OWENS ILLINOIS INC /DE/
Form 10-K
February 14, 2019
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D. C. 20549

FORM 10 K

(Mark One)

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

For the fiscal year ended

December 31, 2018

or

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

Commission file number 1-9576

OWENS-ILLINOIS, INC.

(Exact name of registrant as specified in its charter)

Delaware	22 2781933
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)
One Michael Owens Way, Perrysburg, Ohio	43551
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (567) 336-5000

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

Title of each class	Name of each exchange on which registered
Common Stock, $.01 par value	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the

Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes No

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S K (§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.

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	Accelerated filer	Non accelerated filer
Smaller reporting company	Emerging growth company	

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

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

The aggregate market value (based on the consolidated tape closing price on June 30, 2018) of the voting and non-voting common equity held by non-affiliates of Owens-Illinois, Inc. was approximately $1,852,928,000. For the sole purpose of making this calculation, the term "non-affiliate" has been interpreted to exclude directors and executive officers of the Company. Such interpretation is not intended to be, and should not be construed to be, an admission by Owens-Illinois, Inc. or such directors or executive officers of the Company that such directors and executive officers of the Company are "affiliates" of Owens-Illinois, Inc., as that term is defined under the Securities Act of 1934.

The number of shares of common stock, $.01 par value of Owens-Illinois, Inc. outstanding as of January 31, 2019 was 153,622,239.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Owens-Illinois, Inc. Proxy Statement for The Annual Meeting of Share Owners To Be Held Thursday, May 16, 2019 ("Proxy Statement") are incorporated by reference into Part III hereof.

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PART I

ITEM 1. BUSINESS

General Development of Business

Owens Illinois, Inc., a Delaware corporation (the "Company"), through its subsidiaries, is the successor to a business established in 1903. The Company is the largest manufacturer of glass containers in the world with 77 glass manufacturing plants in 23 countries. It competes in the glass container segment of the rigid packaging market and is the leading glass container manufacturer in most of the countries where it has manufacturing facilities.

Company Strategy

The Company's vision is to responsibly provide innovative and competitive packaging solutions for the world's leading food and beverage companies. Its goal is to enable future success for its customers, employees and share owners. The Company will realize its vision and goal by achieving its strategic ambitions including:

- To be the preferred supplier for glass packaging in the global food and beverage industry by significantly improving the customer experience; aligning its activity with customers' value; improving quality and flexibility; and improving innovation and speed of commercialization; as well as increasing sales, marketing, end-to-end supply chain capabilities and talent;
- To be the most cost effective producer in the global glass packaging segment by ensuring asset stability and total systems cost management; increasing efficiency, leveraging automation, and improving quality; cultivating game changing concepts that create new competitive advantages; and focusing on continuous improvement; and
- To expand its business in attractive, growing markets and segments by leveraging innovation, growing with strategic customers; expanding into attractive new markets; and evaluating expansion into the value chain.

Reportable Segments

The Company has three reportable segments based on its geographic locations: Americas, Europe, and Asia Pacific. These three segments are aligned with the Company's internal approach to managing, reporting, and evaluating performance of its global glass operations. To better leverage its scale and presence across a larger geography and market, the Company completed the consolidation of the former North America and Latin America segments into one segment, named the Americas, effective January 1, 2018.

Products and Services

The Company produces glass containers for alcoholic beverages, including beer, flavored malt beverages, spirits and wine. The Company also produces glass packaging for a variety of food items, soft drinks, teas, juices and pharmaceuticals. The Company manufactures glass containers in a wide range of sizes, shapes and colors and is active in new product development and glass container innovation.

Customers

In most of the countries where the Company competes, it has the leading position in the glass container segment of the rigid packaging market based on sales revenue. The Company's largest customers consist mainly of the leading global food and beverage manufacturers, including (in alphabetical order) Anheuser Busch InBev, Brown-Forman, Carlsberg, Coca-Cola, Constellation, Diageo, Heineken, MillerCoors, Nestle and Pernod Ricard. No customer represents more than 10% of the Company's consolidated net sales.

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The Company sells most of its glass container products directly to customers under annual or multi year supply agreements. Multi year contracts typically provide for price adjustments based on cost changes. The Company also sells some of its products through distributors. Many customers provide the Company with regular estimates of their product needs, which enables the Company to schedule glass container production to maintain reasonable levels of inventory. Glass container manufacturing facilities are generally located in close proximity to customers.

Markets and Competitive Conditions

The Company's principal markets for glass container products are in the Americas, Europe and Asia Pacific.

Americas. The Company has 35 glass container manufacturing plants in the Americas region located in Argentina, Bolivia, Brazil, Canada, Colombia, Ecuador, Mexico, Peru, the U.S. and interests in three joint ventures that manufacture glass containers. Also, the Company has a distribution facility in the U.S. used to import glass containers from its business in Mexico. The Company has the leading share of the glass container segment of the U.S. rigid packaging market, based on sales revenue by domestic producers. In South America and Mexico, the Company maintains a diversified portfolio serving several markets, including alcoholic beverages (beer, wine and spirits), non-alcoholic beverages and food, as well as a large infrastructure for returnable/refillable glass containers.

The principal glass container competitors in the U.S. are the Ardagh Group and Anchor Glass Container. Imports from China, Mexico, Taiwan and other countries also compete in U.S. glass container segments. Additionally, there are several major consumer packaged goods companies that self manufacture glass containers. The Company competes directly with Verallia in Brazil and Argentina, and does not believe that it competes with any other large, multinational glass container manufacturers in the rest of the region.

Europe. The Company has a leading share of the glass container segment of the rigid packaging market in the European countries in which it operates, with 34 glass container manufacturing plants located in the Czech Republic, Estonia, France, Germany, Hungary, Italy, the Netherlands, Poland, Spain and the United Kingdom. These plants primarily produce glass containers for the alcoholic beverages (beer, wine and spirits), non-alcoholic beverages and food markets in these countries. The Company also has interests in two joint ventures that manufacture glass containers in Italy. Throughout Europe, the Company competes directly with a variety of glass container manufacturers including Verallia, Ardagh Group, Vetropack, Vidrala and BA Vidro.

Asia Pacific. The Company has eight glass container manufacturing plants in the Asia Pacific region, located in Australia, China, Indonesia and New Zealand. It also has interests in joint venture operations in China, Malaysia and Vietnam. In Asia Pacific, the Company primarily produces glass containers for the alcoholic beverages (primarily beer and wine), non-alcoholic beverages and food markets. The Company competes directly with Orora Limited in Australia, and does not believe that it competes with any other large, multinational glass container manufacturers in the rest of the region. In China, the glass container segments of the packaging market are regional and highly fragmented with a large number of local competitors.

In addition to competing with other large and well established manufacturers in the glass container segment, the Company competes in all regions with manufacturers of other forms of rigid packaging, principally aluminum cans and plastic containers. Competition is based on quality, price, service, innovation and the marketing attributes of the container. The principal competitors producing metal containers include Ball Corporation, Crown Holdings, Inc., and Silgan Holdings Inc. The principal competitors producing plastic containers include Amcor, Consolidated Container Holdings, LLC, Reynolds Group Holdings Limited, Plastipak Packaging, Inc. and Silgan Holdings Inc. The Company also competes with manufacturers of non rigid packaging alternatives, including flexible pouches, aseptic cartons and bag in box containers.

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The Company seeks to provide products and services to customers ranging from large multinationals to small local breweries and wineries in a way that creates a competitive advantage for the Company. The Company believes that it is often the glass container partner of choice because of its innovation and branding capabilities, its global footprint and its expertise in manufacturing know how and process technology.

Manufacturing

The Company has 77 glass manufacturing plants. It constantly seeks to improve the productivity of these operations through the systematic upgrading of production capabilities, sharing of best practices among plants and effective training of employees.

The Company also provides engineering support for its glass manufacturing operations through facilities located in the U.S., Australia, France, Poland and Peru.

Suppliers and Raw Materials

The primary raw materials used in the Company's glass container operations are sand, soda ash, limestone and recycled glass. Each of these materials, as well as the other raw materials used to manufacture glass containers, has historically been available in adequate supply from multiple sources. One of the sources is a soda ash mining operation in Wyoming in which the Company has a 25% interest.

Energy

The Company's glass container operations require a continuous supply of significant amounts of energy, principally natural gas, fuel oil and electrical power. Adequate supplies of energy are generally available at all of the Company's manufacturing locations. Energy costs typically account for 10-20% of the Company's total manufacturing costs, depending on the cost of energy, the type of energy available, the factory location and the particular energy requirements. The percentage of total cost related to energy can vary significantly because of volatility in market prices, particularly for natural gas and fuel oil in volatile markets such as North America and Europe.

In the Americas' businesses in the U.S. and Canada, more than 90% of the sales volume is represented by customer contracts that contain provisions that pass the commodity price of natural gas to the customer, effectively reducing the region's exposure to changing natural gas market prices. In the Americas' business in South America and Mexico, the Company primarily enters into fixed price contracts for its energy requirements in most of the countries in which it operates and the remaining energy requirements are subject to changing natural gas market prices and economic impacts. These fixed price contracts typically have terms of one to ten years, and generally include annual price adjustments for inflation and for certain contracts price adjustments for foreign currency variation.

In Europe and Asia Pacific, the Company enters into long term contracts for a significant amount of its energy requirements. These contracts have terms that range from one to five years.

Also, in order to limit the effects of fluctuations in market prices for natural gas, the Company uses commodity forward contracts related to its forecasted requirements. The objective of these forward contracts is to reduce potential volatility in cash flows and expense due to changing market prices. The Company continually evaluates the energy markets with respect to its forecasted energy requirements to optimize its use of commodity forward contracts.

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Research, Development and Engineering

Research, development and engineering constitute important parts of the Company's technical activities. The Company primarily focuses on advancements in the areas of product innovation, manufacturing process control, melting technology, automatic inspection, light weighting and further automation of manufacturing activities. Recently, the Company has increased its focus on advancing melting technology with investments in modular glass melting furnaces. The Company's investments in this new technology seeks to reduce the amount of capital required to install, rebuild and operate its furnaces. This new melting technology is also focused on the ability of these assets to be more easily turned on and off or adjusted based on seasonality and customer demands. The Company's research and development activities are conducted principally at its corporate facilities in Perrysburg, Ohio.

The Company holds a large number of patents related to a wide variety of products and processes and has a substantial number of patent applications pending. While the aggregate of the Company's patents are of material importance to its businesses, the Company does not consider that any patent or group of patents relating to a particular product or process is of material importance when judged from the standpoint of any individual segment or its businesses as a whole.

The Company has agreements to license its proprietary glass container technology and to provide technical assistance to a limited number of companies around the world. These agreements cover areas related to manufacturing and engineering assistance. The worldwide licensee network provides a stream of revenue to help support the Company's development activities. In 2018, 2017, and 2016, the Company earned $13 million, $11 million and $13 million, respectively, in royalties and net technical assistance revenue.

Sustainability and the Environment

The Company is committed to reducing the impact its products and operations have on the environment. As part of this commitment, the Company has set targets for increasing the use of recycled glass in its manufacturing process, while reducing energy consumption and carbon dioxide equivalent ("CO_2") emissions. Specific actions taken by the Company include working with governments and other organizations to establish and financially support recycling initiatives, partnering with other entities throughout the supply chain to improve the effectiveness of recycling efforts, reducing the weight of glass packaging and investing in research and development to reduce energy consumption in its manufacturing process. The Company invests in technology and training to improve safety, reduce energy use, decrease emissions and increase the amount of cullet, or recycled glass, used in the production process.

The Company's worldwide operations, in addition to other companies within the industry, are subject to extensive laws, ordinances, regulations and other legal requirements relating to environmental protection, including legal requirements governing investigation and clean up of contaminated properties as well as water discharges, air emissions, waste management and workplace health and safety. The Company strives to abide by and uphold such laws and regulations.

Glass Recycling and Bottle Deposits

The Company is an important contributor to recycling efforts worldwide and is among the largest users of recycled glass containers. If sufficient high quality recycled glass were available on a consistent basis, the Company has the technology to make glass containers containing a high proportion of recycled glass. Using recycled glass in the manufacturing process reduces energy costs and impacts the operating life and efficiency of the glass melting furnaces.

In the U.S., Canada, Europe and elsewhere, government authorities have adopted or are considering legal requirements that would mandate certain recycling rates, the use of recycled materials, or limitations on or preferences for certain types of packaging. The Company believes that governments worldwide will continue to develop and enact legal requirements guiding customer and end consumer packaging choices.

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Sales of beverage containers are affected by governmental regulation of packaging, including deposit laws and extended producer responsibility regulations. As of December 31, 2018, there were a number of U.S. states, Canadian provinces and territories, European countries and Australian states with some form of incentive for consumer returns of glass bottles in their law. The structure and enforcement of such laws and regulations can impact the sales of beverage containers in a given jurisdiction. Such laws and regulations also impact the availability of post consumer recycled glass for the Company to use in container production.

A number of states and provinces have recently considered or are now considering laws and regulations to encourage curbside, deposit and on premise glass recycling. Although there is no clear trend in the direction of these state and provincial laws and proposals, the Company believes that states and provinces, as well as municipalities within those jurisdictions, will continue to adopt recycling laws, which will impact supplies of recycled glass. As a large user of recycled glass for making new glass containers, the Company has an interest in laws and regulations impacting supplies of such material in its markets.

Air Emissions

In Europe, the European Union Emissions Trading Scheme ("EUETS") is in effect to facilitate emissions reduction. The Company's manufacturing facilities which operate in EU countries must restrict the volume of their CO_2 emissions to the level of their individually allocated emissions allowances as set by country regulators. If the actual level of emissions for any facility exceeds its allocated allowance, additional allowances can be bought to cover deficits; conversely, if the actual level of emissions for any facility is less than its allocation, the excess allowances can be sold. Should the regulators significantly restrict the number of emissions allowances available, it could have a material effect on the Company's results.

In the Americas, the U.S. and Canada have engaged in significant legislative and regulatory activities relating to greenhouse gas ("GHG") emissions for years at the federal, state and provincial levels of government. In the U.S., the Environmental Protection Agency (the "EPA") regulates emissions of GHG air pollutants under the Clean Air Act, which grants the EPA authority to establish limits for certain air pollutants and to require compliance, levy penalties and bring civil judicial action against violators. The EPA's GHG regulations continue to evolve, as the structure and scope of the regulations are often the subject of litigation and federal legislative activity. New GHG regulations could have a significant long term impact on the Company's operations that are affected by such regulations. The state of California in the U.S. the Canadian federal government and the province of Quebec have adopted cap and trade legislation aimed at reducing GHG emissions. In Brazil, the government passed a law in 2009 requiring companies to reduce the level of GHG emissions by the year 2020. In other South American countries, national and local governments are also considering potential regulations to reduce GHG emissions.

In Asia Pacific, the National Greenhouse and Energy Reporting Act 2007 commenced on July 1, 2008 in Australia and established a mandatory reporting system for corporate GHG emissions and energy production and consumption. In July 2014, the Australian government introduced the Emissions Reduction Fund ("ERF") which comprises an element to credit emissions reductions, a fund to purchase emissions reductions and a safeguard mechanism. The ERF purchases the lowest cost abatement (in the form of Australian carbon credit units) from a wide range of sources, providing an incentive to businesses, households and landowners to proactively reduce their emissions, while the safeguard mechanism (effective from July 1, 2016) ensures that emissions reductions paid for through the crediting and purchasing elements of the ERF are not offset by significant increases in emissions above business-as-usual levels elsewhere in the economy. An emissions trading scheme has been in effect in New Zealand since 2008.

The Company is unable to predict what environmental legal requirements may be adopted in the future. However, the Company continually monitors its operations in relation to environmental impacts and invests in environmentally friendly and emissions reducing projects. As such, the Company has made significant expenditures for environmental improvements at certain of its facilities over the last several years; however, these expenditures did not have a material adverse effect on the Company's results of operations or cash flows. The Company is unable to predict the impact of future environmental legal requirements on its results of operations or cash flows.

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Employees

The Company’s worldwide operations employed approximately 26,500 persons as of December 31, 2018. Approximately 68% of employees in the U.S. and Canada are hourly workers covered by collective bargaining agreements. The principal collective bargaining agreement, which at December 31, 2018, covered approximately 77% of the Company’s union affiliated employees in the U.S. and Canada, will expire on March 31, 2019. Approximately 71% of employees in South America and Mexico are covered by collective bargaining agreements. The majority of the hourly workers in Australia and New Zealand are also covered by collective bargaining agreements. The collective bargaining agreements in South America, Mexico, Australia and New Zealand have varying terms and expiration dates. In Europe, a large number of the Company’s employees are employed in countries in which employment laws provide greater bargaining or other rights to employees than the laws of the U.S. Such employment rights require the Company to work collaboratively with the legal representatives of the employees to effect any changes to labor arrangements. The Company considers its employee relations to be good and does not anticipate any material work stoppages in the near term.

Available Information

The Company’s website is www.o i.com. The Company’s annual report on Form 10 K, quarterly reports on Form 10 Q, current reports on Form 8 K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 can be obtained from this site at no cost. The Securities and Exchange Commission (“SEC”) maintains a website at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

The Company’s Corporate Governance Guidelines, Global Code of Business Conduct and Ethics and the charters of the Audit, Compensation, Nominating/Corporate Governance and Risk Oversight Committees are also available on the “Investors” section of the Company’s website. Copies of these documents are available in print to share owners upon request, addressed to the Corporate Secretary at the address above. The information on the Company’s website is not part of this or any other report that the Company files with, or furnishes to, the SEC.

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Executive Officers of the Registrant

In the following table, the Company sets forth certain information regarding those persons currently serving as executive officers of Owens-Illinois, Inc. as of February 14, 2019.

Name and Age	Position
Andres A. Lopez (56)	Chief Executive Officer since January 2016; President, Glass Containers and Chief Operating Officer 2015; Vice President and President of O I Americas 2014 2015; Vice President and President of O I South America 2009 2014; Vice President of Global Manufacturing and Engineering 2006 2009.
Miguel I. Alvarez (54)	President, O-I Americas since November 2017; President, O-I Latin America 2014 - 2017; President, O-I Brazil 2010 – 2014. Previously held leadership positions in Chile, Argentina and Ecuador for Belcorp, a leading global beauty products company 2005 – 2010.
Arnaud Aujouannet (49)	Senior Vice President and Chief Sales and Marketing Officer since October 2017; Vice President of Sales and Marketing, Europe 2015 – 2017. Previously Commercial Associate Director, Oral Care Europe for Procter & Gamble, a multi-national consumer goods company 2012 - 2015; Global Sales & Marketing Chief Sales & Marketing Officer, Swiss Precision Diagnostic/Clearblue (a Procter & Gamble Joint Venture) 2009 – 2012.
Jan A. Bertsch (62)	Chief Financial Officer and Senior Vice President since November 2015. Previously Executive Vice President and Chief Financial Officer for Sigma-Aldrich, a life science and technology company, 2012 - 2015. Vice President, Controller and Principal Accounting Officer at BorgWarner 2011 – 2012; Vice President and Treasurer, 2009 - 2011.
Tim M. Connors (44)	President, O-I Asia Pacific since June 2015; General Manager of O-I Australia 2013 – 2015; Vice President of Finance, Asia Pacific 2011 – 2013; Vice President of Strategic Planning and Business Development, North America 2010 – 2011.
Giancarlo Currarino (42)	Senior Vice President and Chief Technology and Supply Chain Officer since December 2016; Vice President and Chief Technology Officer 2012 - 2016; Vice President of Global Engineering 2011 – 2012.
John A. Haudrich (51)	Senior Vice President and Chief Strategy and Integration Officer since November 2015; Vice President and Acting Chief Financial Officer 2015; Vice President Finance and Corporate Controller 2011 – 2015; Vice President of Investor Relations 2009 – 2011.
Vitaliano Torno (60)	President, O-I Europe since January 2016; Managing Director, O-I Europe 2015; Vice President, European countries 2013 – 2015; Vice President, Marketing and sales, Europe 2010 - 2013.
MaryBeth Wilkinson (46)	Senior Vice President and General Counsel since January 2017; Corporate Secretary since 2016; Associate General Counsel 2013 – 2016; Assistant General Counsel 2010 – 2012. Previously Partner with a global law firm 2007 – 2010.

