentsply Sirona Contribution Account for each Participant. Each Participant's account shall be credited with earnings, for recordkeeping purposes only, as provided in Section 6.2. A Participant's Dentsply Sirona Contribution Account shall be maintained solely for the purposes of measuring the amounts to be paid under the Plan. The Company shall not be required to fund or secure the Account in any way. The Company's obligation to Participants hereunder is purely contractual.

6.2 Crediting of Earnings and Statement of Account.

f The Participant's Dentsply Sirona Contribution Account shall be credited with Company contribution credits and earnings annually or, as applicable, upon a distribution. The amount of earnings to be credited each year shall be based on the investment selected by the Participant. The Participant may choose from the following investments with respect to contributions credited for each Plan Year: (i) Dentsply Sirona Common Stock (any dividends will be reinvested in the Participant's Dentsply Sirona Contribution Account), or (ii) U.S. Government 30-year Treasury bonds as quoted in The Wall Street Journal or any Government bond that replaces the 30-year bond and that has the longest duration up to 30 years (average yield for the month of January used for each Plan year). Each election must be 100% in either stock or interest. Once an election is made to invest in the Dentsply Sirona common stock, that election with respect to such stock will be tracked on the basis of the number of shares allocated to such account and cannot be changed. With respect to future allocations, an election may be made to select the interest investment.

g In order to make a new election, the Participant must submit an Investment Election Form to the Administrator (either in writing or electronically) no later than 30 days prior to the beginning of each Plan Year specifying the investment election for the following Plan Year, otherwise if no timely submission of an investment election is made, the immediately preceding election shall be followed. In the absence of a prior election form, the Participant's account shall be deemed to be invested in Dentsply Sirona Common Stock. Investment exchanges of a Participant's existing Dentsply Sirona Contribution Account shall not be permitted.

h Earnings will be credited for whole years only, except of the year of distribution for which earnings will be credited up to the date of distribution. As soon as practicable after the end of each Plan Year (and at such additional times as the Administrator may determine), the Administrator shall furnish each Participant with a statement of the balance credited to the Participant's Dentsply Sirona Contribution Account. Upon a Change in Control, as defined in 2.5, the method of crediting earnings may not be modified or amended.

i The determination of the Dentsply Sirona common stock share price for purposes of annual allocations shall be made as of December 31 for allocations to be made for the following year. For accounts which are based on investment in Dentsply Sirona stock, dividends for a year shall be allocated in the form of Dentsply Sirona stock and shall be based on the beginning of the year balance of shares in the account and the dividends paid during the year for such shares. Effective January 1, 2018, dividend allocations shall be made as of the dividend payment date.

ARTICLE VII

FUNDING AND PARTICIPANT'S INTEREST

7.1 Plan Unfunded. This Plan shall be unfunded and, except as provided below, no trust shall be created by or for the Plan. The crediting to each Participant's Dentsply Sirona Contribution Account, as the case may be, shall be made through recordkeeping entries. No actual funds shall be set aside; provided, however, that nothing herein shall prevent the Company from establishing one or more grantor trusts from which benefits due under this Plan may be paid in certain instances. The Company shall pay all distributions from its general assets and a Participant (or his or her Beneficiary) shall have rights of a general, unsecured creditor against the Company for any distributions due hereunder. The Plan constitutes a mere promise by the Company to make benefit payments in the future.

7.2 Participant's Interest in Plan. A Participant has an interest only in the cash value of the amount credited to his or her account. A Participant has no rights or interests in any specific funds, Dentsply Sirona common stock or other securities.

ARTICLE VIII

ADMINISTRATION AND INTERPRETATION

8.1 Administration. The Committee shall be in charge of the overall operation and administration of the Plan. The Committee has, to the extent appropriate and in addition to the powers described elsewhere in this Plan, full discretionary authority to construe and interpret the terms and provisions of the Plan; to make any and all determinations, including factual determinations, to adopt, alter, and repeal administrative rules, guidelines and practices governing the Plan; to perform all acts, including the delegation of its administrative responsibilities to advisors or other persons who may or may not be employees of the Company; and to rely upon the information or opinions of legal counsel or experts selected to render advise with respect to the Plan, as it shall deem advisable, with respect to the administration of the Plan.

