

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

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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 ("CO₂e") 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 CO₂ 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.owi.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-jar 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;

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

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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	
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Aprilia	Origgio
Asti	Ottaviano
Bari	San Gemini
Marsala	San Polo

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	Villotta
Mezzocorona	
The Netherlands	
Leerdam	Maastricht
Poland	
Jaroslav	Poznan
Spain	
Barcelona(1)	Sevilla
United Kingdom	
Alloa	Harlow
Other Operations	
Engineering Support Centers	
Brockway, Pennsylvania	Melbourne, Australia(1)
Jaroslav, 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

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	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.