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ITEM 1A. RISK FACTORS

Asbestos Related Liability—The Company has made, and will continue to make, substantial payments to resolve claims of persons alleging exposure to asbestos containing products and may need to record additional charges in the future for estimated asbestos related costs. These substantial payments have affected and may continue to affect the Company's cost of borrowing, its ability to pursue global or domestic acquisitions, its ability to reinvest in its operations, and its ability to pay dividends.

From 1948 to 1958, one of the Company's former business units commercially produced and sold approximately $40 million of a high-temperature, calcium silicate based pipe and block insulation material containing asbestos. The Company exited the insulation business in April 1958. The Company receives claims from individuals alleging bodily injury and death as a result of exposure to asbestos from this product ("Asbestos Claims"). Some Asbestos Claims are brought as personal injury lawsuits that typically allege various theories of liability, including negligence, gross negligence and strict liability and seek compensatory and, in some cases, punitive damages. Predominantly, however, Asbestos Claims are presented to the Company under administrative claims-handling agreements, which the Company has in place with many plaintiffs' counsel throughout the country ("Administrative Claims").

Beginning with the initial liability of $975 million established in 1993, the Company has accrued a total of approximately $5.0 billion through 2018, before insurance recoveries, for its asbestos-related liability. The Company's ability to estimate its liability has been significantly affected by, among other factors, the volatility of asbestos related litigation in the United States, the significant number of co-defendants that have filed for bankruptcy, the inherent uncertainty of future disease incidence and claiming patterns against the Company, the significant expansion of the defendants that are now sued in the litigation, and the continuing changes in the extent to which these defendants participate in the resolution of cases in which the Company is also a defendant.

For many years, the Company has conducted an annual comprehensive legal review of its asbestos-related liabilities and costs in connection with finalizing its annual results of operations. In May 2016, the Company revised its method for estimating its asbestos-related liabilities in connection with finalizing and reporting its restated results of operations for the three years ended December 31, 2015. The revised method estimates the total future costs for the Company's asbestos-related liability. Under this method, the Company provides historical Asbestos Claims' data to a third party with expertise in determining the impact of disease incidence and mortality on future filing trends to develop information to assist the Company in estimating the total number of future Asbestos Claims likely to be asserted against the Company. The Company uses this estimate, along with an estimation of disposition costs and related legal costs, as inputs to develop its best estimate of its total probable liability. The revised methodology has led the Company to conclude that an asbestos-related liability of $602 million was required as of December 31, 2018.

The Company continues to believe that its ultimate asbestos-related liability cannot be estimated with certainty. As part of its future annual comprehensive legal reviews, the Company will review its estimate of its total asbestos-related liability, unless significant changes in trends or new developments warrant an earlier review. Such reviews may result in significant adjustments to the liability accrued at the time of the review.

The significant assumptions underlying the material components of the Company's accrual are:

a) settlements will continue to be limited almost exclusively to claimants who were exposed to the Company's asbestos containing insulation prior to its exit from that business in 1958;
b) Asbestos Claims will continue to be resolved primarily under the Company's administrative claims agreements or on terms comparable to those set forth in those agreements;
c) the incidence of serious asbestos related disease cases and claiming patterns against the Company for such cases do not change materially;

d) the Company is substantially able to defend itself successfully at trial and on appeal;
e) the number and timing of additional co-defendant bankruptcies do not change significantly the assets available to participate in the resolution of cases in which the Company is a defendant; and

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f) co-defendants with substantial resources and assets continue to participate significantly in the resolution of future Asbestos Claims.

The ultimate amount of distributions that may be required to fund the Company's total asbestos-related payments cannot be estimated with certainty. Asbestos related payments continue to be substantial and the continued use of significant amounts of cash for asbestos related costs has affected and may continue to affect the Company's cost of borrowing, its ability to pursue global or domestic acquisitions, its ability to reinvest in its operations, and its ability to pay dividends.

Substantial Leverage—The Company's indebtedness could adversely affect the Company's financial health.

The Company has a significant amount of debt. As of December 31, 2018 and December 31, 2017, the Company had approximately $5.3 billion of total debt outstanding.

The Company's indebtedness could:

- Increase vulnerability to general adverse economic and industry conditions;
- Increase vulnerability to interest rate increases for the portion of the debt under the secured credit agreement;
- Require the Company to dedicate a substantial portion of cash flow from operations to payments on indebtedness, thereby reducing the availability of cash flow to fund working capital, capital expenditures, acquisitions, share repurchases, development efforts and other general corporate purposes;
- Limit flexibility in planning for, or reacting to, changes in the Company's business and the rigid packaging market;
- Place the Company at a competitive disadvantage relative to its competitors that have less debt; and
- Limit, along with the financial and other restrictive covenants in the documents governing indebtedness, among other things, the Company's ability to borrow additional funds.

Ability to Service Debt—To service its indebtedness, the Company will require a significant amount of cash. The Company's ability to generate cash and refinance certain indebtedness depends on many factors beyond its control.

The Company's ability to make payments on, to refinance its indebtedness and to fund working capital, capital expenditures, acquisitions, development efforts and other general corporate purposes depends on its ability to generate cash in the future. The Company has no assurance that it will generate sufficient cash flow from operations, or that future borrowings will be available under the secured credit agreement, in an amount sufficient to enable the Company to pay its indebtedness, or to fund other liquidity needs. If short-term interest rates increase, the Company's debt service cost will increase because some of its debt is subject to short-term variable interest rates. At December 31, 2018, the Company's debt, including interest rate swaps, that is subject to variable interest rates represented approximately 33% of total debt.

Further, in July 2017, the Financial Conduct Authority (the authority that regulates LIBOR) announced it intends to stop compelling banks to submit rates for the calculation of LIBOR after 2021. The Alternative Reference Rates Committee ("ARRC") has proposed that the Secured Overnight Financing Rate ("SOFR") is the rate that represents best practice as the alternative to USD-LIBOR for use in debt instruments, derivatives and other financial contracts that are currently indexed to USD-LIBOR. ARRC has proposed a paced market transition plan to SOFR from USD-LIBOR and organizations are currently working on industry wide and company specific transition plans as it relates to derivatives, debt and cash markets exposed to USD-LIBOR. Approximately 20% of the Company's long-term indebtedness are indexed to USD-LIBOR and it is monitoring this activity and evaluating the related risks. Although an alternative to LIBOR has been contemplated in the Company's bank credit agreement, it is unclear as to the new method of calculating LIBOR that may evolve and this new method could adversely affect the Company's interest rates on its indebtedness.

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The Company may need to refinance all or a portion of its indebtedness on or before maturity. If the Company is unable to generate sufficient cash flow and is unable to refinance or extend outstanding borrowings on commercially reasonable terms or at all, it may have to take one or more of the following actions:

- Reduce or delay capital expenditures planned for replacements, improvements and expansions;
- Sell assets;
- Restructure debt; and/or
- Obtain additional debt or equity financing.

The Company can provide no assurance that it could affect or implement any of these alternatives on satisfactory terms, if at all.

Debt Restrictions—The Company may not be able to finance future needs or adapt its business plans to changes because of restrictions placed on it by the secured credit agreement and the indentures and instruments governing other indebtedness.

The secured credit agreement, the indentures governing the senior debentures and notes, and certain of the agreements governing other indebtedness contain affirmative and negative covenants that limit the ability of the Company to take certain actions. For example, these indentures restrict, among other things, the ability of the Company and its restricted subsidiaries to borrow money, pay dividends on, or redeem or repurchase its stock, make certain investments, create liens, enter into certain transactions with affiliates and sell certain assets or merge with or into other companies. These restrictions could adversely affect the Company's ability to operate its businesses and may limit its ability to take advantage of potential business opportunities as they arise.

Failure to comply with these or other covenants and restrictions contained in the secured credit agreement, the indentures or agreements governing other indebtedness could result in a default under those agreements, and the debt under those agreements, together with accrued interest, could then be declared immediately due and payable. If a default occurs under the secured credit agreement, the Company could no longer request borrowings under the secured credit agreement, and the lenders could cause all of the outstanding debt obligations under such secured credit agreement to become due and payable, which would result in a default under a number of other outstanding debt securities and could lead to an acceleration of obligations related to these debt securities. A default under the secured credit agreement, indentures or agreements governing other indebtedness could also lead to an acceleration of debt under other debt instruments that contain cross-acceleration or cross default provisions.

Foreign Currency Exchange Rates—The Company is subject to the effects of fluctuations in foreign currency exchange rates, which could adversely impact the Company's financial results.

The Company's reporting currency is the U.S. dollar. A significant portion of the Company's net sales, costs, assets and liabilities are denominated in currencies other than the U.S. dollar, primarily the Euro, Brazilian real, Colombian peso, Mexican peso and Australian dollar. In its consolidated financial statements, the Company remeasures transactions denominated in a currency other than the functional currency of the reporting entity (e.g. soda ash purchases) and translates local currency financial results into U.S. dollars based on the exchange rates prevailing during the reporting period. During times of a strengthening U.S. dollar, the reported revenues and earnings of the Company's international operations will be reduced because the local currencies will translate into fewer U.S. dollars. This could have a material adverse effect on the Company's financial condition, results of operations and cash flows.

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International Operations—The Company is subject to risks associated with operating in foreign countries.

The Company operates manufacturing and other facilities throughout the world. Net sales from non U.S. operations totaled approximately $4.9 billion, representing approximately 71% of the Company’s net sales for the year ended December 31, 2018. As a result of its non U.S. operations, the Company is subject to risks associated with operating in foreign countries, including:

- Political, social and economic instability;
- War, civil disturbance or acts of terrorism;
- Taking of property by nationalization or expropriation without fair compensation;
- Changes in governmental policies and regulations;
- Devaluations and fluctuations in currency exchange rates;
- Fluctuations in currency exchange rates;
- Imposition of limitations on conversions of foreign currencies into dollars or remittance of dividends and other payments by foreign subsidiaries;
- Imposition or increase of withholding and other taxes on remittances and other payments by foreign subsidiaries;
- Hyperinflation in certain foreign countries;
- Impositions or increase of investment and other restrictions or requirements by foreign governments;
- Loss or non renewal of treaties or other agreements with foreign tax authorities;
- Changes in tax laws, or the interpretation thereof, including those affecting foreign tax credits or tax deductions relating to our non U.S. earnings or operations; and
- Complying with the U.S. Foreign Corrupt Practices Act, which prohibits companies and their intermediaries from engaging in bribery or other prohibited payments to foreign officials for the purposes of obtaining or retaining business or gaining an unfair business advantage and requires companies to maintain accurate books and records and effective internal controls.

The risks associated with operating in foreign countries may have a material adverse effect on operations.

Brexit—The Company’s business may be impacted by the United Kingdom’s proposed exit from the European Union.

In 2016, the United Kingdom held a referendum in which voters approved an exit from the European Union, commonly referred to as "Brexit." As a result of the referendum, the United Kingdom parliament voted in March 2017 to commence the United Kingdom’s official withdrawal process from the European Union. Negotiations between the United Kingdom and the European Union remain ongoing and are complex, and there can be no assurance regarding the terms, timing or consummation of any resulting agreements. The United Kingdom is due to leave the European Union automatically on March 29, 2019, unless the negotiations are extended by unanimous consent of the European Council.

The initial Brexit vote in 2016 caused significant volatility in currency exchange rates and continued uncertainty regarding Brexit may result in future exchange rate volatility. Such volatility, and any adverse effect that Brexit has on the currency regimes to which the Company is subject, could adversely affect the Company’s sales volumes and costs. The Company has two manufacturing facilities in the United Kingdom. Further, the uncertainty surrounding the Brexit negotiations continues to create economic uncertainty, which may cause the Company’s customers to closely monitor their costs, terminate or reduce the scope of existing contracts, decrease or postpone currently planned contracts, or negotiate for more favorable deal terms, each of which may have a negative impact on the Company’s financial condition, results of operations and cash flows.

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Competition—The Company faces intense competition from other glass container producers, as well as from makers of alternative forms of packaging. Competitive pressures could adversely affect the Company's financial health.

The Company is subject to significant competition from other glass container producers, as well as from makers of alternative forms of packaging, such as aluminum cans and plastic containers. The Company also competes with manufacturers of non rigid packaging alternatives, including flexible pouches and aseptic cartons, in serving the packaging needs of certain end use markets, including juice customers. The Company competes with each rigid packaging competitor on the basis of price, quality, service and the marketing and functional attributes of the container. Advantages or disadvantages in any of these competitive factors may be sufficient to cause the customer to consider changing suppliers and/or using an alternative form of packaging. The adverse effects of consumer purchasing decisions may be more significant in periods of economic downturn and may lead to longer-term reductions in consumer spending on glass-job act packaged products.

Pressures from competitors and producers of alternative forms of packaging have resulted in excess capacity in certain countries in the past and have led to capacity adjustments and significant pricing pressures in the rigid packaging market. These pressures could have a material adverse effect on the Company's operations.

Lower Demand Levels—Changes in consumer preferences may have a material adverse effect on the Company's financial results.

Changes in consumer preferences for the food and beverages they consume can reduce demand for the Company's products. Because many of the Company's products are used to package consumer goods, the Company's sales and profitability could be negatively impacted by changes in consumer preferences for those products. Examples of changes in consumer preferences include, but are not limited to, lower sales of major domestic beer brands and shifts from beer to wine or spirits that results in the use of fewer glass containers. In periods of lower demand, the Company's sales and production levels may decrease causing a material adverse effect on the Company's profitability.

Energy Costs—Higher energy costs worldwide and interrupted power supplies may have a material adverse effect on operations.

Electrical power, natural gas, and fuel oil are vital to the Company's operations as it relies on a continuous energy supply to conduct its business. Depending on the location and mix of energy sources, energy accounts for 10% to 20% of total production costs. Substantial increases and volatility in energy costs could cause the Company to experience a significant increase in operating costs, which may have a material adverse effect on operations.

Global Economic Environment—The global credit, financial and economic environment could have a material adverse effect on operations and financial condition.

The global credit, financial and economic environment could have a material adverse effect on operations, including the following:

- Downturns in the business or financial condition of any of the Company's customers or suppliers could result in a loss of revenues or a disruption in the supply of raw materials;
- Tightening of credit in financial markets could reduce the Company's ability, as well as the ability of the Company's customers and suppliers, to obtain future financing;
- Volatile market performance could affect the fair value of the Company's pension assets and liabilities, potentially requiring the Company to make significant additional contributions to its pension plans to maintain prescribed funding levels;
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The deterioration of any of the lending parties under the Company's revolving credit facility or the creditworthiness of the counterparties to the Company's derivative transactions could result in such parties' failure to satisfy their obligations under their arrangements with the Company; and

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- A significant weakening of the Company's financial position or results of operations could result in noncompliance with the covenants under the Company's indebtedness.

Business Integration Risks—The Company may not be able to effectively integrate additional businesses it acquires in the future.

The Company may consider strategic transactions, including acquisitions that will complement, strengthen and enhance growth in its worldwide glass operations. The Company evaluates opportunities on a preliminary basis from time to time, but these transactions may not advance beyond the preliminary stages or be completed. Such acquisitions are subject to various risks and uncertainties, including:

- The inability to integrate effectively the operations, products, technologies and personnel of the acquired companies (some of which may be located in diverse geographic regions) and achieve expected synergies;
- The potential disruption of existing business and diversion of management's attention from day to day operations;
- The inability to maintain uniform standards, controls, procedures and policies;
- The need or obligation to divest portions of the acquired companies;
- The potential impairment of relationships with customers;
- The potential failure to identify material problems and liabilities during due diligence review of acquisition targets;
- The potential failure to obtain sufficient indemnification rights to fully offset possible liabilities associated with acquired businesses; and
- The challenges associated with operating in new geographic regions.

In addition, the Company cannot make assurances that the integration and consolidation of newly acquired businesses will achieve any anticipated cost savings and operating synergies.

Customer Consolidation—The continuing consolidation of the Company's customer base may intensify pricing pressures and have a material adverse effect on operations.

Many of the Company's largest customers have acquired companies with similar or complementary product lines. This consolidation has increased the concentration of the Company's business with its largest customers. In many cases, such consolidation has been accompanied by pressure from customers for lower prices, reflecting the increase in the total volume of products purchased or the elimination of a price differential between the acquiring customer and the company acquired. Increased pricing pressures from the Company's customers may have a material adverse effect on operations.

Operational Disruptions—Profitability could be affected by unanticipated operational disruptions.

The Company's glass container manufacturing process is asset intensive and includes the use of large furnaces and machines. The Company periodically experiences unanticipated disruptions to its assets and these events can have an adverse effect on its business operations and profitability. The impacts of these operational disruptions include, but are not limited to, higher maintenance, production changeover and shipping costs, higher capital spending, as well as lower absorption of fixed costs during periods of extended downtime. The Company maintains insurance policies in amounts and with coverage and deductibles that are reasonable and in line with industry standards; however, this insurance coverage may not be adequate to protect the Company from all liabilities and expenses that may arise.

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Seasonality—Profitability could be affected by varied seasonal demands.

Due principally to the seasonal nature of the consumption of beer and other beverages, for which demand is stronger during the summer months, sales of the Company's products have varied and are expected to vary by quarter. Shipments in the U.S. and Europe are typically greater in the second half of the year, while shipments in the Asia Pacific region are typically greater in the first and fourth quarters of the year, and shipments in South America are typically greater in the last three quarters of the year. Unseasonably cool weather during peak demand periods can reduce demand for certain beverages packaged in the Company's containers.

Raw Materials—Profitability could be affected by the availability and cost of raw materials.

The raw materials that the Company uses have historically been available in adequate supply from multiple sources. For certain raw materials, however, there may be temporary shortages due to weather or other factors, including disruptions in supply caused by transportation or production delays. These shortages, as well as material volatility in the cost of any of the principal raw materials that the Company uses, may have a material adverse effect on operations.

In addition, the Company purchases its soda ash raw materials in U.S. dollars in South America, Mexico and Asia Pacific. Given fluctuations in foreign currency exchange rates, this may cause these regions to experience inflationary or deflationary impacts to their raw material costs.

Environmental Risks—The Company is subject to various environmental legal requirements and may be subject to new legal requirements in the future. These requirements may have a material adverse effect on operations.

The Company's operations and properties are subject to extensive laws, ordinances, regulations and other legal requirements relating to environmental protection, including legal requirements governing investigation and clean up of contaminated properties as well as water discharges, air emissions, waste management and workplace health and safety. Such legal requirements frequently change and vary among jurisdictions. The Company's operations and properties must comply with these legal requirements. These requirements may have a material adverse effect on operations.

The Company has incurred, and expects to incur, costs for its operations to comply with environmental legal requirements, and these costs could increase in the future. Many environmental legal requirements provide for substantial fines, orders (including orders to cease operations), and criminal sanctions for violations. These legal requirements may apply to conditions at properties that the Company presently or formerly owned or operated, as well as at other properties for which the Company may be responsible, including those at which wastes attributable to the Company were disposed. A significant order or judgment against the Company, the loss of a significant permit or license or the imposition of a significant fine may have a material adverse effect on operations.