8.2 Interpretation. The Committee may take any action, correct any defect, supply any omission or reconcile any inconsistency in the Plan, or in any election hereunder, in the manner and to the extent it shall deem necessary to carry the Plan into effect or to carry out the Company's purposes in adopting the Plan. Any decision, interpretation or other action made or taken in good faith by or at the direction of the Company or the Committee arising out of or in connection with the Plan shall be within the absolute discretion of each of them, and shall be final, binding, and conclusive on the Company, and all Participants and Beneficiaries and their respective heirs, executors, administrators, successors, and assigns. The Committee's determinations hereunder need not be uniform, and may be made selectively among Eligible Employees, whether or not they are similarly situated.

8.3 Records and Reports. The Administrator shall keep a record of proceedings and actions and shall maintain or cause to be maintained all such books of account, records, and

other data as shall be necessary for the proper administration of the Plan. Such records shall contain all relevant data pertaining to individual Participants and their rights under this plan. The Committee shall have the duty to carry into effect all rights or benefits provided hereunder to the extent assets of the Company are properly available.

8.4 Payment of Expenses.

j Claims: The Company shall bear all expenses incurred by the Committee or the Administrator in administrating the Plan. If a claim or dispute arises concerning the Committee or the rights of a Participant or Beneficiary to amounts contributed under this Plan, regardless of the party by whom such claim or dispute is initiated, each party shall bear their own costs and expenses in asserting or defending against such claim, except that, if a Participant is the prevailing party in such matter, the Company shall, upon presentation of appropriate vouchers, pay all costs and expenses of the participant, including reasonable attorney's fees, court costs, and ordinary and necessary out-of-pocket costs of attorneys, billed to and payable by the Participant or by anyone claiming under or through the Participant (such person being hereinafter referred to as the "Participant's Claimant"), in connection with the bringing, prosecuting, defending, litigating, negotiating, or setting of such claim or dispute.

k In the case of any claim or dispute initiated by a Participant or the Participant's Claimant, such claim shall be made, or notice of such dispute given, with specific reference to the provisions of this Plan, to the Administrator within two (2) years (three (3) years in the event of a Change in Control) after the occurrences of the event giving rise to such claim or dispute.

8.5 Indemnification for Liability. The Company shall indemnify the Committee and the Administrator and the employees of the Company to whom the Administrator delegates duties under this Plan, against any and all claims, losses, damages, expenses and

liabilities arising from their responsibilities in connection with this Plan, unless the same is determined to be due to gross negligence or willful misconduct.

8.6 Claims Procedure. Claims for benefits shall be administered in accordance and compliance the claims procedure set forth in Appendix A.

8.7 Section 409A. Notwithstanding anything in the Plan to the contrary, all provisions of the Plan shall be construed and interpreted to comply with Section 409A of the Internal Revenue Code of 1986, as amended ("Section 409A"), and, if necessary, any provision shall be null and void to the extent such provision (or part thereof) fails to comply with Section 409A or regulations thereunder.

ARTICLE IX

AMENDMENT AND TERMINATION

9.1 Amendment and termination. The Committee shall have the right, at any time, to amend or terminate this Plan in whole or in part or to discontinue contributions, provided that such amendment or termination shall not adversely affect any Participant or Beneficiary under the Plan on the basis of amounts previously allocated to the Participant's Dentsply Sirona Contribution Account. If the Plan is discontinued with respect to future contributions, Participants' vested Dentsply Sirona Contribution Accounts shall be distributed in accordance with the provisions of Section 5.1, unless the Committee designates that distributions shall be made on an earlier date. If the Committee designates such earlier date, each Participant shall receive distribution of his or her vested Dentsply Sirona Contribution Account, as specified by the Committee. If the Plan is completely terminated by the Committee, each Participant shall receive distribution of his or her vested Dentsply Sirona Contribution Account in one lump sum payment of cash or in kind as of the date of the Plan termination, or in accordance with the Plan. Notwithstanding anything in this Section 9.1 to the contrary, any distribution pursuant to this Section 9.1 upon termination of this Plan other than at the time and in the form elected under Section 5 shall be made only if and to the extent such termination satisfies applicable requirements under Section 409A and the regulations thereunder.

ARTICLE X

MISCELLANEOUS PROVISIONS

10.1 Right of Company to Take Employment Actions. The adoption and maintenance of this Plan shall not be deemed to constitute an employment contract between the Company and any Eligible Employee, not to be a consideration for, nor an inducement or condition of, the employment of any person. Nothing herein contained, or any action taken hereunder, shall be deemed to give any Eligible Employee the right to be retained in the employ of the Company or to interfere with the right of the Company to discharge any Eligible Employee at any time, nor shall it be deemed to give to the Company the right to require the Eligible Employee to remain in its employ, nor shall it interfere with the Eligible Employee's right to terminate his or her employment at any time. Nothing in this Plan shall prevent the Company from amending, modifying, or terminating any other benefit plan.