A number of governmental authorities have enacted, or are considering enacting, legal requirements that would mandate certain rates of recycling, the use of recycled materials and/or limitations on certain kinds of packaging materials. In addition, some companies with packaging needs have responded to such developments and/or perceived environmental concerns of consumers by using containers made in whole or in part of recycled materials. Such developments may reduce the demand for some of the Company's products and/or increase the Company's costs, which may have a material adverse effect on operations.

Governmental authorities have also enacted, or are considering enacting, legal requirements restricting the volume of GHG emissions that manufacturing facilities can produce with penalties for companies that do not comply. A reduction in the quantity of permitted GHG emissions under existing rules, or the introduction of new GHG emissions rules, in jurisdictions where the Company operates, could have a material effect on the its results. The Company is not able to predict what environmental legal requirements may be adopted in the future nor the impact such future environmental legal requirements may have on its results of operations or cash flows.

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Taxes—Potential tax law and U.S. trade policy changes could adversely affect net income and cash flow.

The Company is subject to income tax in the numerous jurisdictions in which it operates. Increases in income tax rates or other tax law changes, as well as ongoing audits by domestic and international authorities, could reduce the Company's net income and cash flow from affected jurisdictions. In particular, additional guidance is likely to be issued providing further clarification on the application of the U.S. Tax Cuts and Jobs Act, which was signed into law on December 22, 2017, and proposed regulations that have subsequently been issued with respect to the provisions enacted pursuant to such law. Further, it is reasonable to expect that global taxing authorities will be reviewing current legislation for potential modifications in reaction to the implementation of the U.S. legislation. This additional guidance, along with the potential for additional global tax legislation changes, could have a material adverse impact on net income and cash flow by impacting significant deductions or income inclusions. In addition, the Company's products are subject to import and excise duties and/or sales or value added taxes in many jurisdictions in which it operates. Increases in these indirect taxes could affect the affordability of the Company's products and, therefore, reduce demand.

In addition, existing free trade laws and regulations, such as the North American Free Trade Agreement, provide certain beneficial duties and tariffs for qualifying imports and exports, subject to compliance with the applicable classification and other requirements. Changes in laws or policies governing the terms of foreign trade, and in particular increased trade restrictions, tariffs or taxes on imports from countries where the Company manufactures products, such as Mexico, could have a material adverse effect on its business and financial results. Also, a government's adoption of "buy national" policies or retaliation by another government against such policies may affect the prices of and demand for the Company's products and could have a negative impact on the Company's results of operations.

Many international legislative and regulatory bodies have proposed legislation and begun investigations of the tax practices of multinational companies and, in the European Union (EU), the tax policies of certain EU member states. One of these efforts has been led by the OECD, an international association of 36 countries including the United States, which has finalized recommendations to revise corporate tax, transfer pricing, and tax treaty provisions in member countries. Since 2013, the European Commission (EC) has been investigating tax rulings granted by tax authorities in a number of EU member states with respect to specific multinational corporations to determine whether such rulings comply with EU rules on state aid, as well as more recent investigations of the tax regimes of certain EU member states. If the EC determines that a tax ruling or tax regime violates the state aid restrictions, the tax authorities of the affected EU member state may be required to collect back taxes for the period of time covered by the ruling. Due to the large scale of the Company's U.S. and international business activities, many of these proposed changes to the taxation of the Company's activities, if enacted, could increase the Company's worldwide effective tax rate and harm results of operations.

Labor Relations—Some of the Company's employees are unionized or represented by workers' councils.

The Company is party to a number of collective bargaining agreements with labor unions which at December 31, 2018, covered approximately 68% of the Company's employees in the U.S. and Canada. The principal collective bargaining agreement, which at December 31, 2018 covered approximately 77% of the Company's union affiliated employees in U.S. and Canada, will expire on March 31, 2019. Approximately 71% of employees in South America and Mexico are covered by collective bargaining agreements. The majority of the hourly workers in Australia and New Zealand are also covered by collective bargaining agreements. The collective bargaining agreements in South

America, Mexico, Australia and New Zealand have varying terms and expiration dates. Upon the expiration of any collective bargaining agreement, if the Company is unable to negotiate acceptable contracts with labor unions, it could result in strikes by the affected workers and increased operating costs as a result of higher wages or benefits paid to union members. In Europe, a large number of the Company's employees are employed in countries in which employment laws provide greater bargaining or other rights to employees than the laws of the U.S. Such employment rights require the Company to work collaboratively with the legal representatives of the employees to effect any changes to labor arrangements. For example, most of the Company's employees in Europe are represented by workers' councils that must approve any changes in conditions of employment, including salaries and benefits and staff changes, and may impede

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efforts to restructure the Company's workforce. In addition, if the Company's employees were to engage in a strike or other work stoppage, the Company could experience a significant disruption of operations and/or higher ongoing labor costs, which may have a material adverse effect on operations.

Key Management and Personnel Retention—Failure to retain key management and personnel could have a material adverse effect on operations.

The Company believes that its future success depends, in part, on its experienced management team and certain key personnel. The loss of certain key management and personnel could limit the Company's ability to implement its business plans and meet its objectives.

Joint Ventures—Failure by joint venture partners to observe their obligations could have a material adverse effect on operations.

A portion of the Company's operations is conducted through joint ventures, including joint ventures in the Americas, Europe, and Asia Pacific segments and in retained corporate costs and other. If the Company's joint venture partners do not observe their obligations or are unable to commit additional capital to the joint ventures, it is possible that the affected joint venture would not be able to operate in accordance with its business plans, which could have a material adverse effect on the Company's financial condition and results of operations.

Information Technology—Failure or disruption of the Company's information technology, or those of third parties, could have a material adverse effect on its business and the results of operations.

The Company employs information technology ("IT") systems and networks to support the business and relies on them to operate its plants, to communicate with its employees, customers and suppliers, to store sensitive business information and intellectual property, and to report financial and operating results. As with any IT system, the Company's IT system, or any third party's system on which the Company relies, could fail on its own accord or may be vulnerable to a variety of interruptions due to events, including, but not limited to, natural disasters, terrorist attacks, power outages, fire, sabotage, equipment failures, cybersecurity vulnerabilities, and cyber-related attacks or computer crimes, any of which could have a material adverse effect on the Company's financial condition, results of operations and cash flows.

Cybersecurity and Data Privacy - Security breaches could disrupt the Company's business operations, result in the loss of critical and confidential information, and have a material adverse effect on its business, reputation and results of operations.

The Company has been subject to cyberattacks in the past, including phishing and malware incidents, and although no such attack has had a material adverse effect on its business, this may not be the case with future attacks. As the prevalence of cyberattacks continues to increase, the Company's IT systems, or those of third parties, may be subject to increased security threats and the Company may incur additional costs to upgrade and maintain its security measures in place to prevent and detect such threats. The Company's security measures may be unable to prevent certain security breaches, and any such breaches could result in transactional errors, business disruptions, loss of or damage to intellectual property, loss of customers and business opportunities, unauthorized access to or disclosure of confidential or personal information (which could cause a breach of applicable data protection legislation), regulatory fines, penalties or intervention, reputational damage, reimbursement or other compensatory costs, and additional compliance costs, any of which could have a material adverse effect on the Company's financial condition, results of operations and cash flows. Any resulting costs or losses may not be covered by, or may exceed the coverage limits of, the Company's cyber insurance.

The Company is increasingly reliant on third parties to provide software, support and management with respect to its IT systems. The security and privacy measures the Company's vendors implement may not be sufficient to prevent and detect cyberattacks that could have a material adverse effect on the Company's financial condition, results of operations and cash flows. While the Company's IT vendor agreements typically contain provisions that seek to eliminate or limit the Company's exposure to liability for damages from a cyberattack, the Company cannot assure that such provisions will withstand legal challenges or cover all or any such damages. If

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the Company's business continuity and/or disaster recovery plans do not effectively and timely resolve issues resulting from a cyberattack, the Company may suffer material adverse effects on its financial condition, results of operations and cash flows.

In addition, new global privacy rules are being enacted and existing ones are being updated and strengthened. In May 2018, the European Union (EU) implemented the General Data Protection Regulation (GDPR) that stipulates data protection and privacy regulations for all individuals within the EU and the European Economic Area (EEA). The Company has significant operations in the EEA and is subject to the GDPR. The GDPR imposes several stringent requirements for controllers and processors of personal data and could make it more difficult and/or more costly for the Company to use and share personal data. Although the Company takes reasonable efforts to comply with all applicable laws and regulations, there can be no assurance that the Company will not be subject to regulatory action, including fines, in the event of an incident. To comply with the new data protection rules imposed by GDPR and other applicable data protection legislation, the Company may be required to put in place additional mechanisms which could adversely affect its financial condition, results of operations and cash flows.

Accounting Estimates—The Company's financial results are based upon estimates and assumptions that may differ from actual results.

In preparing the Company's consolidated financial statements in accordance with U.S. generally accepted accounting principles, several estimates and assumptions are made that affect the accounting for and recognition of assets, liabilities, revenues and expenses. These estimates and assumptions must be made due to certain information used in the preparation of the Company's financial statements which is dependent on future events, cannot be calculated with a high degree of precision from data available or is not capable of being readily calculated based on generally accepted methodologies. The Company believes that accounting for long lived assets, pension benefit plans, contingencies and litigation, and income taxes involves the more significant judgments and estimates used in the preparation of its consolidated financial statements. Actual results for all estimates could differ materially from the estimates and assumptions that the Company uses, which could have a material adverse effect on the Company's financial condition and results of operations.

Accounting Standards—The adoption of new accounting standards or interpretations could adversely impact the Company's financial results.

New accounting standards or pronouncements could adversely affect the Company's operating results or cause unanticipated fluctuations in its results in future periods. The accounting rules and regulations that the Company must comply with are complex and continually changing. In addition, many companies' accounting policies are being subjected to heightened scrutiny by regulators and the public. The Company cannot predict the impact of future changes to accounting principles or its accounting policies on its financial statements going forward. In February 2016, the Financial Accounting Standards Board issued Accounting Standards Update 2016-02, "Leases", which requires all operating leases with lease terms longer than twelve months be recorded as lease assets and lease liabilities on the Company's consolidated balance sheets. Implementing changes required by this new standard will require a significant expenditure of time, attention and resources, including significant upgrades to and investments in the Company's lease administration systems and other accounting systems, and will materially impact the Company's financial statements as the Company has a significant number of leases.

Goodwill—A significant write down of goodwill would have a material adverse effect on the Company's reported results of operations and net worth.

Goodwill at December 31, 2018 totaled $2.5 billion. The Company evaluates goodwill annually (or more frequently if impairment indicators arise) for impairment using the required business valuation methods. These methods include the use of a weighted average cost of capital to calculate the present value of the expected future cash flows of the Company’s reporting units. Future changes in the cost of capital, expected cash flows, or other factors may cause the Company’s goodwill to be impaired, resulting in a non cash charge against results of operations to write down goodwill for the amount of the impairment. If a significant write down is required, the charge would have a material adverse effect on the Company’s reported results of operations and net worth.

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Pension Funding—An increase in the underfunded status of the Company's pension plans could adversely impact the Company's operations, financial condition and liquidity.

The Company contributed $34 million, $31 million and $38 million to its defined benefit pension plans in 2018, 2017, and 2016, respectively. The amount the Company is required to contribute to these plans is determined by the laws and regulations governing each plan, and is generally related to the funded status of the plans. A deterioration in the value of the plans' investments or a decrease in the discount rate used to calculate plan liabilities generally would increase the underfunded status of the plans. An increase in the underfunded status of the plans could result in an increase in the Company's obligation to make contributions to the plans, thereby reducing the cash available for working capital and other corporate uses, and may have an adverse impact on the Company's operations, financial condition and liquidity.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

The principal manufacturing facilities and other material important physical properties of the Company at December 31, 2018 are listed below. All properties are glass container plants and are owned in fee, except where otherwise noted.

Americas Operations	
Argentina	
Rosario	
Bolivia	
Cochabamba	
Brazil	
Recife	Sao Paulo
Rio de Janeiro	
Canada	
Brampton, Ontario	Montreal, Quebec
Colombia	
Buga (tableware)	Soacha
Envigado	Zipaquira
Ecuador	
Guayaquil	
Mexico	
Guadalajara	Queretaro
Los Reyes	Toluca
Monterrey	

Peru	
Callao	Lurin(1)

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United States	
Auburn, NY	Portland, OR
Brockway, PA	Streator, IL
Crenshaw, PA	Toano, VA
Danville, VA	Tracy, CA
Kalama, WA(1)	Waco, TX
Lapel, IN	Windsor, CO
Los Angeles, CA	Winston Salem, NC
Muskogee, OK	Zanesville, OH

Asia Pacific Operations

Australia	
Adelaide	Melbourne
Brisbane	Sydney
China	
Tianjin	Zhaoqing
Indonesia	
Jakarta	
New Zealand	
Auckland	

European Operations

Czech Republic	
Dubi	Nove Sedlo
Estonia	
Jarvakandi	
France	
Beziers	Vayres
Gironcourt	Veauche
Labegude	Vergeze
Puy Guillaume	Wingles
Reims	
Germany	
Bernsdorf	Rinteln
Holzminden	
Hungary	
Oroshaza	
Italy	

Aprilia	Origgio
Asti	Ottaviano
Bari	San Gemini
Marsala	San Polo

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	Villotta
Mezzocorona	
The Netherlands	
Leerdam	Maastricht
Poland	
Jaroslaw	Poznan
Spain	
Barcelona(1)	Sevilla
United Kingdom	
Alloa	Harlow
Other Operations	
Engineering Support Centers	
Brockway, Pennsylvania	Melbourne, Australia(1)
Jaroslaw, Poland	Perrysburg, Ohio
Lurin, Peru	Villeurbanne, France
Shared Service Centers	
Medellin, Colombia	Poznan, Poland(1)
Perrysburg, Ohio	
Distribution Center	
Laredo, TX(1)	
Corporate Facilities	
Melbourne, Australia(1)	Perrysburg, Ohio(1)
Miami, Florida(1)	Vufflens la Ville, Switzerland(1)

(1) This facility is leased in whole or in part.

The Company believes that its facilities are well maintained and currently adequate for its planned production requirements over the next three to five years.

ITEM 3. LEGAL PROCEEDINGS

For information on legal proceedings, see Note 13 to the Consolidated Financial Statements.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON STOCK AND RELATED SHARE OWNER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Owens-Illinois' common stock is listed on the New York Stock Exchange with the symbol OI. The number of share owners of record on December 31, 2018 was 970. Approximately 100% of the outstanding shares were registered in the name of Depository Trust Company, or CEDE & Co., which held such shares on behalf of a number of brokerage firms, banks, and other financial institutions. The shares attributed to these financial institutions, in turn, represented the interests of more than 38,015 unidentified beneficial owners.

In November 2018, the Company's Board of Directors declared a dividend of $0.05 per share, which will be paid on February 12, 2019 to shareholders of record on the close of business on January 22, 2019. The Company anticipates that it will continue to pay quarterly cash dividends in the future. However, the payment and amount of future dividends remain within the discretion of the Company's Board of Directors and will depend upon the Company's future earnings, financial condition, capital requirements, and other factors.

Information with respect to securities authorized for issuance under equity compensation plans is included herein under Item 12.

The Company purchased 3,254,752 shares of its common stock during the fourth quarter of 2018 (8.6 million shares for the year) for approximately $56 million pursuant to authorization by its Board of Directors in January 2018 to purchase up to $400 million of the Company's common stock along with an authorization by its Board of Directors in November 2018 to purchase an additional $313 million of the Company's common stock. The following table provides information about the Company's purchases of its common stock during the fourth quarter of 2018:

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased (in thousands)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plan (in thousands)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plan (in millions)
October 1 - October 31, 2018	316	$ 19.13	316	$ 287
November 1 – November 30, 2018	450	17.28	450	592
December 1 - December 31, 2018	2,489	16.96	2,489	550

	Years Ending December 31,					
	2013	2014	2015	2016	2017	2018
Owens-Illinois, Inc.	$ 100.00	$ 75.43	$ 48.69	$ 48.66	$ 61.96	$ 48.18
S&P 500	100.00	113.69	115.26	129.05	157.22	150.33
Packaging Group	100.00	111.78	111.93	118.65	128.51	123.00

The above graph compares the performance of the Company's Common Stock with that of a broad market index (the S&P 500 Composite Index) and a packaging group consisting of companies with lines of business or product end uses comparable to those of the Company for which market quotations are available.

The packaging group consists of: AptarGroup, Inc., Ball Corp., Bemis Company, Inc., Crown Holdings, Inc., Owens Illinois, Inc., Sealed Air Corp., Silgan Holdings Inc., and Sonoco Products Co.

The comparison of total return on investment for each period is based on the investment of $100 on December 31, 2013 and the change in market value of the stock, including additional shares assumed purchased through reinvestment of dividends, if any.

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ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data presented below relates to each of the five years in the period ended December 31, 2018, which was derived from the audited consolidated financial statements of the Company.

	Years ended December 31,				
	2018	2017	2016	2015	2014
	(Dollars in millions)				
Consolidated operating results(a):					
Net sales	$ 6,877	$ 6,869	$ 6,702	$ 6,156	$ 6,784
Cost of goods sold (b)	(5,594)	(5,536)	(5,392)	(5,046)	(5,481)
Gross profit	1,283	1,333	1,310	1,110	1,303
Selling and administrative, research, development and engineering (b)	(553)	(544)	(568)	(540)	(571)
Other expense, net (b)	(192)	(246)	(114)	(51)	(195)
Earnings before interest expense and items below	538	543	628	519	537
Interest expense, net	(261)	(268)	(272)	(251)	(230)
Earnings from continuing operations before income taxes	277	275	356	268	307
Provision for income taxes	(108)	(70)	(119)	(106)	(92)
Earnings from continuing operations	169	205	237	162	215
Gain (loss) from discontinued operations	113	(3)	(7)	(4)	(23)
Net earnings	282	202	230	158	192
Net (earnings) attributable to noncontrolling interests	(25)	(22)	(21)	(23)	(28)
Net earnings attributable to the Company	$ 257	$ 180	$ 209	$ 135	$ 164

	Years ended December 31,				
	2018	2017	2016	2015	2014
Basic earnings per share of common stock:					
Earnings from continuing operations	$ 0.90	$ 1.12	$ 1.33	$ 0.86	$ 1.14
Gain (loss) from discontinued operations	0.71	(0.01)	(0.04)	(0.03)	(0.14)
Net earnings	$ 1.61	$ 1.11	$ 1.29	$ 0.83	$ 1.00
Weighted average shares outstanding (in thousands)	160,125	162,737	161,857	161,169	164,720
Diluted earnings per share of common stock:					
Earnings from continuing operations	$ 0.89	$ 1.11	$ 1.32	$ 0.85	$ 1.13
Gain (loss) from discontinued operations	0.70	(0.01)	(0.04)	(0.03)	(0.14)
Net earnings	$ 1.59	$ 1.10	$ 1.28	$ 0.82	$ 0.99
Diluted average shares (in thousands)	162,088	164,647	162,825	162,135	166,047
Dividends declared per common share	$ 0.05	$	$	$	$

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	Years ended December 31,				
	2018	2017	2016	2015	2014
	(Dollars in millions)				
Other data:					
The following are included in earnings from continuing operations:					
Depreciation	$ 388	$ 387	$ 375	$ 323	$ 335
Amortization of intangibles	106	101	103	86	83
Amortization of deferred finance fees (included in interest expense)	13	13	13	15	30
Balance sheet data (at end of period):					
Working capital (current assets less current liabilities)	$ 150	$ 140	$ 194	$ 212	$ 43
Total assets	9,699	9,756	9,135	9,421	7,843
Total debt	5,341	5,283	5,328	5,573	3,445
Total share owners’ equity	$ 900	$ 927	$ 363	$ 279	$ 771

(a) Note that the items below relate to items management considers not representative of ongoing operations.