10.2 Alienation or Assignment of Benefits. A Participant's rights and interest under the Plan shall not be assigned or transferred except as otherwise provided herein, and the Participant's rights to benefit payment under the Plan shall not be subject to alienation, pledge or garnishment by or on behalf of creditors (including heirs, beneficiaries, or dependents) of the Participant or of the Beneficiary. Notwithstanding the preceding, the Administrator may direct distributions in accordance with the Plan to an alternate payee pursuant to a Qualified Domestic Relations Order (QDRO), as defined in Section 414(p) of the Internal Revenue Code of 1986, as amended, prior to any distribution date described in Article V.

10.3 Right to Withhold. To the extent required by law in effect at the time of distribution is made from the Plan, the Company of its agents shall have the right to withhold or deduct

from any distributions or payments any taxes required to be withheld by federal, state or local governments.

10.4 Construction. All legal questions pertaining the Plan shall be determined in accordance with the laws of the Commonwealth of Pennsylvania, to the extent such laws are not superseded by the Employee Retirement Income Security Act of 1974, as amended, or any other federal law.

10.5 Headings. The headings of the Articles and Sections of this Plan are for reference only. In the event of a conflict between a heading and the contents of an Article or Section, the contents of the Article or Section shall control.

10.6 Number and Gender. Whenever any words used herein are in the singular form, they shall be construed as though they were also used in the plural form in all cases where they would apply, and references to the male gender shall be construed as applicable to the female gender where applicable, and vice versa.

Appendix A

Claims Procedure

l Filing a Claim for Benefits Not Involving a Disability Determination. A Participant or Beneficiary or the authorized representative (the "Claimant") shall notify the Committee of a claim for benefits under the Plan. Such request shall be deemed filed when made in writing, addressed or hand-delivered to the Committee.

(1) Denial of Claim. Whenever a claim for benefits by any Claimant has been denied, the Committee shall provide the Claimant written or electronic notice within 90 days containing the following information:

(i) the specific reason or reasons for the denial;

(ii) specific reference to those Plan provisions on which the denial is based;

(iii) a description of any additional material or information necessary to perfect the claim and an explanation of why such material or information is necessary; and

(iv) a description of the Plan's review procedures and the time limits applicable to such procedures, including a statement of the Claimant's right to bring a civil action under section 502(a) of ERISA following an adverse benefit determination on review.

If the Committee determines that an extension of time for processing is required, written notice of the extension shall be furnished to the Claimant prior to the termination of the initial 90-day period. In no event shall such extension exceed a period of 90 days from the end of such initial period. The extension notice shall indicate the special circumstances requiring an extension of time and the date by which the Plan expects to render the benefit determination.

(2) Appeal. A Claimant whose claim for benefits is denied, in whole or in part, or who is otherwise adversely affected by any action of the Committee shall be entitled to request the Committee to give further consideration to his claim by filing with the Committee a written request for review. A Claimant who files a timely written request for review shall be entitled to:

i submit written comments, documents, records, and other information relating to the claim for benefits;

ii upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant (as defined under DOL Regulation Section 2560.503-1(m)(8)) to the Claimant's claim for benefits; and

iii a review that takes into account all comments, documents, records, and other information submitted by the Claimant relating to the claim, without regard to whether such information was submitted or considered in the initial benefit determination.

The Committee shall review the Claimant's appeal and shall render its decision within sixty (60) days after the receipt of the request for review, unless special circumstances require an extension of time for processing.

The Committee may extend the 60-day period where the nature of the claim involved or other attendant circumstance make such extension appropriate. In connection with any appeal, the Claimant or his duly authorized representative may review pertinent documents and submit written comments. The Committee's decision on review shall be in writing or in electronic format and shall include:

i the specific reason or reasons for the adverse determination;

ii reference to the specific Plan provisions on which the benefit determination is based;

iii a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant (as defined under DOL Regulation Section 2560.503-1(m)(8)), to the Claimant's claim for benefits; and

iv a statement describing any voluntary appeal procedures offered by the Plan and the Claimant's right to obtain the information about such procedures, and a statement of the Claimant's right to bring an action under section 502(a) of ERISA.

(b) Filing a Claim for Benefits Involving a Disability Determination. The Claimant shall notify the Committee of a claim for disability benefits under the Plan. Such request may be in any form adequate to give reasonable notice to the Committee, shall set forth the basis of such claim, and shall authorize the Committee to conduct such examinations as may be necessary to determine the validity of the claim and to take such steps as may be necessary to facilitate the payment of any benefits to which the Claimant may be entitled under the Plan.

1 Denial of Claim. Whenever a claim for disability benefits by any Claimant has been denied, the Committee shall provide the Claimant written or electronic notice, in a culturally and linguistically appropriate manner as required by DOL Regulation Section 2560.503-1(o), within 45 days containing the following:

i specific reason or reasons for the denial;

ii specific reference to the Plan provisions upon which the denial is based;

iii a description of any additional material or information necessary to perfect the claim and an explanation of why such material or information is necessary;

iv a discussion of the decision, including an explanation of the basis for disagreeing with or not following:

a the views presented by the Claimant to the Plan of health care professionals treating the Claimant and vocational professionals who evaluated the Claimant;

b the views of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with a Claimant's adverse benefit determination without regard to whether the advice was relied upon in making the benefit determination; and

c a disability determination regarding the Claimant presented by the Claimant to the Plan made by the Social Security Administration.

i if the denial is based on a medical necessity or experimental treatment or similar exclusion or limit, either an explanation of the scientific or clinical judgment for the determination, applying the terms of the Plan to your medical circumstances, or a statement that such explanation will be provided to the Claimant free of charge upon request;

ii either the specific internal rules, guidelines, protocols, standards, or other similar criteria of the Plan relied upon in making the initial adverse determination, or alternatively, a statement that such rules, guidelines, protocols, standards, or other similar criteria of the Plan do not exist;

iii a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant (as the term is defined under DOL Regulation Section 2560.523-1(m)(8)) to the Claimant's claim for benefits; and

iv a description of the Plan's review procedures and the time limits applicable to such procedures, including a statement of the Claimant's right to bring a civil action under section 502(a) of ERISA following an adverse benefit determination on review.

If the Committee determines that an extension of time for processing is required, written notice of the extension shall be furnished to the Claimant prior to the termination of the initial 45-day period. The initial period may be extended for up to 30 days. If prior to the end of the first 30-day extension period, the Committee determines that, due to matters beyond the control of the Plan, a decision cannot be rendered within the extension period, the decision making period can be extended for up to an additional 30 days. The extension notice shall specifically explain the standards on which entitlement to a benefit is based, the unresolved issues that prevent a decision on the claim, and the additional information needed to resolve those issues. The Claimant shall be given at least 45 days in which to respond.

1 Appeal. A Claimant whose claim for benefits is denied in whole or in part, or who is otherwise adversely affected by any action of the Committee, shall have the right to request a review of the Committee's denial of claim within 180 days after he receives written notice of the action. A Claimant who files a timely written request for a hearing shall be entitled to:

i submit written comments, documents, records, and other information relating to the claim for benefits;

ii upon request and free of charge, reasonable access to, and copies of all documents, records, and other information relevant (as defined under DOL Regulation Section 2560.503-1(m)(8)) to the Claimant's claim for benefits;

iii a review that takes into account all comments, documents, records, and other information submitted by the Claimant relating to the claim, without regard to whether such information was submitted or considered in the initial benefit determination;

iv a review that does not afford deference to the initial adverse benefit determination and that is conducted by an appropriate named fiduciary of the Plan, who is neither the individual who made the adverse benefit determination that is the subject of the appeal, nor the subordinate of such individual;

v that, in deciding an appeal of any adverse benefit determination that is based, in whole or in part, on a medical judgment, including determinations with regard to whether a particular treatment, drug or other item is experimental, investigational or not medically necessary or appropriate, the appropriate named fiduciary shall consult with a health care professional who has appropriate training and experience in the field of medicine involved in the medical judgment;

vi the identification of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with a Claimant's adverse benefit determination, without regard to whether the advice was relied upon in making the benefit determination;

vii that for purposes of a healthcare professional consultation such professional shall be an individual who is neither an individual who was consulted in connection with the adverse benefit determination that is the subject of the appeal, nor the subordinate of any such individual;

viii that before the Plan can issue an adverse benefit determination on review on a disability benefit claim, the Committee will provide the Claimant, free of charge, with any new or additional evidence considered, relied upon, or generated by the Plan, insurer, or other person making the benefit determination (or at the direction of the Plan, insurer or such other person) in connection with the claim; such evidence must be provided as soon as possible and sufficiently in advance of the date on which the notice of adverse benefit determination on review is required to be provided to give the Claimant a reasonable opportunity to respond prior to that date; and

ix provide that, before the Plan can issue an adverse benefit determination on review on a disability benefit claim based on a new or additional rationale, the Committee will provide the Claimant, free of charge, with the rationale; the rationale must be provided as soon as possible and sufficiently in advance of the date on which the notice of adverse benefit determination on review is required to be provided to give the Claimant a reasonable opportunity to respond prior to that date.