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	Years ended December 31,				
	2018	2017	2016	2015	2014
	(Dollars in millions)				
Cost of goods sold (b)					
Acquisition-related fair value inventory adjustments	$ —	$ —	$ —	$ 22	$ —
Restructuring, asset impairment and related charges	5				8
Other expense, net (b)					
Restructuring, asset impairment and other charges	97	77	129	75	78
Pension settlement charges	74	218	98		65
Gain on China land sale			(71)		
Charge for asbestos-related costs	125			16	46
Strategic transaction costs				23	
Non-income tax charge					69
Acquisition-related fair value intangible adjustments				10	
Equity earnings related charges				5	5
Interest expense, net					
Note repurchase premiums and additional interest charges for the write-off of unamortized deferred financing fees related to the early extinguishment of debt	11	18	9	42	20
Provision for income taxes					
Net tax (benefit) expense for income tax on items above	(14)	(27)	1	(15)	(34)
Tax expense (benefit) recorded for certain tax adjustments		(29)	(8)	8	(8)
Net earnings attributable to noncontrolling interest					
Net impact of noncontrolling interests on items above	(1)	(3)	2		
	$ 297	$ 254	$ 160	$ 186	$ 249

(b) As a result of a new accounting standard, Accounting Standards Update No. 2017-07, “Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost,” the Company reclassified $200 million, $98 million and $50 million of pension settlement charges from Cost of goods sold to Other expense, net for the years ended December 31, 2017, 2016 and 2014, respectively. The Company also reclassified $18 million and $15 million of pension settlement charges from Selling and administrative expense to Other expense, net for the years ended December 31, 2017 and 2014, respectively.

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

The Company's measure of profit for its reportable segments is segment operating profit, which consists of consolidated earnings from continuing operations before interest income, interest expense, and provision for income taxes and excludes amounts related to certain items that management considers not representative of ongoing operations as well as certain retained corporate costs. The segment data presented below is prepared in accordance with general accounting principles for segment reporting. The line titled "reportable segment totals", however, is a non GAAP measure when presented outside of the financial statement footnotes. Management has included reportable segment totals below to facilitate the discussion and analysis of financial condition and results of operations. The Company's management uses segment operating profit, in combination with selected cash flow information, to evaluate performance and to allocate resources.

As previously disclosed, to better leverage its scale and presence across a larger geography and market, the Company completed the consolidation of the former North America and Latin America segments into one segment, named the Americas, effective January 1, 2018. The consolidation resulted in the leadership roles of the former North America and Latin America segments being combined into one position, President of the Americas, reporting to the Company's chief operating decision maker ("CODM"), who is the Company's Chief Executive Officer. Beginning January 1, 2018, the CODM reviews the operating results at the Americas level to make resource allocation decisions and to assess performance. The consolidation also resulted in the elimination of duplicative costs as certain functions of the former North America and Latin America segments were combined to simplify the management of the new Americas segment. For example, the Company consolidated its business shared service centers in North America and Latin America into one Americas shared service center. Amounts for 2017 and 2016 in the following tables are presented on the redefined basis for the Americas segment.

Financial information regarding the Company's reportable segments is as follows (dollars in millions):

	2018	2017	2016
Net sales:			
Americas	$ 3,638	$ 3,711	$ 3,652
Europe	2,489	2,375	2,300
Asia Pacific	675	714	684
Reportable segment totals	6,802	6,800	6,636
Other	75	69	66
Net sales	$ 6,877	$ 6,869	$ 6,702

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	2018	2017	2016
Segment operating profit:			
Americas	$ 585	$ 614	$ 568
Europe	316	263	237
Asia Pacific	44	65	77
Reportable segment totals	945	942	882
Items excluded from segment operating profit:			
Retained corporate costs and other	(106)	(104)	(98)
Charge for asbestos-related costs	(125)		
Pension settlement charges	(74)	(218)	(98)
Restructuring, asset impairment and other charges	(102)	(77)	(129)
Gain on China land sale			71
Interest expense, net	(261)	(268)	(272)
Earnings from continuing operations before income taxes	277	275	356
Provision for income taxes	(108)	(70)	(119)
Earnings from continuing operations	169	205	237
Gain (loss) from discontinued operations	113	(3)	(7)
Net earnings	282	202	230
Net earnings attributable to noncontrolling interests	(25)	(22)	(21)
Net earnings attributable to the Company	$ 257	$ 180	$ 209
Net earnings from continuing operations attributable to the Company	$ 144	$ 183	$ 216

Note: all amounts excluded from reportable segment totals are discussed in the following applicable sections.

Executive Overview—Comparison of 2018 with 2017

2018 Highlights

- Net sales in 2018 were up slightly from the same period in 2017, driven by higher prices but partially offset by lower volumes and an unfavorable effect of changes in foreign currency exchange rates.
- Segment operating profit for reportable segments was up slightly in 2018 compared to 2017. Higher segment operating profit in Europe more than offset lower segment operating profit in the other regions.
- The Company combined the North America and Latin America segments into one segment, named the Americas, to better leverage its scale and presence across a larger geography and market, and to reduce costs.
- The Company acquired a 49.7 percent interest in Empresas Comegua S.A., the leading manufacturer of glass containers for the Central American and Caribbean markets, for approximately $119 million.
- The Company entered into a new $1.91 billion senior secured credit facility with a final maturity date of June 2023.
- The Company's Board of Directors declared a dividend of $0.05 per share which will be paid on February 12, 2019 to shareholders of record on the close of business on January 22, 2019.
- The Company repurchased approximately 8.6 million shares of its common stock during 2018 for approximately $163 million. The Company's Board of Directors also authorized an increase of the existing share repurchase program, resulting in approximately $550 million in remaining repurchase authority as of December 31, 2018.

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Net sales in 2018 increased by $8 million compared to the same period in the prior year primarily due to higher prices, but partially offset by lower volumes and an unfavorable effect of changes in foreign currency exchange rates.

Earnings from continuing operations before income taxes were $2 million higher in 2018 than in the prior year, primarily due to higher segment operating profit. Segment operating profit for reportable segments in 2018 were $3 million higher compared to the prior year. Higher segment operating profit in Europe more than offset lower segment operating profit in the other regions.

Net interest expense in 2018 decreased $7 million compared to 2017. The decrease was primarily due to lower note repurchase premiums and write-offs of deferred finance fees recorded in 2018 than in 2017.

For 2018, the Company recorded net earnings from continuing operations attributable to the Company of $144 million, or $0.89 per share (diluted), compared with $183 million, or $1.11 per share (diluted), in 2017.

Earnings in both periods included items that management considered not representative of ongoing operations. These items decreased earnings from continuing operations attributable to the Company by $297 million, or $1.83 per share, in 2018 and $254 million, or $1.54 per share, in 2017.

Results of Operations—Comparison of 2018 with 2017

Net Sales

The Company's net sales in 2018 were $6,877 million compared with $6,869 million in 2017, an increase of $8 million, or less than 1%. Higher selling prices benefited net sales by $150 million in 2018. Unfavorable foreign currency exchange rates, driven by a weaker Brazilian real and the Mexican peso, decreased net sales by $20 million in 2018 compared to the prior year. Total glass container shipments, in tonnes, were down approximately 2% in 2018 compared to the prior year and were driven by the transfer of production to the Company's joint venture in Mexico, the ongoing trends in U.S. beer shipments, the Brazil transportation strike and capacity constraints in both the Americas and Europe. Lower sales volume and an unfavorable sales mix decreased net sales by $128 million.

The change in net sales of reportable segments can be summarized as follows (dollars in millions):

Net sales— 2017		$ 6,800
Price	$ 150	
Sales volume	(128)	
Effects of changing foreign currency rates	(20)	
Total effect on net sales		2
Net sales— 2018		$ 6,802

Americas: Net sales in the Americas in 2018 were $3,638 million compared with $3,711 million for the same period in 2017, a decrease of $73 million, or 2%. Higher selling prices increased net sales by $117 million in 2018. Total glass container shipments in the region were down 3% in 2018 compared to the prior year with higher shipments to food customers offset by lower shipments to alcoholic beverage customers. Despite the transportation strike and capacity constraints, year over year shipments in Brazil were also strong in 2018. In the U.S., solid year over year growth in shipments to food customers in 2018 were more than offset by a decline in shipments to alcoholic beverage customers, owing to the ongoing trends in beer shipments and the transfer of production to the Company's joint venture with Constellation Brands. Overall, the change in sales volume and mix in the region decreased net sales by $98 million in 2018. The effects of foreign currency exchange rate changes decreased net sales $92 million in 2018 compared to 2017, primarily due to the weakening of the Brazilian real and the Mexican peso in relation to the U.S.

dollar.

Europe: Net sales in Europe in 2018 were $2,489 million compared with $2,375 million for the same period in 2017, an increase of $114 million, or 5%. The effects of foreign currency exchange rates increased net sales in the region by approximately $95 million in 2018 as the Euro strengthened in relation to the U.S. dollar. Glass container shipments in 2018 were down less than 1% compared to the same period in 2017, partially due to certain production capacity constraints. These slightly lower shipments in the region in 2018 resulted in $5 million of lower net sales. Selling prices in Europe increased net sales by $24 million in 2018 compared to the prior year.

Asia Pacific: Net sales in Asia Pacific in 2018 were $675 million compared with $714 million in 2017, a decrease of $39 million, or 5%. Glass container shipments in 2018 were down 3% compared to 2017, primarily driven by lower shipments to alcoholic beverage customers in Australia, resulting in $25 million of lower net sales. Slightly higher selling prices increased net sales by $9 million in 2018. The unfavorable effects of foreign currency exchange rate changes decreased net sales by $23 million as the Australian Dollar and New Zealand Dollar weakened in relation to the U.S. dollar.

Earnings from Continuing Operations before Income Taxes and Segment Operating Profit

Earnings from continuing operations before income taxes were $277 million in 2018 compared to $275 million for the same period in 2017, an increase of $2 million, or nearly 1%, and were primarily due to higher segment operating profit.

Operating profit of the reportable segments includes an allocation of some corporate expenses based on a percentage of sales and direct billings based on the costs of specific services provided. Unallocated corporate expenses and certain other expenses not directly related to the reportable segments' operations are included in Retained corporate costs and other. For further information, see Segment Information included in Note 2 to the Condensed Consolidated Financial Statements.

Segment operating profit of reportable segments in 2018 was $945 million compared to $942 million for 2017, an increase of $3 million, or less than 1%. Higher selling prices in 2018 slightly outpaced higher costs, lower sales volumes and an unfavorable impact from the effects of foreign currency exchange rates. Higher segment operating profit in Europe more than offset lower segment operating profit in the other regions.

The change in segment operating profit of reportable segments can be summarized as follows (dollars in millions):

Segment operating profit - 2017		$ 942
Price	$ 150	
Sales volume	(25)	
Operating costs	(119)	
Effects of changing foreign currency rates	(3)	
Total net effect on segment operating profit		3
Segment operating profit - 2018		$ 945

Americas: Segment operating profit in the Americas in 2018 was $585 million compared with $614 million in 2017, a decrease of $29 million, or 5%. The change in sales volume and mix discussed above decreased segment operating profit in the current year by $16 million. Selling prices were $117 million higher in the current year period compared to the prior year. Segment operating profit was impacted by $149 million of higher operating costs in 2018 than in the same period in the prior year, driven by cost inflation, the transportation strike in Brazil, a raw material batch disruption issue at a plant in Mexico, and higher transportation costs due to freight rate inflation. The region also benefitted from $11 million of insurance proceeds in 2018. In addition, the region recorded a $19 million gain in 2018 based on a favorable court ruling in Brazil, which will allow the region to recover revenue tax paid in previous years. The region's previous restructuring actions have reduced operating costs by approximately $6 million in 2018, in line with management's expectations. The effects of foreign currency exchange rates decreased segment operating profit by $17 million in 2018, which included $4 million from the impact of highly-inflationary basis of accounting in the region's operations in Argentina.

Europe: Segment operating profit in Europe in 2018 was $316 million compared with $263 million in 2017, an increase of $53 million, or 20%. The effects of foreign currency exchange rates increased segment operating profit by $15 million in the current year period. Selling prices were $24 million higher in 2018 compared to the prior year period. Segment operating profit in 2018 improved due to approximately $5 million of lower operating costs compared to the same period in the prior year. Lower production volumes in the region were partially

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offset by an approximate $11 million gain related to an asset sale. In addition, the prior year permanent footprint adjustment in the region contributed to lower operating costs in 2018, in line with management's expectations when the restructuring activities were initiated. The change in sales volume and mix described above reduced segment operating profit by $2 million.

Asia Pacific: Segment operating profit in Asia Pacific in 2018 was $44 million compared with $65 million in 2017, a decrease of $21 million, or 32%. As anticipated, cost inflation and asset improvement projects in the region drove operating costs higher and decreased segment operating profit by $22 million in 2018 compared to the same period in the prior year. The decrease in sales volume discussed above reduced segment operating profit by $7 million. Higher selling prices increased segment operating profit in 2018 by $9 million. The effects of foreign currency exchange rates decreased segment operating profit by $1 million in 2018.

Interest Expense, Net

Net interest expense for 2018 was $261 million compared with $268 million in 2017. Net interest expense included $11 million and $18 million in 2018 and 2017, respectively, for note repurchase premiums and the write-off of deferred finance fees that were related to debt that was repaid prior to its maturity. Exclusive of these items, net interest expense was comparable in 2018 to the prior year.

Provision for Income Taxes

The Company's effective tax rate from continuing operations for 2018 was 39.0% compared with 25.5% for 2017. The effective tax rate for 2018 was higher than the same period in 2017 primarily due to the nonoccurrence of a resolution of a tax matter in 2017 that resulted in approximately $26 million of tax accruals being reversed. The effective tax rates for both 2018 and 2017 were also impacted by several charges that management considered not representative of ongoing operations, including charges for restructuring, pension settlements, asbestos-related costs, and the write-off of finance fees, for which no tax benefit was recorded due to the Company's valuation allowance recorded in the U.S.

Excluding the amounts related to items that management considers not representative of ongoing operations, the Company's effective tax rate was approximately 21% in 2018 and 2017.

Net Earnings from Continuing Operations Attributable to the Company

For 2018, the Company recorded net earnings from continuing operations attributable to the Company of $144 million, or $0.89 per share (diluted), compared to $183 million, or $1.11 per share (diluted), in 2017. Earnings in 2018 and 2017 included items that management considered not representative of ongoing operations as set forth in the following table (dollars in millions):

	Net Earnings Increase (Decrease)	
Description	2018	2017
Charge for asbestos-related costs	$ (125)	$ —
Pension settlement charges	(74)	(218)
Restructuring, asset impairment and other charges	(102)	(77)
Note repurchase premiums and write-off of finance fees	(11)	(18)

Tax benefit for certain tax adjustments		29
Net benefit (charge) for income tax on items above	14	27
Net impact of noncontrolling interests on items above	1	3
Total	$ (297)	$ (254)

Foreign Currency Exchange Rates

Given the global nature of its operations, the Company is subject to fluctuations in foreign currency exchange rates. As described above, the Company's reported revenues and segment operating profit in 2018 were decreased due to foreign currency effects compared to 2017.

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This trend may continue into 2019. During times of a strengthening U.S. dollar, the reported revenues and segment operating profit of the Company's international operations will be reduced because the local currencies will translate into fewer U.S. dollars. The Company uses certain derivative instruments to mitigate a portion of the risk associated with changing foreign currency exchange rates.

Executive Overview—Comparison of 2017 with 2016

2017 Highlights

- Net sales were up nearly 3% compared to the prior year, driven by higher shipments, higher prices and the favorable effects of changes in foreign currency exchange rates
- Driven by higher shipments and progress on strategic initiatives, segment operating profit was higher in all regions, except for Asia Pacific, compared to the prior year
- Issued €225 million and $310 million of senior notes and repaid higher-cost debt
- Received $115 million from selling the Company's right, title and interest in amounts due under a prior arbitration award in Venezuela

Net sales increased by $167 million compared to the prior year primarily due to the favorable effect of changes in foreign currency exchange rates, higher shipments and higher prices.

Earnings from continuing operations before income taxes were $81 million lower in 2017 than the prior year primarily due to higher pension settlement charges, partially offset by higher segment operating profit. Segment operating profit for reportable segments increased by $60 million compared to the prior year. For 2017, segment operating profit in all regions, except for Asia Pacific, exceeded prior year amounts.

Net interest expense in 2017 decreased $4 million compared to 2016. Net interest expense included $18 million and $9 million in 2017 and 2016, respectively, for note repurchase premiums and the write off of finance fees related to debt that was repaid prior to its maturity. Exclusive of these items, net interest expense decreased $13 million in 2017 primarily due to deleveraging and refinancing actions.

For 2017, the Company recorded earnings from continuing operations attributable to the Company of $183 million, or $1.11 per share (diluted), compared with earnings of $216 million, or $1.32 per share (diluted), for 2016. Earnings in both periods included items that management considered not representative of ongoing operations. These items decreased earnings from continuing operations attributable to the Company by $254 million, or $1.54 per share, in 2017 and $160 million, or $0.99 per share, in 2016.

Results of Operations—Comparison of 2017 with 2016

Net Sales

The Company's net sales in 2017 were $6,869 million compared with $6,702 million in 2016, an increase of $167 million, or approximately 3%. Higher selling prices benefited net sales by $61 million in 2017. Total glass container shipments, in tonnes, were up approximately 1% in 2017 compared to the same period in the prior year. However, an unfavorable sales mix resulted in approximately $3 million of lower sales. Favorable foreign currency exchange rates, primarily due to a stronger Euro, Brazilian real, Colombian peso, Australian dollar and New Zealand dollar, increased sales by $106 million.

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The change in net sales of reportable segments can be summarized as follows (dollars in millions):

Net sales— 2016		$ 6,636
Price	$ 61	
Sales volume (excluding acquisitions)	(3)	
Effects of changing foreign currency rates	106	
Total effect on net sales		164
Net sales— 2017		$ 6,800

Americas: Net sales in the Americas in 2017 were $3,711 million compared with $3,652 million in 2016, an increase of $59 million, or 2%. Higher selling prices increased net sales by $59 million in 2017. Total glass shipments in the region were comparable in 2017 to the prior year. Strong shipments in Mexico and higher shipments in Brazil were nearly offset by lower shipments to beer customers in the U.S. An unfavorable sales mix resulted in $32 million of lower sales in 2017 and was partially due to several customers converting a portion of their glass shipments from carton packaging to bulk shipments. Favorable foreign currency exchange rates increased net sales by $32 million, principally due to a strengthening of the Brazilian real and Colombian peso in relation to the U.S. dollar.

Europe: Net sales in Europe in 2017 were $2,375 million compared with $2,300 million in 2016, an increase of $75 million, or 3%. Net sales in 2017 were benefited by a 1% increase in glass container shipments driven by higher shipments to beer, spirits and wine customers. This increased net sales by $28 million compared to the prior year. Favorable foreign currency exchange rates increased net sales by $57 million, as the Euro strengthened in relation to the U.S. dollar. As a result of the pass through of 2016 cost deflation to customers under contractual price adjustment formulas, selling prices in Europe were $10 million lower in 2017 compared to the same period in the prior year.

Asia Pacific: Net sales in Asia Pacific in 2017 were $714 million compared with $684 million in 2016, an increase of $30 million, or 4%. The favorable effects of foreign currency exchange rates changes during 2017, primarily due to the strengthening of the Australian dollar and New Zealand dollar in relation to the U.S. dollar, increased net sales by $17 million. Glass container shipments were down 1% in 2017 as higher shipments to food customers were more than offset by lower shipments to beer and non-alcoholic beverage customers. This resulted in a slightly favorable sales mix, which contributed to $1 million of higher sales in 2017. Slightly higher selling prices also increased net sales by $12 million in 2017.