The Committee shall review the Claimant's appeal and notify the Claimant in writing of the final decision within 45 days of the Committee's receipt of the written request for review.

In connection with any appeal, the Claimant or his duly authorized representative may review pertinent documents and submit written comments. The Committee's decision shall be in writing or provided as an electronic notification, in a culturally and linguistically appropriate manner as required by DOL Regulation Section 2560.503-1(o) and shall include:

(i) the specific reason or reasons for the adverse determination;

(ii) reference to the specific Plan provisions on which the benefit determination is based;

(iii) a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant (as defined under DOL Regulation Section 2560.503-1(m)(8)) to the Claimant's claim for benefits;

(iv) a discussion of the decision, including an explanation of the basis for disagreeing with or not following:

(a) the views presented by the Claimant to the Plan of health care professionals treating the Claimant and vocational professionals who evaluated the Claimant;

(b) the views of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with a Claimant's adverse benefit determination without regard to whether the advice was relied upon in making the benefit determination; and

(c) a disability determination regarding the Claimant presented by the Claimant to the Plan made by the Social Security Administration.

(v) if the denial is based on a medical necessity or experimental treatment or similar exclusion or limit, either an explanation of the scientific or clinical judgment for the determination, applying the terms of the Plan to your medical circumstances, or a statement that such explanation will be provided to the Claimant free of charge upon request;

(vi) either the specific internal rules, guidelines, protocols, standards, or other similar criteria of the Plan relied upon in making the initial adverse determination, or, alternatively, a statement that such rules, guidelines, protocols, standards, or other similar criteria of the Plan do not exist; and

(vii) a statement describing any voluntary appeal procedures offered by the Plan and the Claimant's right to obtain the information about such procedures, and a statement of the Claimant's right to bring an action under Section 502(a) of ERISA. The statement of the Claimant's right to bring action under Section 502(a) of ERISA shall also describe any applicable contractual limitations period that applies to the Claimant's right to bring such action, including the calendar date on which the contractual limitations period expires for the claim.

A Claimant must follow the claims review procedures under the Plan and exhaust his administrative remedies before taking any further action with respect to a claim for benefits. If the Plan fails to strictly adhere to all the requirements of this claims procedure with respect to a disability claim, the Claimant is deemed to have exhausted the administrative remedies available under the Plan, and shall be entitled to pursue any available remedies under ERISA Section 502(a) on the basis that the Plan has failed to provide a reasonable claims procedure that would yield a decision on the merits of the claim, except where the violation was: (a) de minimis; (b) non-prejudicial; (c) attributable to good cause or matters beyond the Plan's control; (d) in the context of an ongoing food-faith exchange of information; and (e) not reflective of a pattern or practice of non-compliance. The Claimant may request a written explanation of the violation

from the Plan, and the Plan must provide such explanation within ten (10) days, including a specific description of its basis, if any, for asserting that the violation should not cause the administrative remedies to be deemed exhausted. If a court rejects the Claimant's request for immediate review on the basis that the Plan met the standards for the exception, the claim shall be considered as re-filed on appeal upon the Plan's receipt of the decision of the court. Within a reasonable time after the receipt of the decision, the Plan shall provide the Claimant with notice of the resubmission.

FIRST AMENDMENT TO EMPLOYMENT AGREEMENT

This First Amendment (the "Amendment") to Employment Agreement (the "Employment Agreement"), is entered into as of August 3, 2018 (the "Effective Date") by and between DENTSPLY SIRONA Inc., a Delaware corporation (the "Company"), and Donald M. Casey Jr. ("Executive") (collectively referred to herein as the "Parties").

RECITALS

A. The Parties entered into the Employment Agreement as of February 12, 2018, which provided, among other things, that Executive's Principal Place of Employment was the Company's headquarters in York, Pennsylvania; provided that, prior to his relocation as contemplated by Section 1(f) thereof, Executive may perform his duties under the Employment Agreement at such other offices as may be appropriate for the performance of his duties as determined in consultation with the Board; and provided further, that given the nature of Executive's duties, Executive will be required to travel and perform services at locations other than his principal office from time to time.

B. After discussion, it has been determined that Executive's Principal Place of Employment should now be the Company's commercial headquarters in Charlotte, North Carolina.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and of the respective covenants and agreements set forth below, the Parties hereto agree as follows:

1 Section 1(e) of the Employment Agreement be, and hereby is, amended to read as follows:

Principal Place of Employment. Executive's principal office shall be the Company's commercial headquarters in Charlotte, North Carolina, provided that, during the period following the Effective Date and prior to his relocation as contemplated by Section 1(f), Executive may perform his duties under this Agreement at such other offices as may be appropriate for the performance of his duties as determined in consultation with the Board. The Parties understand that given the nature of Executive's duties, Executive will be required to travel and perform services at locations other than his principal office from time to time.

2 All terms used in this First Amendment shall have the same definitions as used in the Employment Agreement, unless otherwise provided herein.

3 This First Amendment may be executed in several counterparts, each of which shall be deemed to be an original, but all of which together will constitute one and the same Agreement. Signatures delivered by facsimile shall be deemed effective for all purposes.

4 Except as amended hereby, the Employment Agreement shall remain in full force and effect and is hereby ratified and confirmed by the Company and Executive in all respects.

IN WITNESS WHEREOF, the Parties have executed this First Amendment to Employment Agreement as of the date and year first above written.

DENTSPLY SIRONA Inc.

By: _____
Name: Eric K. Brandt
Title: Chairman of the Board
of Directors

EXECUTIVE

_____

Donald M. Casey Jr.

Exhibit 21.1

Subsidiaries of DENTSPLY SIRONA Inc. (the "Company") - December 31, 2018

1 Advanced Technology Research SRL (Italy)
2 Augma Bio Materials Ltd. (Israel, 20%)
3 CCRI, Inc. (Delaware)
4 Ceramco Manufacturing B.V. (Netherlands)
5 Cleverdent Ltd. (UK)
6 Cyfex AG (Switzerland, 30%)
7 D Luxembourg Sarl (Luxembourg)
8 DeguDent GmbH (Germany)
9 Dental Implant Training Center Corp. (New Jersey)
10 Dentsply - Sirona Poland SP.z.o.o (Poland)
11 Dentsply (Australia) Pty. Ltd. (Australia)
12 Dentsply (Singapore) Pte. Ltd. (Singapore)
13 Dentsply (Tianjin) International Trading Co. Ltd. (China)
14 Dentsply Acquisition S.a.r.l. (Luxembourg)
15 Dentsply Acquisition US LLC (Delaware)
16 Dentsply Argentina S.A.C.e.I. (Argentina)
17 Dentsply AT Sarl (Luxembourg)
18 Dentsply Benelux B.V. (Netherlands)
19 Dentsply Benelux Sarl (Luxembourg)
20 Dentsply BI Ltd. (Ireland)
21 Dentsply BX Sarl (Luxembourg)
22 Dentsply Canada Ltd. (Canada)
23 Dentsply CE S.a.r.l. (Luxembourg)
24 Dentsply CH Sarl (Luxembourg)
25 Dentsply Chile Comercial Ltda. (Chile)
26 Dentsply Dental (Tianjin) Co. Ltd. (China)
27 Dentsply Dental GmbH (Germany)
28 Dentsply Dental S.a.r.l. (Luxembourg)
29 Dentsply DeTrey GmbH (Germany)
30 Dentsply Europe S.a.r.l. (Luxembourg)
31 DENTSPLY Finance Co. LLC (Delaware)
32 Dentsply GAC Europe SAS (France)
33 Dentsply Germany GmbH (Germany)
34 Dentsply Germany Holdings GmbH (Germany)
35 Dentsply Germany Investments GmbH (Germany)
36 Dentsply Holdings S.a.r.l. (Luxembourg)
37 Dentsply Holdings Unlimited (U.K.)
38 Dentsply IE Ltd. (Ireland)
39 Dentsply IH A/S (Denmark)
40 Dentsply IH AB (Sweden)
41 Dentsply IH AS (Norway)
42 Dentsply IH GmbH (Germany)
43 Dentsply IH Holdings GmbH (Germany)
44 Dentsply IH Inc. (Delaware)
45 Dentsply IH Ltd (UK)
46 Dentsply IH Oy (Finland)