Earnings from Continuing Operations before Income Taxes and Segment Operating Profit

Earnings from continuing operations before income taxes were $275 million in 2017 compared with $356 million for the same period in 2016, a decrease of $81 million, or 23%. This decrease was primarily due to higher pension settlement charges, partially offset by higher segment operating profit.

Operating profit of the reportable segments includes an allocation of some corporate expenses based on both a percentage of sales and direct billings based on the costs of specific services provided. Unallocated corporate expenses and certain other expenses not directly related to the reportable segments' operations are included in Retained corporate costs and other. For further information, see Segment Information included in Note 2 to the Consolidated Financial Statements.

Segment operating profit of reportable segments in 2017 was $942 million compared to $882 million in 2016, an increase of $60 million, or 7%. Higher selling prices increased segment operating profit by $61 million and the favorable effects of foreign currency exchange rates increased segment operating profit by $11 million in 2017. Partially offsetting this was $12 million of higher operating costs.

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The change in segment operating profit of reportable segments can be summarized as follows (dollars in millions):

Segment operating profit - 2016		$ 882
Price	$ 61	
Sales volume (excluding acquisitions)	—	
Operating costs	(12)	
Effects of changing foreign currency rates	11	
Total net effect on segment operating profit		60
Segment operating profit - 2017		$ 942

Americas: Segment operating profit in the Americas in 2017 was $614 million compared with $568 million in 2016, an increase of $46 million, or 8%. Selling prices were $59 million higher in 2017 compared to the prior year. The unfavorable sales mix discussed above decreased segment operating profit by $7 million. Operating costs in 2017 were higher than the same period in the prior year and this decreased segment operating profit by $16 million. Despite significant benefits from cost savings initiatives and higher equity earnings from the Company's joint-venture with Constellation Brands ("Constellation Brands") in Mexico, these benefits were more than offset by substantial cost inflation. Beginning in the first quarter of 2017, equity earnings from this joint-venture were recorded in the Americas region. In prior years, equity earnings from this joint-venture were recorded in retained corporate costs and other as it was mostly in construction mode. In addition, approximately $5 million in gains related to non-strategic asset sales were recognized by the region in 2017. The favorable effects of foreign currency exchange rates increased segment operating profit by $5 million in 2017.

Europe: Segment operating profit in Europe in 2017 was $263 million compared with $237 million in 2016, an increase of $26 million, or 11%. Operating costs were $25 million lower in 2017 than the prior year period due to cost savings initiatives, benefits realized from a permanent footprint adjustment and cost deflation. The increase in sales volume discussed above improved segment operating profit by $6 million. Lower selling prices decreased segment operating profit in 2017 by $10 million. The favorable effects of foreign currency exchange rates increased segment operating profit by $5 million in 2017.

Asia Pacific: Segment operating profit in Asia Pacific in 2017 was $65 million compared with $77 million in 2016, a decrease of $12 million, or 16%. Despite cost containment efforts, cost inflation, higher supply chain costs and higher costs related to asset improvement projects in the region increased operating costs and decreased segment operating profit by $30 million in 2017. Costs associated with these asset improvement projects are planned to continue and will result in lower segment operating profit in the first half of 2018 in the region than the same period in 2017. Also, in 2017, higher selling prices increased segment operating profit by $12 million and the change in sales volume and mix discussed above increased segment operating profit by $1 million. In addition, the region recorded $4 million of gain related to a land sale in 2017. The favorable effects of foreign currency exchange rates increased segment operating profit by $1 million in 2017.

Interest Expense, net

Net interest expense in 2017 was $268 million compared with $272 million in 2016. Net interest expense included $18 million and $9 million in 2017 and 2016, respectively, for note repurchase premiums and the write off of finance fees related to debt that was repaid prior to its maturity. Exclusive of these items, net interest expense decreased $13 million in 2017 primarily due to deleveraging and refinancing actions.

Provision for Income Taxes

The Company’s effective tax rate from continuing operations for 2017 was 25.5%, compared with 33.4% for 2016. The Company’s effective tax rate for 2017 was lower than 2016 primarily due to the resolution of a tax matter that resulted in approximately $26 million of tax accruals reversed in 2017.

Excluding the amounts related to items that management considers not representative of ongoing operations, the Company’s effective tax rate for 2017 was approximately 21%, compared with approximately 24% for 2016. The rate for 2017 was lower than 2016 due to favorable resolution of certain tax matters during 2017.

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The U.S. Tax Cuts and Jobs Act (the "Act") was enacted on December 22, 2017. The Act reduces the U.S. federal corporate tax rate from 35% to 21%, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred and creates new taxes on certain foreign sourced earnings. See Note 11 to the Consolidated Financial Statements for additional information.

Net Earnings Attributable to Noncontrolling Interests

Net earnings attributable to noncontrolling interests for 2017 was $22 million compared to $21 million for 2016.

Earnings from Continuing Operations Attributable to the Company

For 2017, the Company recorded earnings from continuing operations attributable to the Company of $183 million, or $1.11 per share (diluted), compared with earnings of $216 million, or $1.32 per share (diluted), for 2016. The after tax effects of the items excluded from segment operating profit, the unusual tax items and the additional interest charges increased or decreased earnings in 2017 and 2016 as set forth in the following table (dollars in millions).

	Net Earnings Increase (Decrease)	
Description	2017	2016
Pension settlement charges	$ (218)	$ (98)
Restructuring, asset impairment and other charges	(77)	(129)
Note repurchase premiums and write-off of finance fees	(18)	(9)
Gain on China land sale		71
Tax benefit (charge) for certain tax adjustments	29	8
Net benefit (charge) for income tax on items above	27	(1)
Net impact of noncontrolling interests on items above	3	(2)
Total	$ (254)	$ (160)

Foreign Currency Exchange Rates

Given the global nature of its operations, the Company is subject to fluctuations in foreign currency exchange rates. As described above, the Company's reported revenues and segment operating profit in 2017 were increased due to foreign currency effects compared to 2016.

This trend may not continue into 2018. During times of a strengthening U.S. dollar, the reported revenues and segment operating profit of the Company's international operations will be reduced because the local currencies will translate into fewer U.S. dollars. The Company uses certain derivative instruments to mitigate a portion of the risk associated with changing foreign currency exchange rates.

Items Excluded from Reportable Segment Totals

Retained Corporate Costs and Other

Retained corporate costs and other for 2018 were $106 million compared with $104 million for 2017. Planned increases in research and development costs in 2018 were partially offset by lower selling and administrative expenses.

Retained corporate costs and other for 2017 were $104 million compared with $98 million for 2016. These costs were higher in 2017 primarily due to lower equity earnings from the Company's joint-venture with Constellation Brands in Mexico. Beginning in the first quarter of 2017, equity earnings from this joint-venture were recorded in the Americas region. In prior years, equity earnings from this joint-venture were recorded in Retained Corporate Costs and Other as it was mostly in construction mode.

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Charge for Asbestos Related Costs

For the year ended December 31, 2018, the Company's comprehensive legal review of its asbestos-related liabilities resulted in a $125 million charge. This charge was primarily due to factors impacting the increased likelihood of additional losses resulting from changes in the law, procedure, the expansion of judicial resources in certain jurisdictions, renewed attention to dockets of non-mesothelioma cases, and new information obtained about the Company's asbestos-related liability. For the years ended December 31, 2017 and 2016, no adjustments were required for asbestos-related costs.

As part of its future comprehensive annual reviews, the Company will estimate its total asbestos-related liability and such reviews may result in adjustments to the liability accrued at the time of the review. The Company continues to believe that its ultimate asbestos-related liability cannot be estimated with certainty.

See "Critical Accounting Estimates" and Note 13 to the Consolidated Financial Statements for additional information.

Pension Settlement Charges

In the past several years, the Company has settled a portion of its pension obligations through retiree annuity contract purchase transactions, which resulted in settlement charges as noted below. The Company may purchase annuity contracts in the future, which would result in additional settlement charges.

During 2018, the Company recorded charges totaling $74 million for pension settlements, primarily in the United States and United Kingdom.

During 2017, the Company recorded charges totaling $218 million for pension settlements in the United States, Canada and United Kingdom.

During 2016, the Company recorded charges totaling $98 million for pension settlements in the United States.

See Note 10 to the Consolidated Financial Statements for additional information.

Restructuring, Asset Impairment and Other Charges

During 2018, the Company recorded charges totaling $102 million for restructuring, asset impairment and other charges. These charges reflect $92 million of plant and furnace closures, primarily in the Americas region, and other charges of $10 million.

During 2017, the Company recorded charges totaling $77 million for restructuring, asset impairment and other charges. These charges reflect $72 million of plant and furnace closures, primarily in the Americas and European regions, and other charges of $5 million.

During 2016, the Company recorded charges totaling $129 million for restructuring, asset impairment and other charges. These charges reflect $98 million of plant and furnace closures, primarily in the Europe and Americas regions. In addition, other charges of $31 million were recorded during 2016, primarily related to an impairment charge recorded at one of the Company's equity investments.

See Note 9 to the Consolidated Financial Statements for additional information.

Gain on China Land Compensation

During 2016, the Company recorded a gain of $71 million related to compensation received for land that the Company was required to return to the Chinese government.

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Discontinued Operations

On December 6, 2018, an ad hoc committee for the World Bank's International Centre for Settlement of Investment Disputes ("ICSID") rejected the request by the Bolivarian Republic of Venezuela ("Venezuela") to annul the award issued by an ICSID tribunal in favor of OI European Group B.V. ("OIEG") related to the 2010 expropriation of OIEG's majority interest in two plants in Venezuela (the "Award"). The annulment proceeding with respect to the Award is now concluded.

On July 31, 2017, OIEG sold its right, title and interest in amounts due under the Award to an Ireland-domiciled investment fund. Under the terms of the sale, OIEG received a payment, in cash, at closing equal to $115 million (the "Cash Payment"). OIEG may also receive additional payments in the future ("Deferred Amounts") calculated based on the total compensation that is received from Venezuela as a result of collection efforts or as settlement of the Award with Venezuela. OIEG's right to receive any Deferred Amounts is subject to the limitations described below.

OIEG's interest in any amounts received in the future from Venezuela in respect of the Award is limited to a percentage of such recovery after taking into account reimbursement of the Cash Payment to the purchaser and reimbursement of legal fees and expenses incurred by the Company and the purchaser. OIEG's percentage of such recovery will also be reduced over time. Because the Award has yet to be satisfied and the ability to successfully enforce the Award in countries that are party to the ICSID Convention is subject to significant challenges, the Company is unable to reasonably predict the amount of recoveries from the Award, if any, to which the Company may be entitled in the future. Any future amounts that the Company may receive from the Award are highly speculative and the timing of any such future payments, if any, is highly uncertain. As such, there can be no assurance that the Company will receive any future payments under the Award beyond the Cash Payment.

A separate arbitration involving other subsidiaries of the Company was initiated in 2012 to obtain compensation primarily for third-party minority shareholders' lost interests in the two expropriated plants. However, on November 13, 2017, ICSID issued an award that dismissed this arbitration on jurisdiction grounds. In March 2018, the two subsidiaries of the Company submitted to ICSID an application to annul the November 13, 2017 award; they have since submitted a pleading seeking annulment.

As a result of the favorable ruling by an ICSID ad hoc committee rejecting Venezuela's request to annul the Award, and thereby concluding those annulment proceedings, the Company has recognized a $115 million gain from discontinued operations in 2018. The gain from discontinued operations of $113 million, and the losses from discontinued operations of $3 million and $7 million for the years ended December 31, 2018, 2017 and 2016, respectively, reflect the gain in 2018 and the ongoing costs for the Venezuelan expropriation in all three years.

Capital Resources and Liquidity

As of December 31, 2018, the Company had cash and total debt of $512 million and $5.3 billion, respectively, compared to $492 million and $5.3 billion, respectively, as of December 31, 2017. A significant portion of the cash was held in mature, liquid markets where the Company has operations, such as the U.S., Europe and Australia, and is readily available to fund global liquidity requirements. The amount of cash held in non U.S. locations as of December 31, 2018 was $481 million.

Current and Long Term Debt

On June 27, 2018, certain of the Company's subsidiaries entered into a new Senior Secured Credit Facility (the "Agreement"), which amended and restated the previous credit agreement (the "Previous Agreement"). The proceeds from the Agreement were used to repay all outstanding amounts under the Previous Agreement. The Company recorded $11 million of additional interest charges for the write-off of unamortized fees during 2018.

The Agreement provides for up to $1.91 billion of borrowings pursuant to term loans and revolving credit facilities. The term loans mature, and the revolving credit facilities terminate, in June 2023. At December 31, 2018, the Agreement includes a $300 million revolving credit facility, a $700 million multicurrency revolving credit facility, and a $910 million term loan A facility ($897 million net of debt issuance costs). At December 31, 2018, the Company had unused credit of $988 million available under the Agreement. The weighted average interest rate on borrowings outstanding under the Agreement at December 31, 2018 was 3.97%.

The Agreement contains various covenants that restrict, among other things and subject to certain exceptions, the ability of the Company to incur certain indebtedness and liens, make certain investments, become liable under contingent obligations in certain defined instances only, make restricted payments, make certain asset sales within guidelines and limits, engage in certain affiliate transactions, participate in sale and leaseback financing arrangements, alter its fundamental business, and amend certain subordinated debt obligations.

The Agreement also contains one financial maintenance covenant, a Total Leverage Ratio (the "Leverage Ratio"), that requires the Company not to exceed a ratio of 4.5x calculated by dividing consolidated total debt, less cash and cash equivalents, by Consolidated EBITDA, as defined in the Agreement. The maximum Leverage Ratio is subject to an increase of 0.5x for (i) any fiscal quarter during which certain qualifying acquisitions (as specified in the Agreement) are consummated and (ii) the following three fiscal quarters. The Leverage Ratio could restrict the ability of the Company to undertake additional financing or acquisitions to the extent that such financing or acquisitions would cause the Leverage Ratio to exceed the specified maximum.

Failure to comply with these covenants and other customary restrictions could result in an event of default under the Agreement. In such an event, the Company could not request borrowings under the revolving facilities, and all amounts outstanding under the Agreement, together with accrued interest, could then be declared immediately due and payable. Upon the occurrence and for the duration of a payment event of default, an additional default interest rate equal to 2.0% per annum will apply to all overdue obligations under the Agreement. If an event of default occurs under the Agreement and the lenders cause all of the outstanding debt obligations under the Agreement to become due and payable, this would result in a default under a number of other outstanding debt securities and could lead to an acceleration of obligations related to these debt securities. As of December 31, 2018, the Company was in compliance with all covenants and restrictions in the Agreement. In addition, the Company believes that it will remain in compliance and that its ability to borrow funds under the Agreement will not be adversely affected by the covenants and restrictions.

The Leverage Ratio also determines pricing under the Agreement. The interest rate on borrowings under the Agreement is, at the Company's option, the Base Rate or the Eurocurrency Rate, as defined in the Agreement, plus an applicable margin. The applicable margin is linked to the Leverage Ratio. The margins range from 1.00% to 1.50% for Eurocurrency Rate loans and from 0.00% to 0.50% for Base Rate Loans. In addition, a commitment fee is payable on the unused revolving credit facility commitments ranging from 0.20% to 0.30% per annum linked to the Leverage Ratio.

Obligations under the Agreement are secured by substantially all of the assets, excluding real estate and certain other excluded assets, of certain of the Company's domestic subsidiaries and certain foreign subsidiaries. Such obligations are also secured by a pledge of intercompany debt and equity investments in certain of the Company's domestic subsidiaries and, in the case of foreign obligations, of stock of certain foreign subsidiaries. All obligations under the Agreement are guaranteed by certain domestic subsidiaries of the Company, and certain foreign obligations under the Agreement are guaranteed by certain foreign subsidiaries of the Company.

In March 2017, the Company expanded its borrowings under the Senior Notes due 2024 by issuing €225 million of additional notes that bear interest at 3.125% and are due November 15, 2024. The notes were issued via a private placement and are guaranteed by certain of the Company's domestic subsidiaries. The net proceeds, after deducting debt issuance costs, totaled approximately $237 million and were used to repay a portion of the Company's revolving credit facility.

During March 2017, the Company purchased in a tender offer approximately $228 million aggregate principal amount of its 7.80% Senior Debentures due in 2018. In November 2017, the remaining $22 million of the 7.80% Senior Debentures were repurchased by the Company, the indenture relating thereto was discharged, and all collateral and guarantees thereunder were released. The Company recorded $18 million of additional interest charges for note repurchase premiums and the write-off of unamortized finance fees related to these actions.

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During December 2017, the Company issued senior notes with a face value of $310 million that bear interest at 4.00% and are due March 15, 2023. The notes were issued via a private placement and are guaranteed by certain of the Company's domestic subsidiaries. The net proceeds, after deducting debt issuance costs, totaled approximately $305 million and were used to repay a portion of the term loan A facility under the Previous Agreement.

In the third quarter of 2018, the Company terminated a €185 million European accounts receivable securitization program.

In order to maintain a capital structure containing appropriate amounts of fixed and floating-rate debt, the Company has entered into a series of interest rate swap agreements. These interest rate swap agreements were accounted for as either fair value hedges or cash flow hedges (See Note 8 to Consolidated Financial Statements for more information).

The Company assesses its capital raising and refinancing needs on an ongoing basis and may enter into additional credit facilities and seek to issue equity and/or debt securities in the domestic and international capital markets if market conditions are favorable. Also, depending on market conditions, the Company may elect to repurchase portions of its debt securities in the open market.

The carrying amounts reported for certain long-term debt obligations subject to frequently redetermined interest rates, approximate fair value. Fair values for the Company's significant fixed rate debt obligations are based on published market quotations, and are classified as Level 1 in the fair value hierarchy.

Cash Flows

Operating activities: Cash provided by continuing operating activities was $793 million for 2018 compared to $724 million for 2017. The increase in cash provided by continuing operating activities in 2018 was primarily due to a year-over-year decrease in working capital of $15 million compared to a year-over-year increase of $89 million in 2017. In 2018, working capital was affected by higher accounts payable and inventory balances and lower trade receivables balances compared to year end 2017. In 2018, the Company has experienced higher sales levels in Europe and Brazil and lower sales levels in the U.S. compared to the prior year. This change in the sales mix has impacted trade receivables as longer payment terms are more common outside the U.S. Also, the Company factored approximately $145 million more trade receivables at year end 2018 compared to 2017. Together, the net impact of more factoring and a higher mix of sales outside the U.S. have had a favorable impact on the Company's operating cash flows in 2018.

Also, operating cash flows have been favorably impacted in 2018 as payments for restructuring activities were $30 million lower than in the prior year due to the timing of restructuring actions undertaken. Asbestos-related payments were approximately $105 million in 2018, or $5 million lower than in 2017. However, due to its de-risking and accelerated claim disposition strategy, the Company expects its 2019 asbestos-related payments to increase to approximately $160 million. The Company may continue to experience year-over-year variability with regard to the annual quantity of asbestos-related claims that it is presented with, disposed and paid. See Note 13 to the Consolidated Financial Statements for additional information. In addition, the Company experienced a $44 million year-over-year increase in cash utilized for other operating items, which included the impact of higher spending on non-current assets and lower charges for the write-off of deferred financing fees.

Investing activities: Cash utilized in continuing investing activities was $698 million for 2018 compared to $466 million for 2017. Capital spending for property, plant and equipment during 2018 was $536 million compared with $441 million in the prior year, reflecting the payment in 2018 of a higher level of vendor invoices accrued at the end of 2017, as well as a higher level of project activity in the Asia Pacific region.

Acquisition activities were $175 million and $39 million in 2018 and 2017, respectively. In 2018, the Company paid approximately $119 million for a nearly 50 percent interest in Empresas Comegua S.A., which is the leading manufacturer of glass containers for the Central American and Caribbean markets. In addition, in both 2018 and 2017, the Company made contributions to the Company's joint venture with Constellation Brands in Nava, Mexico. In October 2017, the Company signed an agreement to expand its joint venture with Constellation. To meet rising demand from Constellation's adjacent brewery, the newly-expanded relationship provides for the addition of a fifth furnace, which is expected to be operational by the end of 2019. This capacity expansion will be financed by equal contributions from both partners with the Company's contribution expected to be approximately $30 million in 2019. The term of the joint venture agreement was also expanded for ten additional years, to 2034.

Also, in 2017, a subsidiary of the Company received $115 million from selling its right, title and interest in amounts due under a prior arbitration award against Venezuela related to a discontinued operation. See Note 20 to the Consolidated Financial Statements for additional information.

Financing activities: Cash utilized in financing activities was $53 million for 2018 compared to $392 million of cash utilized by financing activities for 2017. Finance activities in 2018 included additions to long-term debt of $2,511 million and repayments of long-term debt of $2,353 million, both driven by the refinancing of the Agreement in 2018. Financing activities in 2017 included additions to long-term debt of $1,458 million, which included the issuances of €225 million and $310 million of senior notes. Financing activities in 2017 also included the repayment of long-term debt of $1,764 million, which included the repayment of floating-rate debt in the Company's Senior Secured Credit Facility and the repurchase of the 2018 Senior Debentures. Borrowings under short-term loans decreased by $18 million in 2018. The Company paid approximately $13 million in finance fees in 2018 compared to $28 million in note repurchase premiums and finance fees in 2017. The Company paid $22 million and $17 million in distributions to noncontrolling interests in 2018 and 2017, respectively.

In January 2018, the Board of Directors authorized a $400 million share repurchase program and in November 2018, the board authorized an increase to the program, resulting in approximately $550 million in remaining repurchase authority as of December 31, 2018. In 2018, the Company repurchased $163 million in shares of the Company's stock and expects to repurchase approximately $200 million in shares in 2019. In addition, the Company's Board of Directors declared a dividend of $0.05 per share, or approximately $8 million, which will be paid on February 12, 2019, to shareholders of record on the close of business on January 22, 2019. The Board anticipates declaring a dividend in future quarters on a regular basis; however, future declarations of dividends are subject to Board approval and may be adjusted based on the Company's results of operations, financial position and cash flow, or as business needs or market conditions change.

The Company anticipates that cash flows from its operations and from utilization of credit available under the Agreement will be sufficient to fund its operating and seasonal working capital needs, debt service and other obligations on a short term (twelve months) and long term basis. Based on the Company's expectations regarding future payments for lawsuits and claims and also based on the Company's expected operating cash flow, the Company believes that the payment of any deferred amounts of previously settled or otherwise determined lawsuits and claims, and the resolution of presently pending and anticipated future lawsuits and claims associated with asbestos, will not have a material adverse effect upon the Company's liquidity on a short term or long term basis.

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Contractual Obligations and Off Balance Sheet Arrangements

The following information summarizes the Company's significant contractual cash obligations at December 31, 2018 (dollars in millions).

	Payments due by period				
	Total	Less than one year	1 - 3 years	3 - 5 years	More than 5 years
Contractual cash obligations:					
Long-term debt	$ 5,169	$ 26	$ 1,436	$ 2,288	$ 1,419
Capital lease obligations	45	7	13	10	15
Operating leases	252	67	90	62	33
Interest(1)	881	230	379	202	70
Purchase obligations(2)	2,031	586	707	350	388
Pension benefit plan contributions(3)	36	36			
Postretirement benefit plan benefit payments(1)	92	10	19	19	44
Equity affiliate investment obligation(4)	30	30			
Total contractual cash obligations	$ 8,536	$ 992	$ 2,644	$ 2,931	$ 1,969

	Amount of commitment expiration per period				
	Total	Less than one year	1 - 3 years	3 - 5 years	More than 5 years
Other commercial commitments:					
Standby letters of credit	$ 45	$ 45	$ —	$ —	$ —
Total commercial commitments	$ 45	$ 45	$ —	$ —	$ —

(1) Amounts based on rates and assumptions at December 31, 2018.

(2) The Company's purchase obligations consist principally of contracted amounts for energy and molds. In cases where variable prices are involved, current market prices have been used. The amount above does not include ordinary course of business purchase orders because the majority of such purchase orders may be canceled. The Company does not believe such purchase orders will adversely affect its liquidity position.

(3) In order to maintain minimum funding requirements, the Company is required to make contributions to its defined benefit pension plans of approximately $36 million in 2019. Future funding requirements for the Company's pension plans will depend largely on actual asset returns and future actuarial assumptions, such as discount rates, and can vary significantly.

(4) The Company entered into a joint venture agreement with Constellation Brands to operate a glass container plant in Nava, Mexico. To help meet current and rising demand from Constellation's adjacent brewery, the joint venture plans to expand the plant over the next year. The Company expects to contribute approximately $30 million for the joint venture's expansion plans in 2019.

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The Company is unable to make a reasonably reliable estimate as to when cash settlement with taxing authorities may occur for its unrecognized tax benefits. Therefore, the liability for unrecognized tax benefits is not included in the table above. See Note 11 to the Consolidated Financial Statements for additional information.

Critical Accounting Estimates

The Company's analysis and discussion of its financial condition and results of operations are based upon its consolidated financial statements that have been prepared in accordance with accounting principles generally accepted in the United States ("U.S. GAAP"). The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and the disclosure of contingent assets and liabilities. The Company evaluates these estimates and assumptions on an ongoing basis. Estimates and assumptions are based on historical and other factors believed to be reasonable under the circumstances at the time the financial statements are issued. The results of these estimates may form the basis of the carrying value of certain assets and liabilities and may not be readily apparent from other sources. Actual results, under conditions and circumstances different from those assumed, may differ from estimates.

The impact of, and any associated risks related to, estimates and assumptions are discussed within Management's Discussion and Analysis of Financial Condition and Results of Operations, as well as in the Notes to the Consolidated Financial Statements, if applicable, where estimates and assumptions affect the Company's reported and expected financial results.

The Company believes that accounting for the impairment of long lived assets, pension benefit plans, contingencies and litigation related to its asbestos-related liability, and income taxes involves the more significant judgments and estimates used in the preparation of its consolidated financial statements.

Impairment of Long Lived Assets

Property, Plant and Equipment—The Company tests for impairment of PP&E whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. PP&E held for use in the Company's business is grouped for impairment testing at the lowest level for which cash flows can reasonably be identified, typically a segment or a component of a segment. The Company evaluates the recoverability of PP&E based on undiscounted projected cash flows, excluding interest and taxes. If an asset group is considered impaired, the impairment loss to be recognized is measured as the amount by which the asset group's carrying amount exceeds its fair value. PP&E held for sale is reported at the lower of carrying amount or fair value less cost to sell.

Impairment testing requires estimation of the fair value of PP&E based on the discounted value of projected future cash flows generated by the asset group. The assumptions underlying cash flow projections represent management's best estimates at the time of the impairment review. Factors that management must estimate include, among other things: industry and market conditions, sales volume and prices, production costs and inflation. Changes in key assumptions or actual conditions which differ from estimates could result in an impairment charge. The Company uses reasonable and supportable assumptions when performing impairment reviews and cannot predict the occurrence of future events and circumstances that could result in impairment charges.

Goodwill –Goodwill is tested for impairment annually as of October 1 (or more frequently if impairment indicators arise). Step 1 compares the business enterprise value ("BEV") of each reporting unit with its carrying value. The BEV is computed based on estimated future cash flows, discounted at the weighted average cost of capital of a hypothetical third-party buyer. If the BEV is less than the carrying value for any reporting unit, then goodwill impairment must be calculated. Goodwill impairment will be calculated by comparing the reporting unit's fair value of goodwill with the carrying amount of goodwill. Any excess of the carrying value of the goodwill over the fair value will be recorded as an impairment loss. The calculations of the BEV in Step 1 are based on significant unobservable inputs, such as projected future cash flows of the reporting units, discount rates, and terminal business value, and are classified as Level 3 in the fair value hierarchy. The Company's projected future cash flows incorporates management's best estimates of the expected future results including, but not limited to, price trends, customer demand, material costs, asset replacement costs and any other known factors.

Goodwill is tested for impairment at the reporting unit level, which is the operating segment or one level below the operating segment, also known as a component. Two or more components of an operating segment shall be aggregated into a single reporting unit if the components have similar economic characteristics, based on an assessment of various factors. Despite the consolidation of the Americas segment effective January 1, 2018, the Company has not changed the reporting units within this segment or the goodwill allocated to its reporting units. The Americas segment is comprised of two reporting units – North America and Latin America. The Company aggregated the components of the Latin America reporting segment into a single reporting unit. The Company has determined that the Europe segment is also a reporting unit. The Company aggregated the components of the Asia Pacific segment, which has no goodwill, into a single reporting unit equal to the reportable segment. The aggregation of the components of these reporting units or segments were based on their economic similarity as determined by the Company using a number of quantitative and qualitative factors, including gross margins, the manner in which the Company operates the business, the consistent nature of products, services, production processes, customers and methods of distribution, as well as the level of shared resources and assets between the components.

During the fourth quarter of 2018, the Company completed its annual impairment testing and determined that no impairment of goodwill existed. Goodwill at December 31, 2018 totaled approximately $2.5 billion, representing 26% of total assets. The Company has four reporting units of which three of the reporting units have goodwill and include approximately $874 million of recorded goodwill to the Company's Europe reporting unit, approximately $1.04 billion of recorded goodwill to the Company's North America reporting unit and approximately $598 million of recorded goodwill to the Company's Latin America reporting unit. The testing performed as of October 1, 2018, indicated an excess of BEV over book value for North America, Europe and Latin America. North America exceeded its carrying values by approximately 12% and is determined to be the reporting unit having the greatest risk of future impairment if actual results fall modestly short of expectations. If the Company's projected future cash flows were substantially lower, or if the assumed weighted average cost of capital was substantially higher, the testing performed as of October 1, 2018, may have indicated an impairment of one or more of these reporting units and, as a result, the related goodwill may also have been impaired. Any impairment charges that the Company may take in the future could be material to its consolidated results of operations and financial condition. However, less significant changes in projected future cash flows or the assumed weighted average cost of capital would not have indicated an impairment. For example, if projected future cash flows had been decreased by 5%, or if the weighted average cost of capital had been increased by 5%, or both, the resulting lower BEV's would still have exceeded the book value of each of these reporting units.

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During the time subsequent to the annual evaluation, and at December 31, 2018, the Company considered whether any events and/or changes in circumstances had resulted in the likelihood that the goodwill of any of its reporting units may have been impaired and has determined that no such events have occurred. The Company will monitor conditions throughout 2019 that might significantly affect the projections and variables used in the impairment test to determine if a review prior to October 1 may be appropriate. If the results of impairment testing confirm that a write down of goodwill is necessary, then the Company will record a charge in the fourth quarter of 2019, or earlier if appropriate. In the event the Company would be required to record a significant write down of goodwill, the charge would have a material adverse effect on reported results of operations and net worth.

Other Long-Lived Assets - Intangibles – Other long-lived assets consist primarily of purchased customer relationships intangibles and are amortized using the accelerated amortization method over their estimated useful lives. The Company reviews these assets for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. In the event that a decline in fair value of an asset occurs, and the decline in value is considered to be other than temporary, an impairment loss is recognized. The test for impairment would require the Company to make estimates about fair value, which may be determined based on discounted cash flows, third party appraisals or other methods that provide appropriate estimates of value. The Company continually monitors the carrying value of their assets.

Pension Benefit Plans

Significant Estimates—The determination of pension obligations and the related pension expense or credits to operations involves significant estimates. The most significant estimates are the discount rate used to calculate the actuarial present value of benefit obligations and the expected long term rate of return on plan assets. The Company uses discount rates based on yields of high quality fixed rate debt securities at the end of the year. At December 31, 2018, the weighted average discount rate was 3.69% and 2.76% for U.S. and non U.S. plans, respectively. The Company uses an expected long term rate of return on assets that is based on both past performance of the various plans' assets and estimated future performance of the assets. Due to the nature of the plans' assets and the volatility of debt and equity markets, actual returns may vary significantly from year to year. The Company refers to average historical returns over longer periods (up to 10 years) in determining its expected rates of return because short term fluctuations in market values do not reflect the rates of return the Company expects to achieve based upon its long term investing strategy. For purposes of determining pension charges and credits in 2018, the Company's estimated weighted average expected long term rate of return on plan assets is 7.25% for U.S. plans and 5.52% for non U.S. plans compared to 7.50% for U.S. plans and 6.32% for non U.S. plans in 2017. The Company recorded pension expense from continuing operations (exclusive of settlement charges) of $26 million, $21 million, and $23 million for the U.S. plans in 2018, 2017, and 2016, respectively, and $6 million, $8 million, and $8 million for the non U.S. plans in 2018, 2017, and 2016, respectively. Depending on currency translation rates, the Company expects to record approximately $32 million of total pension expense for the full year of 2019. The 2019 pension expense will reflect a 7.25% and 5.50% expected long-term rate of return for the U.S. assets and non-U.S. assets, respectively.

Future effects on reported results of operations depend on economic conditions and investment performance. For example, a one half percentage point change in the actuarial assumption regarding discount rates used to calculate plan liabilities or in the expected rate of return on plan assets would result in a change of approximately $5 million and $10 million, respectively, in the pretax pension expense for the full year 2019.

Recognition of Funded Status—The Company recognizes the funded status of each pension benefit plan on the balance sheet. The funded status of each plan is measured as the difference between the fair value of plan assets and actuarially calculated benefit obligations as of the balance sheet date. Actuarial gains and losses are accumulated in Other Comprehensive Income and the portion of each plan that exceeds 10% of the greater of that plan's assets or projected benefit obligation is amortized to income on a straight line basis over the average remaining service period of employees still accruing benefits or the expected life of participants not accruing benefits if all, or almost all, of the plan's participants are no longer accruing benefits.

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Contingencies and Litigation Related to Asbestos Liability

For many years, the Company has conducted an annual comprehensive legal review of its asbestos-related liabilities and costs in connection with finalizing and reporting its annual results of operations, unless significant changes in trends or new developments warrant an earlier review. As part of its current annual comprehensive legal review, the Company provides historical claims filing data to a third party consultant with expertise in predicting future claims filings based on actuarial inputs such as disease incidence and mortality. The Company uses these estimates of total future claims, along with its legal judgment regarding an estimation of future disposition costs and related legal costs, as inputs to develop a reasonable estimate of probable liability. If the results of the annual comprehensive legal review indicate that the existing amount of the accrued liability is lower (higher) than its reasonably estimable asbestos-related costs, then the Company will record an appropriate charge (credit) to the Company's results of operations to increase (decrease) the accrued liability.

The significant assumptions underlying the material components of the Company's accrual are described in the Risk Factors section and in Note 13 to the Consolidated Financial Statements. Changes in these significant assumptions have the potential to impact the Company's asbestos-related liability.

In addition, if trends relating to the Company's actual Asbestos Claims materially differ, up or down, from the amounts predicted, the total number of future estimated Asbestos Claims could change significantly. Similarly, if trends relating to the actual per-claim indemnity costs differ materially, up or down, from the previously estimated amount, the total cost of the estimate future Asbestos Claims could change significantly. The same may also be true with respect to legal costs. Significant changes in the future total number of predicted Asbestos Claims, or their costs, could impact the total estimated asbestos-related liability, which in turn could result in a material charge or credit to the Company's results of operations.

The Company believes it is reasonably possible that it will incur a loss for its asbestos-related liabilities in excess of the amount currently recognized, which is $602 million as of December 31, 2018. The Company estimates that reasonably possible losses could result in asbestos-related liabilities up to $722 million. This estimate of additional reasonably possible loss reflects a qualitative legal judgment regarding the nature of contingencies that could impact future Asbestos Claims and legal costs, which include, but are not limited to, successful attempts by plaintiffs to challenge existing legal barriers to liability, enact plaintiff-oriented liability or damage-related legislation, establish new theories of liability, or revive long-dormant inventories of non-mesothelioma cases. However, it is also possible that the ultimate amount of asbestos-related liabilities could be above this estimate.

Income Taxes

The Company accounts for income taxes as required by general accounting principles under which management judgment is required in determining income tax expense/(benefit) and the related balance sheet amounts. This judgment includes estimating and analyzing historical and projected future operating results, the reversal of taxable and tax deductible temporary differences, tax planning strategies, and the ultimate outcome of uncertain income tax positions. Actual income taxes paid may vary from estimates, depending upon changes in income tax laws, actual results of operations, and the effective settlement of uncertain tax positions. The Company has received tax assessments in excess of established reserves for uncertain tax positions. The Company is contesting these tax assessments, and will continue to do so, including pursuing all available remedies such as appeals and litigation, if necessary.

The Company believes that adequate provisions for all income tax uncertainties have been made. However, if tax assessments are settled against the Company at amounts in excess of established reserves, it could have a material impact to the Company's results of operations, financial position or cash flows. Changes in the estimates and assumptions used for calculating income tax expense and potential differences in actual results from estimates could have a material impact on the Company’s results of operations and financial condition.

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Deferred tax assets and liabilities are recognized for the tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities measured using enacted tax rates and for tax attributes such as operating losses and tax credit carryforwards. Deferred tax assets and liabilities are determined separately for each tax jurisdiction on a separate or on a consolidated tax filing basis, as applicable, in which the Company conducts its operations or otherwise incurs taxable income or losses. A valuation allowance is recorded when it is more likely than not that some portion or all of the deferred tax assets will not be realized. The realization of deferred tax assets depends on the ability to generate sufficient taxable income of the appropriate character within the carryback or carryforward periods provided for in the tax law for each applicable tax jurisdiction. The Company considers the following possible sources of taxable income when assessing the realization of deferred tax assets:

- taxable income in prior carryback years;
- future reversals of existing taxable temporary differences;
- future taxable income exclusive of reversing temporary differences and carryforwards; and
- prudent and feasible tax planning strategies that the Company would be willing to undertake to prevent a deferred tax asset from otherwise expiring.

The assessment regarding whether a valuation allowance is required or whether a change in judgment regarding the valuation allowance has occurred also considers all available positive and negative evidence, including but not limited to:

- nature, frequency, and severity of cumulative losses in recent years;
- duration of statutory carryforward and carryback periods;
- statutory limitations against utilization of tax attribute carryforwards against taxable income;
- historical experience with tax attributes expiring unused; and
- near and medium term financial outlook.

The weight given to the positive and negative evidence is commensurate with the extent to which the evidence may be objectively verified. Accordingly, it is generally difficult to conclude a valuation allowance is not required when there is significant objective and verifiable negative evidence, such as cumulative losses in recent years. The Company uses the actual results for the last two years and current year results as the primary measure of cumulative losses in recent years.

The evaluation of deferred tax assets requires judgment in assessing the likely future tax consequences of events recognized in the financial statements or tax returns and future profitability. The recognition of deferred tax assets represents the Company’s best estimate of those future events. Changes in the current estimates, due to unanticipated events or otherwise, could have a material effect on the Company’s results of operations and financial condition.

In certain tax jurisdictions, the Company’s analysis indicates that it has cumulative losses in recent years. This is considered significant negative evidence which is objective and verifiable and, therefore, difficult to overcome. However, the cumulative loss position is not solely determinative and, accordingly, the Company considers all other available positive and negative evidence in its analysis. Based on its analysis, the Company has recorded a valuation allowance for the portion of deferred tax assets where based on the weight of available evidence it is unlikely to realize those deferred tax assets.