Dentsply IH Pty. Ltd. (Australia)
Dentsply IH S.A. (Switzerland)
DENTSPLY Implants (China) Co. Limited (Hong Kong)
DENTSPLY Implants (HK) Co. Limited (Hong Kong)
Dentsply Implants Manufacturing GmbH (Germany)
Dentsply Implants NV (Belgium)
Dentsply Implants Taiwan Co, Ltd. (Taiwan)
Dentsply Implants Turkey Diş Hekimliği Ürünleri A.Ş (Turkey)
Dentsply India Pvt. Ltd. (India)
Dentsply Industria e Comercio Ltda. (Brazil)
Dentsply Israel Ltd. (Israel)
Dentsply Italia SrL (Italy)
Dentsply Korea Limited (Korea)
Dentsply Limited (Cayman Islands)
Dentsply LLC (Delaware)
Dentsply Mexico S.A. de C.V. (Mexico)
DENTSPLY North America LLC (Delaware)
Dentsply Peru SAC (Peru)
DENTSPLY Prosthetics U.S. LLC (Delaware)
Dentsply Russia Limited (U.K.)
Dentsply Sarl (Luxembourg)
Dentsply SE Sarl (Luxembourg)
Dentsply Services (Switzerland) S.a.r.L. (Switzerland)
Dentsply Sirona (N.Z.) Limited (New Zealand)
DENTSPLY SIRONA (PHILS.), INC. (Philippines)
Dentsply Sirona (Thailand) Ltd. (Thailand)
Dentsply Sirona Austria GmbH (Austria)
Dentsply Sirona Dental Solutions (Shanghai) Co. Ltd. (China)
Dentsply Sirona Deutschland GmbH (Germany)
Dentsply Sirona Europe GmbH (Austria)
Dentsply Sirona France S.A.S. (France)
Dentsply Sirona Iberia S.A. (Spain)
DENTSPLY Sirona K.K. (Japan)
Dentsply Sirona Limited Liability Company (Russia)
Dentsply Sirona Malaysia Sdn Bhd (Malaysia)
Dentsply Sirona Orthodontics Inc. (Delaware)
Dentsply Sirona Pty. Ltd. (Australia)
Dentsply Sirona Real Estate GmbH (Germany)
Dentsply Sirona South Africa (Proprietary) Limited (South Africa)
Dentsply Sirona Switzerland Sarl (Switzerland)
Dentsply Sirona Vietnam Company Limited (Vietnam)
Dentsply South Africa (Pty.) Ltd. (South Africa)
Dentsply Sweden AB (Sweden)
Dentsply US Inc. (Delaware)
DS Dental Instruments Sarl (Switzerland)
DS Dental Instruments SRL (Barbados)
Ducera Dental Verwaltungs GmbH (Germany)
Durango Bensheim GmbH & Co. KG (Germany, 94.8%)
Durango Bensheim Verwaltungs GmbH (Germany)
E.S. Healthcare NV (Belgium)
E.S. Tooling NV (Belgium)

FONA Dental s.r.o. (Slovakia)
Fona Dental Systems Co., Ltd. (China)
FONA s.r.l. (Italy)
Futuredontics, Inc. (California)
GAC (International) Pty Ltd (Australia)
GAC Deutschland GmbH (Germany)
GAC International Asia Pte. Ltd. (Singapore, 50%)
GAC SA (Switzerland)
infiniDent Services GmbH (Germany)
JCM International Inc. (Delaware)
Dentsply Nordics AB (Sweden)
LLC Dentsply Ukraine (Ukraine)
LLC Dentsply IH (Russia)
M Guide Dental Laboratory LLC (New Jersey)
Maillefer Instruments Consulting S.a.r.l. (Switzerland)
Maillefer Instruments Holding S.a.r.l. (Switzerland)
Maillefer Instruments Manufacturing S.a.r.l. (Switzerland)
Maillefer Instruments Plus Sarl (Switzerland)
Maillefer Instruments Trading S.a.r.l. (Switzerland)
Medical 3 Importacion Service Iberica S.L. (Spain, 50%)
Megalopolis Dental S.A. de C.V. (Mexico)
MHT Optic Research AG (Switzerland)
MHT S.R.L. (Italy)
MIS Asia Pacific Limited (Hong Kong)
MIS Belgium SA (Belgium, 99%)
MIS Germany GmbH (Germany)
MIS Implants B.V. (Netherlands, 54.08%)
MIS Implants Technologies France SRL (France)
MIS Implants Technologies GmbH (Germany)
MIS Implants Technologies HK Limited (Hong Kong)
MIS Implants Technologies Inc. (New Jersey)
MIS Implants Technologies Ltd. (Israel)
MIS Implants Technologies UK Limited (United Kingdom)
MİSDENT Implants Diş Ürünleri Sanayi Ticaret Anonim Şirketi (Turkey)
Nectar Imaging s.r.l. (Italy)
Oasis Medikal Urunler Kimya Turizm Sanayi Ve Ticaret Anonim Sirketi (Turkey)
OraMetrix GmbH (Germany)
OraMetrix Pty. Ltd. (Australia)
OraMetrix, Inc. (Delaware)
Ortho Concept Sarl (France)
Orthodental International, Inc. (California)
Orthodental S.A. de C.V. (Mexico)
Prident (Shanghai) Dental Medical Devices Co., Ltd. (China)
Prident International, Inc. (California)
PT Dedent Supply (Indonesia)
PT Dentsply Indonesia (Indonesia)
Qi An Hua Rui (Beijing) Technology Ltd. (China)
Ransom & Randolph Company (Delaware)
SCI 2R (France)
Shenzen Mi Yi Shi Commerce Company Ltd. (China)
SiCAT GmbH & Co. KG (Germany, 57.125%)