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Based on the evidence available including a lack of sustainable earnings, the Company in its judgment previously recorded a valuation allowance against substantially all of its net deferred tax assets in the United States. If a change in judgment regarding this valuation allowance were to occur in the future, the Company will record a potentially material deferred tax benefit, which could result in a favorable impact on the effective tax rate in that period. The utilization of tax attributes to offset taxable income reduces the amount of deferred tax assets subject to a valuation allowance.

In 2017, the Company elected to treat Global Intangible Low Taxed Income ("GILTI"), which was effective in 2018 for the Company, as a period cost.

The U.S. Tax Cuts and Jobs Act (the "Act") was enacted on December 22, 2017. The Act reduces the U.S. federal corporate tax rate from 35% to 21%, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred and creates new taxes on certain foreign sourced earnings. Additional guidance is likely to be issued providing further clarification on the application of the Act, and the proposed regulations subsequently issued with respect to the Act. Further, it is reasonable to expect that global taxing authorities will be reviewing current legislation for potential modifications in reaction to the implementation of the Act. This additional guidance, along with the potential for additional global tax legislation changes, could have a material adverse impact on net income and cash flow by impacting significant deductions or income inclusions.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risks relating to the Company's operations result primarily from fluctuations in foreign currency exchange rates, changes in interest rates, and changes in commodity prices, principally energy and soda ash. The Company uses certain derivative instruments to mitigate a portion of the risk associated with changing foreign currency exchange rates. The Company also uses certain derivative instruments to mitigate a portion of the risk associated with fluctuating energy prices in its Americas region. These instruments carry varying degrees of counterparty credit risk. To mitigate this risk, the Company has defined a financial counterparty policy that established criteria to select qualified counterparties based on credit ratings and CDC spreads. The policy also limits the exposure with individual counterparties. The Company monitors these exposures quarterly. The Company does not enter into derivative financial instruments for trading purposes.

Foreign Currency Exchange Rate Risk

Earnings of Operations Outside the United States

A substantial portion of the Company's operations are conducted by subsidiaries outside the U.S. The primary international markets served by the Company's subsidiaries are in Canada, Australia, China, Latin America (principally Brazil, Colombia, and Mexico), and Europe (principally France, Germany, Italy, the Netherlands, Poland, Spain, and the United Kingdom). In general, revenues earned and costs incurred by the Company's major international operations are denominated in their respective local currencies. Consequently, the Company's reported financial results could be affected by factors such as changes in foreign currency exchange rates or highly inflationary economic conditions in the international markets in which the Company's subsidiaries operate. When the U.S. dollar strengthens against foreign currencies, the reported U.S. dollar value of local currency earnings generally decreases; when the U.S. dollar weakens against foreign currencies, the reported U.S. dollar value of local currency earnings generally increases. For the years ended December 31, 2018, 2017, and 2016, the Company did not have any significant foreign subsidiaries whose functional currency was the U.S. dollar.

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Borrowings Not Denominated in the Functional Currency

Because the Company's subsidiaries operate within their local economic environment, the Company believes it is appropriate to finance those operations with borrowings denominated in the local currency to the extent practicable where debt financing is desirable or necessary. This strategy mitigates the risk of reported losses or gains in the event the foreign currency strengthens or weakens against the U.S. dollar. Considerations which influence the amount of such borrowings include long and short term business plans, tax implications, and the availability of borrowings with acceptable interest rates and terms.

Available excess funds of a subsidiary may be redeployed through intercompany loans to other subsidiaries for debt repayment, capital investment, or other cash requirements. The intercompany loans give rise to foreign currency exchange rate risk, which the Company mitigates through the use of forward exchange contracts that effectively swap the intercompany loan and related interest to the appropriate local currency.

Foreign Exchange Derivative Contracts and not Designated as Hedging Instruments

The Company uses short-term forward exchange or option agreements to purchase foreign currencies at set rates in the future. These agreements are used to limit exposure to fluctuations in foreign currency exchange rates for significant planned purchases of fixed assets or commodities that are denominated in currencies other than the subsidiaries' functional currency. The Company also uses foreign exchange agreements to offset the foreign currency risk for receivables and payables, including intercompany receivables, payables, and loans, not denominated in, or indexed to, their functional currencies. At December 31, 2018 and 2017, the net fair value of such agreements was less than $1 million and a net asset of $3 million, respectively.

Cash Flow Hedges of Foreign Exchange Risk

The Company has variable-interest rate borrowings denominated in currencies other than the functional currency of the borrowing subsidiaries. As a result, the Company is exposed to fluctuations in the currency of the borrowing against the subsidiaries' functional currency. The Company uses derivatives to manage these exposures and designates these derivatives as cash flow hedges of foreign exchange risk. For these derivatives designated as cash flow hedges of foreign exchange risk the gain or loss on the derivative is recorded in Accumulated OCI and is subsequently reclassified into earnings in the period for which the hedged forecasted transaction affects earnings. At December 31, 2018 and 2017, the net fair value of such swap contracts was a net asset of $9 million and a net asset of $4 million, respectively.

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Interest Rate Risk

The Company's interest expense is most sensitive to changes in the general level of interest rates applicable to the term loans under its Agreement (see Note 12 to the Consolidated Financial Statements for further information). The Company's interest rate risk management objective is to limit the impact of interest rate changes on net income and cash flow, while minimizing interest payments and expense. To achieve this objective, the Company regularly evaluates its mix of fixed and floating rate debt, and, from time to time, may enter into interest rate swap agreements.

The following table provides information about the Company's interest rate sensitivity related to its significant debt obligations, including interest rate swap agreements, at December 31, 2018. The table presents principal cash flows and related weighted average interest rates by expected maturity date.

(Dollars in millions)	2019	2020	2021	2022	2023	Thereafter	Total	Fair Value at 12/31/2018
Long-term debt at variable rate:								
Principal by expected maturity	$ 18	$ 250	$ 34	$ 32	$ 518	$ 825	$ 1,677	$ 1,670
Avg. principal outstanding	$ 1,667	$ 1,533	$ 1,391	$ 1,359	$ 1,084	$ 825		
Avg. interest rate	3.05 %	3.01 %	2.97 %	2.95 %	2.69 %	2.29 %		
Long-term debt at fixed rate:								
Principal by expected maturity	$ 15	$ 768	$ 397	$ 517	$ 1,231	$ 609	$ 3,537	$ 3,632
Avg. principal outstanding	$ 3,530	$ 2,770	$ 2,375	$ 1,864	$ 632	$ 632		
Avg. interest rate	5.00 %	4.94 %	4.95 %	4.95 %	5.85 %	5.85 %		

The Company believes the near term exposure to interest rate risk of its debt obligations has not changed materially since December 31, 2018.

In addition, the determination of pension obligations and the related pension expense or credits to operations involves significant estimates. Future funding requirements for the Company's pension plans will depend largely on actual asset returns and future actuarial assumptions, such as discount rates, and can vary significantly. The discount rate is a significant estimate that is used to calculate the actuarial present value of benefit obligations and is based on yields of high quality fixed rate debt securities at the end of the year. For example, a one half percentage point change in the actuarial assumption regarding discount rates used to calculate plan liabilities or in the expected rate of return on plan assets would result in a change of approximately $5 million and $10 million, respectively, in the pretax pension expense for the full year 2019.

Interest Rate Swap Agreements

The Company's objectives in using interest rate derivatives are to manage its exposure to interest rate movements and to maintain a capital structure containing appropriate amounts of fixed and floating-rate debt. To accomplish this objective, the Company uses interest rate swaps as part of its interest rate risk management strategy. Interest rate swaps designated as cash flow hedges involve the receipt of variable amounts from a counterparty in exchange for the Company making fixed-rate payments. These interest rate swap agreements were used to hedge the variable cash flows associated with variable-rate debt. At December 31, 2018 and 2017, the net fair value of such swap contracts was a net asset of $5 million and a net liability of $4 million, respectively.

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Commodity Price Risk

The Company enters into commodity forward contracts related to forecasted natural gas requirements, the objectives of which are to limit the effects of fluctuations in the future market price paid for natural gas and the related volatility in cash flows. At December 31, 2018 and 2017, the net fair value of such contracts was a net asset of $1 million and a net liability of $10 million, respectively.

The Company believes the near term exposure to commodity price risk of its commodity forward contracts was not material at December 31, 2018.

Forward-Looking Statements

This document contains "forward-looking" statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”) and Section 27A of the Securities Act of 1933. Forward-looking statements reflect the Company's current expectations and projections about future events at the time, and thus involve uncertainty and risk. The words “believe,” “expect,” “anticipate,” “will,” “could,” “would,” “should,” “may,” “plan,” “estimate “predict,” “potential,” “continue,” and the negatives of these words and other similar expressions generally identify forward-looking statements. It is possible the Company's future financial performance may differ from expectations due to a variety of factors including, but not limited to the following: (1) foreign currency fluctuations relative to the U.S. dollar, (2) changes in capital availability or cost, including interest rate fluctuations and the ability of the Company to refinance debt at favorable terms, (3) the general political, economic and competitive conditions in markets and countries where the Company has operations, including uncertainties related to economic and social conditions, disruptions in the supply chain, competitive pricing pressures, inflation or deflation, and changes in tax rates and laws, (4) the Company’s ability to generate sufficient future cash flows to ensure the Company’s goodwill is not impaired, (5) consumer preferences for alternative forms of packaging, (6) cost and availability of raw materials, labor, energy and transportation, (7) the Company’s ability to manage its cost structure, including its success in implementing restructuring plans and achieving cost savings, (8) consolidation among competitors and customers, (9) the Company’s ability to acquire businesses and expand plants, integrate operations of acquired businesses and achieve expected synergies, (10) unanticipated expenditures with respect to environmental, safety and health laws, (11) unanticipated operational disruptions, including higher capital spending, (12) the Company’s ability to further develop its sales, marketing and product development capabilities, (13) the failure of the Company’s joint venture partners to meet their obligations or commit additional capital to the joint venture, (14) the Company’s ability to prevent and detect cybersecurity threats against its information technology systems and to comply with data privacy regulations, (15) the Company’s ability to accurately estimate its total asbestos-related liability or to control the timing and occurrence of events related to outstanding asbestos-related claims, including but not limited to settlements of those claims, (16) changes in U.S. trade policies, (17) the Company’s ability to achieve its strategic plan, and the other risk factors discussed in this Annual Report on Form 10-K for the year ended December 31, 2018 and any subsequently filed Quarterly Report on Form 10-Q. It is not possible to foresee or identify all such factors. Any forward-looking statements in this document are based on certain assumptions and analyses made by the Company in light of its experience and perception of historical trends, current conditions, expected future developments, and other factors it believes are appropriate in the circumstances. Forward-looking statements are not a guarantee of future performance and actual results or developments may differ materially from expectations. While the Company continually reviews trends and uncertainties affecting the Company's results of operations and financial condition, the Company does not assume any obligation to update or supplement any particular forward-looking statements contained in this document.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Share Owners of Owens Illinois, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Owens-Illinois, Inc. (the Company) as of December 31, 2018 and 2017, the related consolidated statements of results of operations, comprehensive income, share owners' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and financial statement schedule listed in the Index at Item 15 (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at 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 U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 14, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1987.

Toledo, Ohio

February 14, 2019

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Owens-Illinois, Inc.

CONSOLIDATED RESULTS OF OPERATIONS

Dollars in millions, except per share amounts

Years ended December 31,	2018	2017	2016
Net sales	$ 6,877	$ 6,869	$ 6,702
Cost of goods sold	(5,594)	(5,536)	(5,392)
Gross profit	1,283	1,333	1,310
Selling and administrative expense	(483)	(484)	(503)
Research, development and engineering expense	(70)	(60)	(65)
Interest expense, net	(261)	(268)	(272)
Equity earnings	77	77	60
Other expense, net	(269)	(323)	(174)
Earnings from continuing operations before income taxes	277	275	356
Provision for income taxes	(108)	(70)	(119)
Earnings from continuing operations	169	205	237
Gain (loss) from discontinued operations	113	(3)	(7)
Net earnings	282	202	230
Net earnings attributable to noncontrolling interests	(25)	(22)	(21)
Net earnings attributable to the Company	$ 257	$ 180	$ 209
Amounts attributable to the Company:			
Earnings from continuing operations	$ 144	$ 183	$ 216
Gain (loss) from discontinued operations	113	(3)	(7)
Net earnings	$ 257	$ 180	$ 209
Basic earnings per share:			
Earnings from continuing operations	$ 0.90	$ 1.12	$ 1.33
Gain (loss) from discontinued operations	0.71	(0.01)	(0.04)
Net earnings	$ 1.61	$ 1.11	$ 1.29
Diluted earnings per share:			
Earnings from continuing operations	$ 0.89	$ 1.11	$ 1.32
Gain (loss) from discontinued operations	0.70	(0.01)	(0.04)
Net earnings	$ 1.59	$ 1.10	$ 1.28
Dividends declared per common share	$ 0.05	$ -	$ -

See accompanying Notes to the Consolidated Financial Statements.

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Owens-Illinois, Inc.

CONSOLIDATED COMPREHENSIVE INCOME

Dollars in millions

Years ended December 31,	2018	2017	2016
Net earnings	$ 282	$ 202	$ 230
Other comprehensive income (loss):			
Foreign currency translation adjustments	(174)	70	(224)
Pension and other postretirement benefit adjustments, net of tax	30	289	52
Change in fair value of derivative instruments, net of tax	(6)	(8)	13
Other comprehensive income (loss)	(150)	351	(159)
Total comprehensive income	132	553	71
Comprehensive income attributable to noncontrolling interests	(17)	(27)	(17)
Comprehensive income attributable to the Company	$ 115	$ 526	$ 54

See accompanying Notes to the Consolidated Financial Statements.

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Owens-Illinois, Inc.

CONSOLIDATED BALANCE SHEETS

Dollars in millions

December 31,	2018	2017
Assets		
Current assets:		
Cash and cash equivalents	$ 512	$ 492
Trade receivables, net of allowances of $35 million and $34 million at December 31, 2018 and 2017, respectively	549	663
Inventories	1,018	1,036
Prepaid expenses and other current assets	278	229
Total current assets	2,357	2,420
Other assets:		
Equity investments	698	525
Pension assets	44	49
Other assets	602	602
Intangibles	400	439
Goodwill	2,513	2,590
Total other assets	4,257	4,205
Property, plant and equipment:		
Land, at cost	244	255
Buildings and equipment, at cost:		
Buildings and building equipment	1,141	1,180
Factory machinery and equipment	5,193	5,015
Transportation, office and miscellaneous equipment	102	96
Construction in progress	344	303
	7,024	6,849
Less accumulated depreciation	3,939	3,718
Net property, plant and equipment	3,085	3,131
Total assets	$ 9,699	$ 9,756

See accompanying Notes to the Consolidated Financial Statements.

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Owens-Illinois, Inc.

CONSOLIDATED BALANCE SHEETS (Continued)

Dollars in millions, except per share amounts

December 31,	2018	2017
Liabilities and Share Owners' Equity		
Current liabilities:		
Accounts payable	$ 1,321	$ 1,324
Salaries and wages	157	166
U.S. and foreign income taxes	34	35
Current portion of asbestos-related liabilities	160	100
Other accrued liabilities	375	378
Other liabilities - discontinued operations		115
Short-term loans	127	151
Long-term debt due within one year	33	11
Total current liabilities	2,207	2,280
Long-term debt	5,181	5,121
Deferred taxes	96	99
Pension benefits	534	471
Nonpension postretirement benefits	145	167
Other liabilities	194	209
Asbestos-related liabilities	442	482
Share owners' equity:		
Share owners' equity of the Company:		
Common stock, par value $.01 per share, 250,000,000 shares authorized, 186,575,999 and 185,727,663 shares issued (including treasury shares), respectively	2	2
Capital in excess of par value	3,124	3,099
Treasury stock, at cost, 30,917,603 and 22,648,606 shares, respectively	(705)	(551)
Retained earnings	333	84
Accumulated other comprehensive loss	(1,968)	(1,826)
Total share owners' equity of the Company	786	808
Noncontrolling interests	114	119
Total share owners' equity	900	927
Total liabilities and share owners' equity	$ 9,699	$ 9,756

See accompanying Notes to the Consolidated Financial Statements.

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Owens-Illinois, Inc.

CONSOLIDATED SHARE OWNERS' EQUITY

Dollars in millions

	Share Owners' Equity of the Company						
	Common Stock	Capital in Excess of Par Value	Treasury Stock	Retained Earnings (accumulated deficit)	Accumulated Other Comprehensive Loss	Non-Controlling Interests	Total Share Owners' Equity
Balance on January 1, 2016	$ 2	3,064	(573)	(305)	(2,017)	108	279
Issuance of common stock (0.5 million shares)		5					5
Reissuance of common stock (0.5 million shares)			13				13
Stock compensation (0.2 million shares)		11					11
Net earnings				209		21	230
Other comprehensive loss					(155)	(4)	(159)
Distributions to noncontrolling interests						(16)	(16)
Balance on December 31, 2016	2	3,080	(560)	(96)	(2,172)	109	363
Issuance of common stock (0.1 million shares)		1					1
Reissuance of common stock (0.4 million shares)			9				9
Stock compensation (0.3 million shares)		18					18
Net earnings				180		22	202
Other comprehensive income					346	5	351
Distributions to noncontrolling interests						(17)	(17)
Balance on December 31, 2017	2	3,099	(551)	84	(1,826)	119	927
Issuance of common stock (0.03 million shares)							—
Reissuance of common stock (0.4 million shares)		(2)	9				7
Treasury shares purchased (8.6 million shares)			(163)				(163)
Stock compensation (0.8 million shares)		27					27

Dividends declared (a)				(8)			(8)
Net earnings				257		25	282
Other comprehensive loss					(142)	(8)	(150)
Distributions to noncontrolling interests						(22)	(22)
Balance on December 31, 2018	$ 2	$ 3,124	$ (705)	$ 333	$ (1,968)	$ 114	$ 900

(a) The Company's Board of Directors declared a quarterly cash dividend of five cents per share of common stock in the fourth quarter of 2018.

See accompanying Notes to the Consolidated Financial Statements.

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Owens-Illinois, Inc.

CONSOLIDATED CASH FLOWS

Dollars in millions

Years ended December 31,	2018	2017	2016
Operating activities:			
Net earnings	$ 282	$ 202	$ 230
Loss (gain) from discontinued operations	(113)	3	7
Non-cash charges (credits):			
Depreciation	388	387	375
Amortization of intangibles and other deferred items	106	101	103
Amortization of finance fees and debt discount	13	13	13
Deferred tax provision (benefit)	(9)	(12)	(4)
Pension expense	32	29	31
Restructuring, asset impairment and related charges	92	72	98
Pension settlement charges	74	218	98
Asbestos-related costs	125		
Impairment of equity investment			25
Gain on China land sale			(71)
Pension contributions	(34)	(31)	(38)
Asbestos-related payments	(105)	(110)	(125)
Cash paid for restructuring activities	(32)	(62)	(24)
Change in components of working capital	15	(89)	90
Other, net	(41)	3	(50)
Cash provided by continuing operating activities	793	724	758
Cash utilized in discontinued operating activities	(2)	(3)	(7)
Total cash provided by operating activities	791	721	751
Investing activities:			
Cash payments for property, plant and equipment	(536)	(441)	(454)
Acquisitions, net of cash acquired	(175)	(39)	(56)
Net cash proceeds on disposal of assets	11	14	85
Net foreign exchange derivative activity	2		8
Cash utilized in continuing investing activities	(698)	(466)	(417)
Cash provided by discontinued investing activities		115	
Total cash utilized in investing activities	(698)	(351)	(417)
Financing activities:			
Additions to long-term debt	2,511	1,458	1,235
Repayments of long-term debt	(2,353)	(1,764)	(1,453)
Increase (decrease) in short-term loans	(18)	(36)	10
Payment of finance fees	(13)	(28)	(9)
Distributions paid to noncontrolling interests	(22)	(17)	(16)
Treasury shares repurchased	(163)		
Issuance of common stock and other	5	(5)	5
Cash utilized in financing activities	(53)	(392)	(228)
Effect of exchange rate fluctuations on cash	(20)	22	(13)
Increase in cash	20	—	93

Cash and cash equivalents at beginning of period	492	492	399
Cash and cash equivalents at end of period	$ 512	$ 492	$ 492

See accompanying Notes to the Consolidated Financial Statements.