SiCAT Verwaltungs GmbH (Germany)
Sirona Dental a/s (Denmark)
Sirona Dental Comércio de Produtos e Sistemas Odontológicos Ltda. (Brazil)
Sirona Dental GmbH (Austria)
Sirona Dental Limited Sirketi (Turkey)
Sirona Dental Mexico S. de R.L. de C.V. (Mexico)
Sirona Dental Services GmbH (Germany)
Sirona Dental Systems (Foshan) Co., Ltd. (China)
Sirona Dental Systems (HK) Ltd. (Hong Kong)
Sirona Dental Systems Co., Ltd (Thailand)
Sirona Dental Systems GmbH (Germany)
Sirona Dental Systems LLC (Delaware)
Sirona Dental Systems Ltd. (United Kingdom)
Sirona Dental Systems O.O.O. (Russia)
Sirona Dental Systems Private Ltd. (India)
Sirona Dental Systems s.r.l. (Italy)
Sirona Dental Systems Trading, LLC (United Arab Emirates, 49%)
Sirona Dental, Inc. (Delaware)
Sirona Immobilien GmbH (Germany)
Sirona Technologie GmbH & Co. KG (Germany)
Sirona Verwaltungs GmbH (Germany)
Societe de Recherche Techniques Dentaires SAS (France)
The Dental Trading Co., Ltd. (Thailand, 49.8%)
Tulsa Dental Products LLC (Delaware)
Tuzodent S.A. de C.V. (Mexico)
VDW GmbH (Germany)
VIPI Indústria, Comércio, Exportação e Importação de Produtos Odontológicos Ltda. (Brazil)
Wellspect Healthcare GmbH (Austria)
Zhermack GmbH (Germany)
Zhermack SpA (Italy)
Zhermack, Inc. (Nevada)
Zhermapol SP Zoo (Poland)
ZST Holdings Inc. (Canada, 10%)

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (Nos. 333-209791, 333-167410 and 333-101548) of Dentsply Sirona Inc. of our report dated March 8, 2019 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Harrisburg, PA
March 8, 2019

Exhibit 31.1

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Donald M. Casey, Jr, certify that:

1 I have reviewed this Form 10-K of DENTSPLY SIRONA Inc;

2 Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3 Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4 The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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:

c Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5 The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ *Donald M. Casey, Jr*

Donald M. Casey, Jr
Chief Executive Officer

Date: March 8, 2019

Exhibit 31.2

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Nicholas W. Alexos, certify that:

1 I have reviewed this Form 10-K of DENTSPLY SIRONA Inc;

2 Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3 Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4 The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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:

c Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5 The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ *Nicholas W. Alexos*

Nicholas W. Alexos

Executive Vice President and Chief Financial Officer

Date: March 8, 2019

Exhibit 32

CERTIFICATION PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of DENTSPLY SIRONA Inc. (the "Company") on Form 10-K for the year ending December 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), We, Donald M. Casey Jr. Chief Executive Officer of the Company and Nicholas W. Alexos, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of our knowledge and belief:

(1) The Report fully complies with the requirements of Sections 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company as of the date of the Report.

/s/ *Donald M. Casey Jr.*

Donald M. Casey Jr.
Chief Executive Officer

/s/ *Nicholas W. Alexos*

Nicholas W. Alexos
Executive Vice President and Chief Financial Officer

Date: March 8, 2019