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1. Significant Accounting Policies

Basis of Consolidated Statements The consolidated financial statements of Owens-Illinois, Inc. (the “Company”) include the accounts of its subsidiaries. Newly acquired subsidiaries have been included in the consolidated financial statements from dates of acquisition.

The Company uses the equity method of accounting for investments in which it has a significant influence and generally an ownership interest of 20% to 50%. The Company monitors other than temporary declines in fair value and records reductions in carrying values when appropriate.

Nature of Operations The Company is a leading manufacturer of glass container products. The Company’s principal product lines are glass containers for the food and beverage industries. The Company has glass container operations located in 23 countries. The principal markets and operations for the Company’s products are in the Americas, Europe and Asia Pacific.

Use of Estimates The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management of the Company to make estimates and assumptions that affect certain amounts reported in the financial statements and accompanying notes. Actual results may differ from those estimates, at which time the Company would revise its estimates accordingly.

Foreign Currency Translation The assets and liabilities of non-U.S. subsidiaries are translated into U.S. dollars at year-end exchange rates and their results of operations are converted on an ongoing basis at the monthly average rate. Any related translation adjustments are recorded in accumulated other comprehensive income in share owners’ equity.

Revenue Recognition Revenue is recognized when obligations under the terms of the Company’s contracts and related purchase orders with its customers are satisfied, which primarily takes place when products are shipped from the Company’s manufacturing or warehousing facilities to the customer. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring goods, which includes estimated provisions for rebates, discounts, returns and allowances. Sales, value added, and other taxes the Company collects concurrent with revenue-producing activities are excluded from revenue.

Shipping and Handling Costs Shipping and handling costs are included with cost of goods sold in the Consolidated Results of Operations.

Stock-Based Compensation The Company has various stock-based compensation plans consisting of stock option grants and restricted share awards. Costs resulting from all share-based compensation plans are required to be recognized in the financial statements. A public entity is required to measure the cost of employee services received in exchange for an award of equity instruments based on the grant-date fair value of the award. That cost is recognized over the required service period (usually the vesting period). No compensation cost is recognized for equity instruments for which employees do not render the required service.

Cash The Company defines “cash” as cash and time deposits with maturities of three months or less when purchased. Outstanding checks in excess of funds on deposit are included in accounts payable.

Accounts Receivable   Receivables are stated at amounts estimated by management to be the net realizable value. The Company charges off accounts receivable when it becomes apparent based upon age or customer circumstances that amounts will not be collected.

Allowance for Doubtful Accounts   The allowance for doubtful accounts is established through charges to the provision for bad debts. The Company evaluates the adequacy of the allowance for doubtful accounts on a periodic basis. The evaluation includes historical trends in collections and write-offs, management's judgment of the probability of collecting accounts and management's evaluation of business risk.

Inventory Valuation   Inventories are valued at the lower of average costs or market.

See accompanying Notes to the Consolidated Financial Statements.

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Owens Illinois, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
Tabular data dollars in millions

Goodwill Goodwill represents the excess of cost over fair value of net assets of businesses acquired. Goodwill is evaluated annually, as of October 1, for impairment or more frequently if an impairment indicator exists.

Intangible Assets and Other Long-Lived Assets Intangible assets are amortized over the expected useful life of the asset. Amortization expense directly attributed to the manufacturing of the Company's products is included in cost of goods sold. Amortization expense related to non-manufacturing activities is included in Selling and administrative expense and Other expense, net. The Company evaluates the recoverability of intangible assets and other long-lived assets based on undiscounted projected cash flows, excluding interest and taxes, when factors indicate that impairment may exist. If impairment exists, the asset is written down to fair value.

Property, Plant and Equipment Property, plant and equipment ("PP&E") is carried at cost and includes expenditures for new facilities and equipment and those costs which substantially increase the useful lives or capacity of existing PP&E. In general, depreciation is computed using the straight-line method and recorded over the estimated useful life of the asset. Factory machinery and equipment is depreciated over periods ranging from 5 to 25 years with the majority of such assets (principally glass-melting furnaces and forming machines) depreciated over 7 to 15 years. Buildings and building equipment are depreciated over periods ranging from 10 to 50 years. Depreciation expense directly attributed to the manufacturing of the Company's products is included in cost of goods sold. Depreciation expense related to non-manufacturing activities is included in selling and administrative. Depreciation expense includes the amortization of assets recorded under capital leases. Maintenance and repairs are expensed as incurred. Costs assigned to PP&E of acquired businesses are based on estimated fair values at the date of acquisition. The Company evaluates the recoverability of PP&E based on undiscounted projected cash flows, excluding interest and taxes, when factors indicate that impairment may exist. If impairment exists, the asset is written down to fair value.

Derivative Instruments The Company uses derivative instruments to manage risks generally associated with foreign exchange rate, interest rate and commodity market volatility. Derivative financial instruments are included on the balance sheet at fair value. Changes in the fair value of derivative assets or liabilities (i.e., gains or losses) are recognized depending upon the type of hedging relationship and whether a hedge has been designated. For those derivative instruments that qualify for hedge accounting, the Company designates the hedging instrument, based upon the exposure being hedged, as a cash flow hedge, fair value hedge, or a hedge of a net investment in a foreign operation. For a derivative instrument designated as a fair value hedge, the gain or loss on the derivative is recognized in earnings immediately with the offsetting gain or loss on the hedged item. For a derivative instrument designated as a cash flow hedge, the effective portion of the derivative's gain or loss is initially reported as a component of Accumulated other comprehensive loss and is subsequently recognized in earnings when the hedged exposure affects earnings. If there is an ineffective portion of the change in fair value of the derivative it is recognized directly in earnings. For a derivative instrument designated as a hedge of a net investment in a foreign operation, the effective portion of the derivative's gain or loss is reported in Accumulated other comprehensive loss as part of the cumulative translation adjustment and amounts are reclassified out of accumulated other comprehensive loss into earnings when the hedged net investment is either sold or substantially liquidated. Changes in fair value of derivative instruments that do not qualify for hedge accounting are recognized immediately in current net earnings. The Company does not enter into derivative financial instruments for trading purposes and is not a party to leveraged derivatives. In the consolidated statement of cash flows, the settlement of derivative instruments designated as hedges is typically recorded in the category that is consistent with the nature of the underlying item being hedged. See Note 8 to the Consolidated Financial Statements for additional information about hedges and derivative financial instruments.

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Fair Value Measurements   Fair value is defined as the amount that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. Generally accepted accounting principles defines a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1: Observable inputs such as quoted prices in active markets;

Level 2: Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and

Level 3: Unobservable inputs for which there is little or no market data, which requires the Company to develop assumptions.

The carrying amounts reported for cash and short-term loans approximate fair value. In addition, carrying amounts approximate fair value for certain long-term debt obligations subject to frequently redetermined interest rates. Fair values for the Company's significant fixed rate debt obligations are generally based on published market quotations.

Reclassifications   Certain reclassifications of prior years' data have been made to conform to the current year presentation. As a result of the Company's implementation of Accounting Standards Update No. 2017-07, "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost," the Company reclassified $200 million and $98 million of pension settlement charges from Cost of goods sold to Other expense, net on the Consolidated Results of Operations for the years ended December 31, 2017 and 2016, respectively. The Company also reclassified $18 million of pension settlement charges from Selling and administrative expense to Other expense, net on the Consolidated Results of Operations for the year ended December 31, 2017.

New Accounting Standards

Revenue from Contracts with Customers - In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, "Revenue from Contracts with Customers," which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. On January 1, 2018, the Company adopted this accounting standard. See Note 3, Revenue, for additional information.

Leases - In February 2016, the FASB issued ASU No. 2016-02, "Leases" effective January 1, 2019. Under this guidance, lessees will be required to recognize on the balance sheet a lease liability and a right-of-use asset for all leases, with the exception of short-term leases. The lease liability represents the lessee's obligation to make lease payments arising from a lease, and will be measured as the present value of the lease payments. The right-of-use asset represents the lessee's right to use a specified asset for the lease term, and will be measured at the lease liability amount, adjusted for lease prepayment, lease incentives received and the lessee's initial direct costs. ASU No. 2016-02 is required to be applied using the modified retrospective approach for all leases existing as of the effective date. The Company expects to adopt this guidance using the additional, optional transition method, the package of transitional practical expedients relating to the identification, classification and initial direct costs of leases commencing before the effective date of ASU No. 2016-02, and the transitional practical expedient for the treatment of existing land easements; however, the Company does not expect to elect the hindsight transitional practical expedient. The Company anticipates the new guidance will significantly impact its consolidated financial statements as the Company has a significant number of leases. As of December 31, 2018, the Company had minimum lease commitments under non-cancellable operating leases approximating $265 million. The Company formed an implementation team, identified its lease population and implemented a new software to manage its leases in accordance with this new accounting standard.

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Credit Losses - In June 2016, the FASB issued ASU No. 2016-13, “Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments.” This guidance requires the measurement of all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions and reasonable and supportable forecasts. This guidance also requires enhanced disclosures regarding significant estimates and judgments used in estimating credit losses. The new guidance is effective for the Company on January 1, 2020. Early adoption is permitted for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The Company is currently evaluating the impact that the adoption of this guidance will have on its consolidated financial statements.

Statement of Cash Flows - In August 2016, the FASB issued ASU No. 2016-15, “Classification of Certain Cash Receipts and Cash Payments” which was intended to reduce diversity in practice on how certain transactions are classified in the statement of cash flows. Application of the standard is required for annual periods beginning after December 15, 2017. The Company adopted this standard in the first quarter of 2018. The adoption of this standard did not have a material impact on the Company’s condensed consolidated financial statements.

Compensation - Retirement Benefits - In March 2017, the FASB issued ASU No. 2017-07, “Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost” which requires the service cost component to be presented with other employee compensation costs in operating income within the income statement while the other components will be reported separately outside of operations. Application of the standard is required for annual periods beginning after December 15, 2017. The Company adopted this standard in the first quarter of 2018. The adoption of this standard did not have a material impact on the Company’s consolidated financial statements, except for in the Consolidated Results of Operations for the prior periods in which there were pension settlement charges. These prior period pension settlement charges were reclassified from the Cost of goods sold and Selling and administrative expense to Other expense, net for the years ended December 31, 2017 and 2016, respectively. See the Reclassifications section of Note 1 for additional details.

Derivatives and Hedging - In August 2017, the FASB issued ASU No. 2017-12, “Targeted Improvements to Accounting for Hedging Activities” which improves the financial reporting of hedging relationships to better portray the economic results of an entity’s risk management activities in its financial statements. Application of the standard is required for annual periods beginning after December 15, 2018. The Company adopted this standard in the first quarter of 2018. The adoption of this standard did not have a material impact on the Company’s condensed consolidated financial statements.

Income Taxes - In January 2018, the FASB issued ASU 2018-02, “Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income,” which gives entities the option to reclassify to retained earnings the tax effects resulting from the U.S. Tax Cuts and Jobs Act (the “Act”) related to items in Accumulated other comprehensive income (“AOCI”) that the FASB refers to as having been stranded in AOCI. The new guidance may be applied retrospectively to each period in which the effect of the Act is recognized in the period of adoption. The Company must adopt this guidance for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years. Early adoption is permitted for periods for which financial statements have not yet been issued or made available for issuance, including the period the Act was enacted. The guidance, when adopted, will require new disclosures regarding a company’s accounting policy for releasing the tax effects in AOCI and permit a company the option to reclassify to retained earnings the tax effects resulting from the Act that are stranded in AOCI. The Company is currently evaluating how to apply the new guidance and has not determined whether it will elect to reclassify stranded amounts, if any. The adoption of ASU 2018-02 is not expected to have a material effect on the Company's consolidated financial statements.

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Disclosure Requirements for Fair Value Measurement - In August 2018, the FASB issued ASU No. 2018-13, "Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement" which modifies the fair value disclosure requirements. Application of the standard is required for annual periods beginning after December 15, 2019. The Company is currently evaluating the impact that the adoption of this guidance will have on its consolidated financial statements.

Disclosure Requirements for Defined Benefit Plans - In August 2018, the FASB issued ASU No. 2018-14, "Disclosure Framework—Changes to the Disclosure Requirements for Defined Benefit Plans" which modifies the defined benefit plan disclosure requirements. Application of the standard is required for annual periods beginning after December 15, 2020. The Company is currently evaluating the impact that the adoption of this guidance will have on its consolidated financial statements.

2. Segment Information

The Company has three reportable segments and three operating segments based on its geographic locations: Americas, Europe, and Asia Pacific. These three segments are aligned with the Company's internal approach to managing, reporting, and evaluating performance of its global glass operations. As previously disclosed, to better leverage its scale and presence across a larger geography and market, the Company completed the consolidation of the former North America and Latin America segments into one segment, named the Americas, effective January 1, 2018. The consolidation resulted in the leadership roles of the former North America and Latin America segments being combined into one position, President of the Americas, reporting to the Company's chief operating decision maker ("CODM"), who is the Company's Chief Executive Officer. Beginning January 1, 2018, the CODM reviews the operating results at the Americas level to make resource allocation decisions and to assess performance. The consolidation also resulted in the elimination of duplicative costs as certain functions of the former North America and Latin America segments were combined to simplify the management of the new Americas segment. For example, the Company consolidated its business shared service centers in North America and Latin America into one Americas shared service center. Amounts for 2017 and 2016 in the following tables are presented on the redefined basis for the Americas segment.

Certain assets and activities not directly related to one of the regions or to glass manufacturing are reported with Retained corporate costs and other. These include licensing, equipment manufacturing, global engineering, and certain equity investments. Retained corporate costs and other also includes certain headquarters, administrative and facilities costs and certain incentive compensation and other benefit plan costs that are global in nature and are not allocable to the reportable segments.

The Company's measure of profit for its reportable segments is segment operating profit, which is a non-GAAP financial measure that consists of consolidated earnings from continuing operations before interest income, interest expense, and provision for income taxes and excludes amounts related to certain items that management considers not representative of ongoing operations as well as certain retained corporate costs. The Company's management uses segment operating profit, in combination with net sales and selected cash flow information, to evaluate performance and to allocate resources. Segment operating profit for reportable segments includes an allocation of some corporate expenses based on both a percentage of sales and direct billings based on the costs of specific services provided.

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Financial information regarding the Company's reportable segments is as follows (dollars in millions):

	2018	2017	2016
Net sales:			
Americas	$ 3,638	$ 3,711	$ 3,652
Europe	2,489	2,375	2,300
Asia Pacific	675	714	684
Reportable segment totals	6,802	6,800	6,636
Other	75	69	66
Net sales	$ 6,877	$ 6,869	$ 6,702

	2018	2017	2016
Segment operating profit:			
Americas	$ 585	$ 614	$ 568
Europe	316	263	237
Asia Pacific	44	65	77
Reportable segment totals	945	942	882
Items excluded from segment operating profit:			
Retained corporate costs and other charges	(106)	(104)	(98)
Charge for asbestos-related costs	(125)		
Pension settlement charges	(74)	(218)	(98)
Restructuring, asset impairment and other	(102)	(77)	(129)
Gain on China land sale			71
Interest expense, net	(261)	(268)	(272)
Earnings from continuing operations before income taxes	$ 277	$ 275	$ 356

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	Americas	Europe	Asia Pacific	Reportable Segment Totals	Retained Corp Costs and Other	Consolidated Totals
Total assets:						
2018	$ 5,497	$ 3,036	$ 918	$ 9,451	$ 248	$ 9,699
2017	5,411	3,133	1,001	9,545	211	9,756
2016	5,059	2,792	926	8,777	358	9,135
Equity investments:						
2018	$ 429	$ 98	$ 106	$ 633	$ 65	$ 698
2017	259	95	114	468	57	525
2016	21	78	117	216	217	433
Equity earnings:						
2018	$ 39	$ 21	$ —	$ 60	$ 17	$ 77
2017	41	18		59	18	77
2016	12	15	4	31	29	60
Capital expenditures:						
2018	$ 255	$ 187	$ 92	$ 534	$ 2	$ 536
2017	233	152	55	440	1	441
2016	231	163	59	453	1	454
Depreciation and amortization expense:						
2018	$ 293	$ 136	$ 55	$ 484	$ 10	$ 494
2017	310	125	43	478	10	488
2016	312	118	37	467	11	478

The Company’s net property, plant and equipment by geographic segment are as follows:

	U.S.	Non-U.S.	Total
2018	$ 681	$ 2,404	$ 3,085
2017	757	2,374	3,131
2016	749	2,131	2,880

The Company’s net sales by geographic segment are as follows:

	U.S.	Non-U.S.	Total
2018	$ 2,020	$ 4,857	$ 6,877
2017	2,072	4,797	6,869
2016	2,124	4,578	6,702

None of the years presented had a country with operations outside of the U.S. that accounted for more than 10% or more of consolidated net sales.

3. Revenue

On January 1, 2018, the Company adopted accounting standard ASC 606, “Revenue from Contracts with Customers,” and selected the modified retrospective transition method. The adoption of this new standard did not impact the Company’s consolidated results of operations or balance sheet and there was no cumulative effect of initially applying this new revenue standard to the opening balance of retained earnings.

Revenue is recognized when obligations under the terms of the Company’s contracts and related purchase orders with its customers are satisfied. This occurs with the transfer of control of glass containers, which primarily takes place when products are shipped from the Company’s manufacturing or warehousing facilities to

Owens Illinois, Inc.
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the customer. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring goods, which includes estimated provisions for rebates, discounts, returns and allowances. Sales, value added, and other taxes the Company collects concurrent with revenue-producing activities are excluded from revenue. The Company's payment terms are based on customary business practices and can vary by customer type. The term between invoicing and when payment is due is not significant. Also, the Company elected to account for shipping and handling costs as a fulfillment cost at the time of shipment.

For the year ended December 31, 2018, the Company had no material bad debt expense and there were no material contract assets, contract liabilities or deferred contract costs recorded on the Consolidated Balance Sheet. For the year ended December 31, 2018, revenue recognized from prior periods (for example, due to changes in transaction price) was not material.

The following table for the year ended December 31, 2018 disaggregates the Company's revenue by customer end use:

	Americas	Europe	Asia Pacific	Total
Alcoholic beverages (beer, wine, spirits)	$ 2,281	$ 1,780	$ 493	$ 4,554
Food and other	780	461	101	1,342
Non-alcoholic beverages	577	248	81	906
Reportable segment totals	$ 3,638	$ 2,489	$ 675	$ 6,802
Other				75
Net sales				$ 6,877

4. Inventories

Major classes of inventory are as follows:

	2018	2017
Finished goods	$ 849	$ 873
Raw materials	125	122
Operating supplies	44	41
	$ 1,018	$ 1,036

5. Equity Investments

At December 31, 2018 the Company’s ownership percentage in affiliates include:

Affiliates	O-I Ownership Percentage	Business Type
Empresas Comegua S.A.	49.7 %	Glass container manufacturer
BJC O-I Glass Pte. Ltd.	50 %	Glass container manufacturer
CO Vidrieria SARL ("COV")	50 %	Glass container manufacturer
Rocky Mountain Bottle Company		